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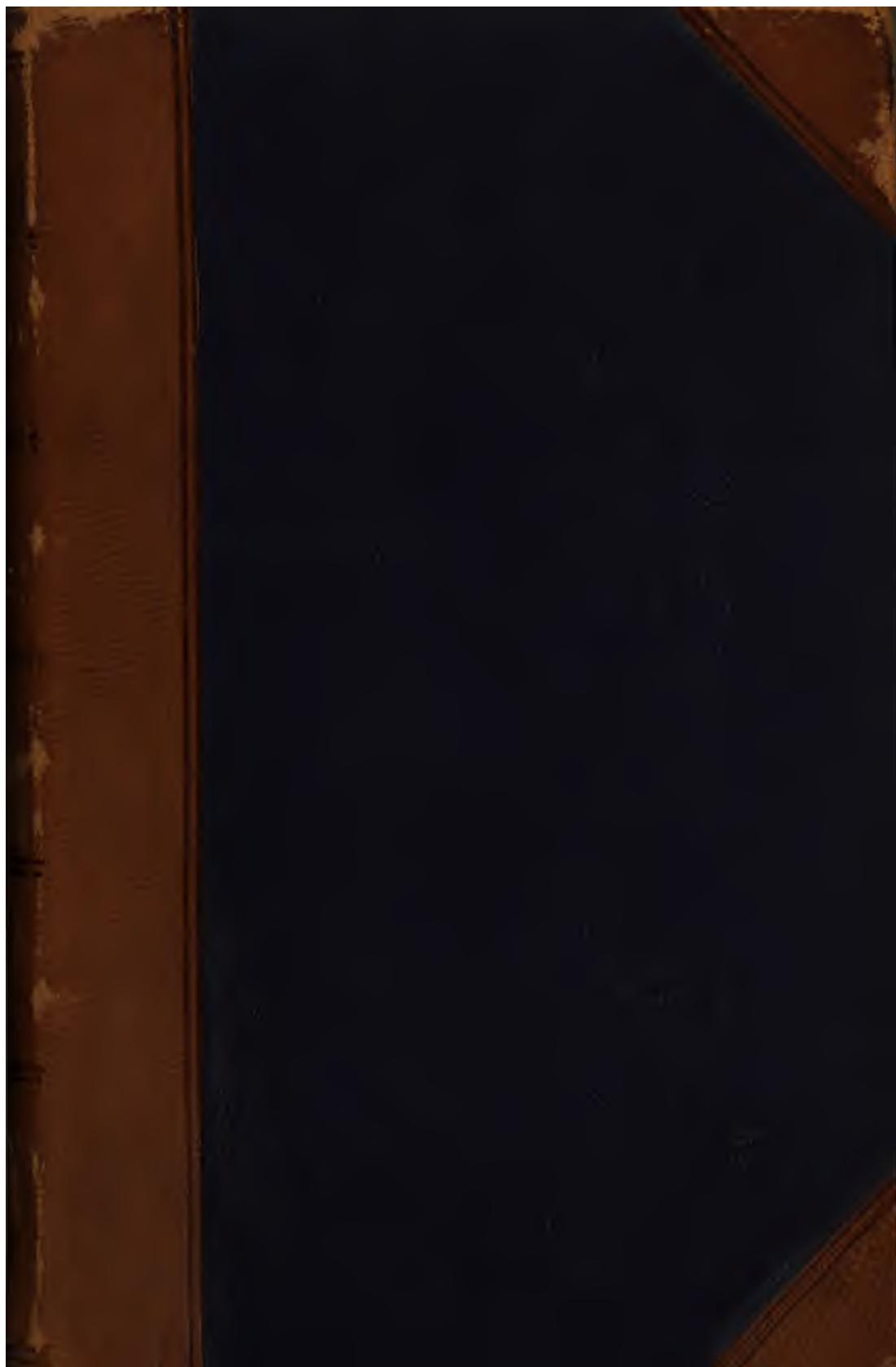
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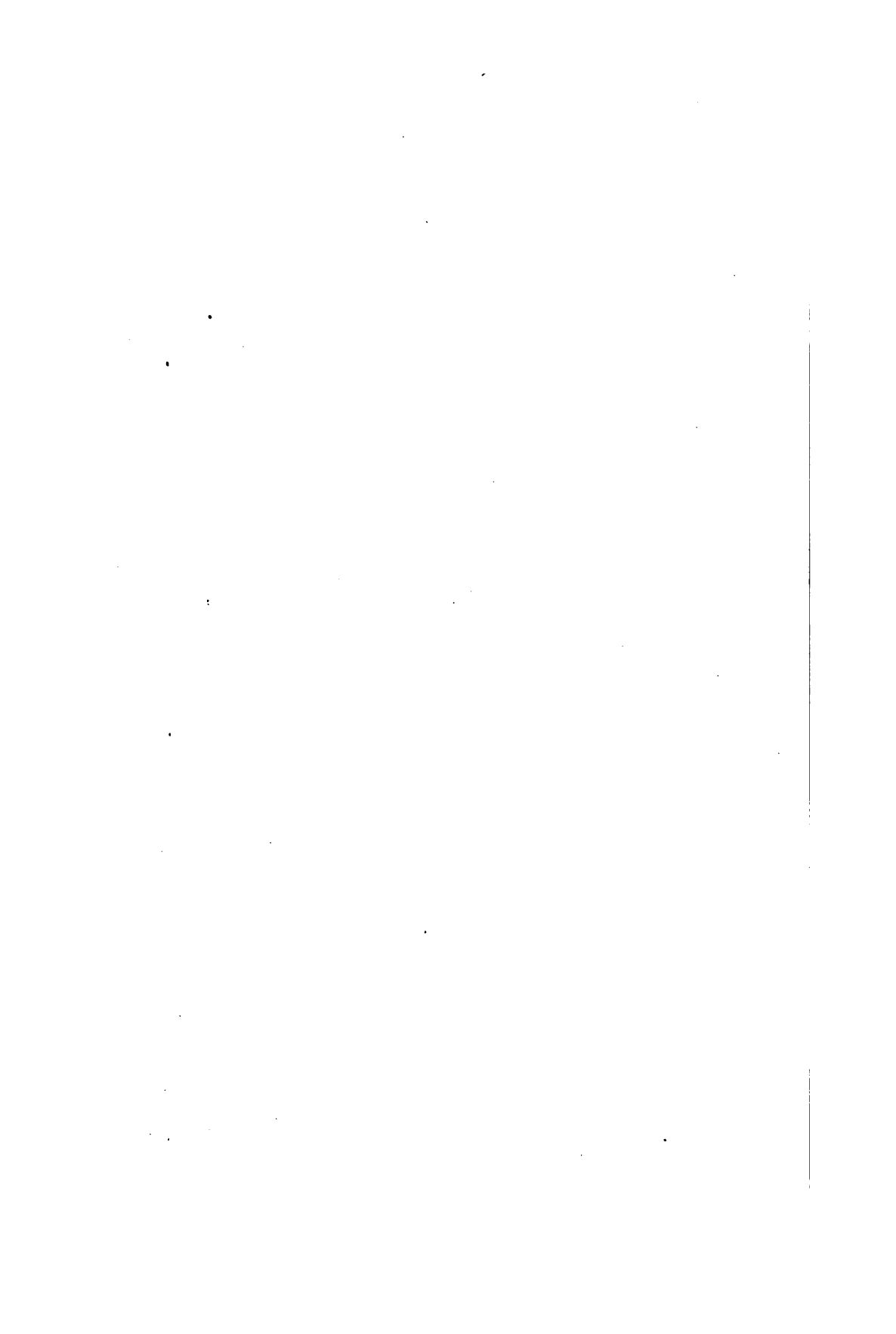
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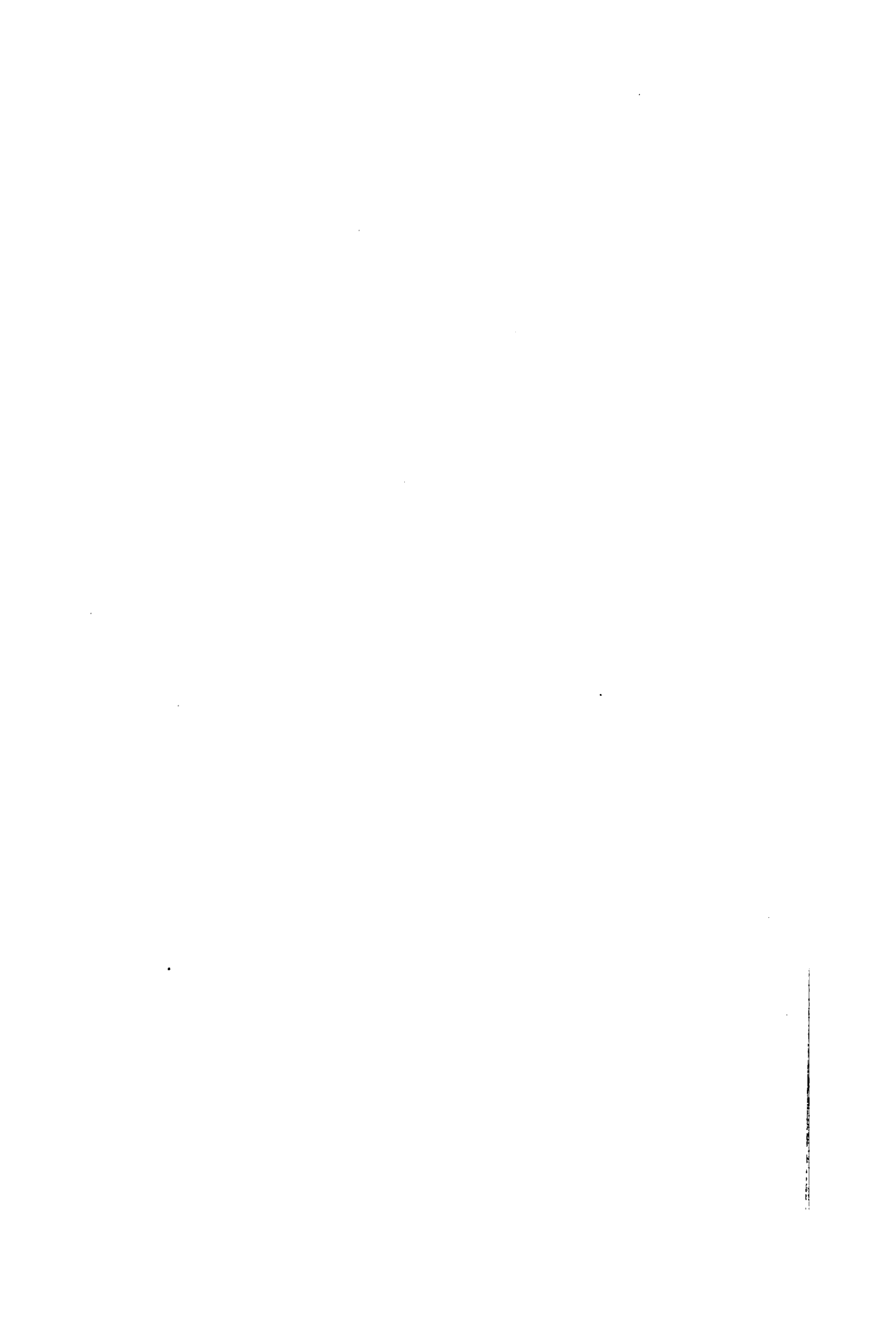
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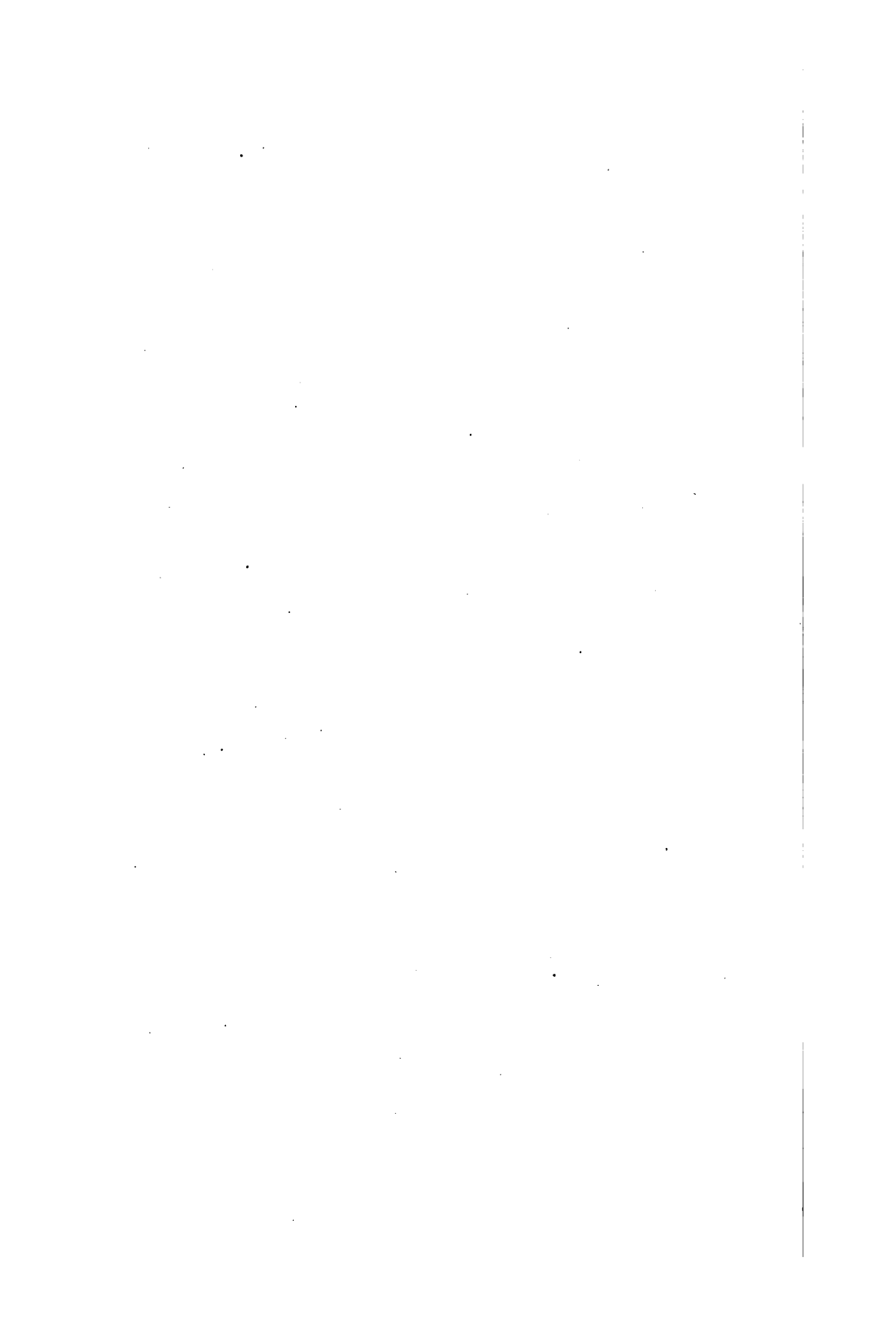


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Nos. CXVII-CXX.]

[Vol. XXX.

# THE SHIPWRECKED MARINER

"There is Sorrow on the Sea."

## Quarterly Maritime Magazine.

EDITED BY  
**W. R. BUCK, ESQ.**  
 (Late of H. M. Civil Service, &c.)  
 Secretary of The Shipwrecked Mariners' Society.



"HELP!—HELP!—HELP!"—  
 'Tis the Mariner's Cry! 'mid the tempest's fierce yelling!  
 "HELP!—HELP!—HELP!"—  
 'Tis his Home's echo'd Wail! unto Heav'n their woe telling!

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**INSTITUTED**  
**1839.**



**INCORPORATED**  
**1850.**

**"There is Sorrow on the Sea."**

**The one NATIONAL INSTITUTION, providing  
for every want of the Shipwrecked Fisherman and Mariner;  
relieving the distress of the bereft Widow and Orphan; and  
specially helping all the Fishing and Seafaring Classes  
providently to help themselves.**



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**A**MID THE HAZARDS OF WAR, THE HERO IS HARDLY  
TAKEN BY SURPRISE ; AND UNDER THE SCOURGE  
OF PESTILENCE, AND FAMINE, THE LINGERING SPIRIT  
HAS TIME TO BEQUEATH A BLESSING, OR TO BREATHE A  
PRAYER !

**B**UT, IN THE PERILS OF THE SEA, WHEN THE LIFE-  
FREIGHTED VESSEL FOUNDERS IN MID-OCEAN, OR  
IS DASHED UPON THE REEF, OR WRECKED UPON THE  
SHORE, THE INTERESTS OF THE FUTURE DISAPPEAR IN  
THE TERRORS OF THE PRESENT—THE CRY FOR "HELP"  
FROM MAN, IS LOUDER THAN THAT FOR "MERCY"  
FROM HEAVEN.

**A**ND, WHILE THE BODY PERISHES, IN THE WILD  
EMBRACE OF THE WAVES, THE SOUL IS HURRIED,  
UNSHRIVEN, TO ITS ETERNAL HOME !

*SIR DAVID BREWSTER*





FRONTISPIECE.—"The Shipwrecked Mariner."—JANUARY, 1883.



"SHIPWRECKED MARINERS."

No. CXVII.

VOL. XXX.

# THE SHIPWRECKED MARINER

"There is Sorrow on the Sea."

Quarterly Maritime Magazine.

JANUARY, 1883.

Published under the Auspices of "The Shipwrecked Mariners' Society."

## IDYLLS OF THE SEA.

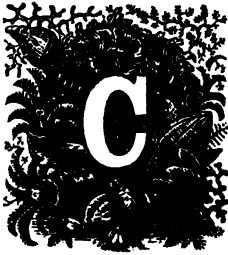
"Mari colitur medio gratissima tellus."

VIRGIL.

"There is a rapture on the lonely shore,  
There is society, where none intrudes,  
By the deep Sea, and music in its roar."

BYRON.

### I.—DAYS OF YORE.



CAN anyone determine at what period of his mental development he first formed a definite notion of the objects which appeared to his young senses?—at what period he gained a correct idea of a building, even his own dwelling, or of an animal or a tree,—in short, at what stage of his dawning intellect he was capable of exact perception?"

Such an utterance fell from the lips of my meditative friend Adelpheos, as he and I wandered one day by the seaside. On me this philosophic mood of his imposed a present silence; and he continued—

"Let a young child be brought, for the first time, to look upon this scene before us—what, think you, would be the effect upon his mind? To us, as we look away from this shore, the wide-spread waters seem

boundless, restless, lustrous ; but although his power of vision might indeed be limited in range and feeble in definition, the impression, one would think, could not but be marvellous, though flitting. I imagine that every fresh object, as it turns up, is a source of wonderment to the young—that it creates an emotion, of which, in mature life, we have no estimation—yet, of all natural objects whatsoever, nothing could, I ween, produce such glow of amazement as the first sight of the sea.”

“I can't recall,” I said, “my first impression, for though my birth-place was hard by this shore, I know not whether my cradle slumbers were e'er disturbed by the wild sea's roar. Often in infancy I was brought to breathe the breezes from the sea and taught to walk upon the sand left firm by the retiring tide ; and in my childhood oft I gambolled here—threw up entrenchments with my wooden spade, to stay perchance the inflow of the flood, but, spite my efforts, the ruthless wave came on and in one moment broke through my bank of sand, full two feet high perhaps, and then I leapt from my enclosure and ran while the foam pursued me, and laughed and shouted that it never caught me ; there I watched to see how each approaching wave, regardless of my toil, pitilessly destroyed the labour of my hands ; I cannot now recount how much of my poor efforts, since then, has been thus fated. But of my first consciousness of the existence of this sea I have no remembrance ; by small degrees I must have acquired a notion of its being too small for memory to record.”

“Memory, I conclude, cannot have registered our first impressions and perceptions,” said my friend, “and yet I think there must have been an instant of time when each of us comprehended the scene before us, and the impression was of short duration, yet long enough for the opening faculties. It is by waves that our sensations are produced—so some philosophers say—waves of light and sound, and, I suppose, all the senses are similarly affected ; therefore, it is wisely provided these waves shall not impinge too sharply on the infant brain.”

“Those waves must be short and quick in childhood,” I rejoined, “for they make our little senses keen and lively, and, as I suppose, cause us to exaggerate the magnitude of objects, while distance is diminished. I used to think tall trees nearly touched the stars, the blue arch of heaven seemed to come down and touch the border of the sea, and in my childish innocence I fancied that thither we might sail to enter the celestial portals. But things near were invested with a

bigness in somewhat strange contrast with their appearance now. For instance, yon parish church was then a trinity (now by modern *improvement* transformed into a unity), and each compartment was in my eye big enough to hold all the dwellers of the town; and the steeple, as I thought, looked as high as was the Tower of Babel; the spire, too, seemed like a second attempt to build till the clouds were reached. I knew not then the double purpose of this 'stately fane': first, to denote that within the sacred edifice beneath men are directed heavenward; the second, to stand as a landmark for the sailor, who, when all other beacons are indefinite, may take his bearing west



THE SAILOR'S LANDMARK.

north-west, to steer his bark between the sand-banks lying some leagues out yonder; however, eventually I learnt its true purport—

‘And I thought that the beacon looked lovely as Hope,  
That star of life’s tremulous ocean.’”

The shrill cry of a sea-gull then diverted our attention.

“Come,” said Adelpheos, “we will saunter on, and avoid dipping too deep into philosophy.”

“Yes, lest we get out of our depth, as I did once when bathing from this shore, and had to swim with my eyes shut—fortunately I swam backward,” I added.

“Ah! it is a grand thing to effect a safe landing; some make a

plunge—maybe into the abyss of speculation, and land nowhere,” remarked Adelpheos.

“Not even on the solid ground of Nature,” I said.

“A stroll by the sea revives old thoughts and sentiments, methinks,” rejoined Adelpheos.

“Ay, after a ramble here,” I answered,

“‘I seem’d t’ have liv’d my childhood o’er again.’”

“One thing, Adelpheos, often puzzled me—the cause of this wave motion. You may solve the difficulty. See, now, even while the sea is calm, there is an irresistible force at work; the small waves chase each other to the shore, roll over, making a long white curl, uttering a low murmur, they kiss the sand, and then retire; on they will come, in spite of that ridge of shingle, on which they dance and splash as if in tiny mimicry of all the boisterous antics of a choppy sea.”

“Of wave motion we will speak hereafter; let us waive the subject for awhile, and hear more of your youthful cogitations by the main,” Adelpheos replied.

“Sometimes I’ve wandered here alone,” said I, “‘before the break of day;’ have watched, while the stars grew pale and vanished in the dawn; and

‘With a full but soft emotion,  
Like the swell of summer’s ocean,’

seen the sun just peep above the water, watched till the full orb lifted from the horizon, and fancied I could stretch a hair between the sphere and sea. Then, a long band of light, reflected by the rippled surface as from thousands of little mirrors, soon stretched towards me, and I rejoiced in the prospect of the growing day. In such a mood, at times, I thus soliloquised: Hail, thou inexhaustible source of wonder and contemplation! Hail, thou multitudinous *Ocean!* whose waves chase one another like the generations of men, and after a momentary space are merged in eternal oblivion. Thy fluctuating waters wash the varied shores of the world; and while they disjoin nations, whom a nearer connection would have involved in constant war, they cultivate the arts, promote commerce, and afford health and plenty to mankind.”

“You have a preference,” said my friend, “for this eastern sea and this sandy beach, I find, for you have breathed not a word about the picturesque and rocky west, nor the glories of the setting sun.”

“ True, I speak now of youthful experiences. I loved the freshness of the scenes at sunrise—when

‘ Fair laughs the morn, and soft the zephyr blows ;’

and when the whole aspect—as of my young life—was hopeful; so my admiration leans to the rising rather than the setting sun.”

“ There is a grandeur in the setting sun as he dips into the great western ocean, and there is a hopefulness that he will rise again,” added Adelpheos.



CHILDHOOD ON THE SHORE.

“ Well, well,” I replied, “ we all have our own dilections : but I look upon this sea from another standpoint—I reflect how great a part it has played in the destiny of nations ; to me it is *the historic sea* notwithstanding all the wondrous deeds of old classic story.”

“ The apostrophe which you just now repeated,” responded Adelpheos, “ suggests a point of great interest—the disjoining of nations, which would make *me* call it *the pre-historic sea* in a peculiar sense,

for though the Straits of Dover did not exist when man first peopled this favoured land--('the silver streak' itself is of recent date)--the sea which separates us from the Continent was formed by a slow process; partly perhaps by upheavals and depressions, and partly by the wear and tear of great rivers. There was a time, no doubt, when the Thames, Humber, Tweed, Tay, and Rhine, and other streams, flowed into one great river, which ran northward.\* Perhaps, too, another great stream ran westward, receiving the waters of northern France and southern England. These two vast rivers may have cut their way backward, and united by breaking through the high land which existed as the last remnant of connection between this island and the Continent."†

"This was a disunion, then, which prepared the way for what you call the historic period?" said Adelpheos.

"Yes," I replied; "had it not been for that severance, Britain would never, I imagine, have been what it has been and is. So far as I can learn, the first inhabitants came over dryshod; I do not pretend to assign them any name, call them, if you will, the Aborigines, or pre-Keltic; and suppose they saw the great rivers burst through the chalky ridge. A narrow stream was first formed by this breach; and over this, men who had not learnt the art of sailing ships, nor even of making them, could come, and, as some of the learned say, did come, and travelled still further west; they found, no doubt, a narrow channel between Scotland and Ireland, and 'the Emerald Isle' afforded them a pleasant abode, which, however, was already to some extent occupied by the old hunting men. After that came another swarm from the old Aryan hive; these were the Cymry who possessed our land. We are not concerned with invasions and conflicts now, but merely note that in

---

\* "By soundings during the coast survey of the United Kingdom, it appears that Great Britain and the innumerable islands and rocks that rise above the surface of the sea repose upon a submarine bank, bounded by a line 100 fathoms deep; and this bank, on which Great Britain and all its islands stand, is connected on the south-east, through Holland and Belgium, with the continent of Europe." (Mrs. Somerville's *Physical Geography*.) This 100 fathoms line somewhere near the entrance to the Baltic may mark the outfall of the combined streams.)

† "Before the formation of the Straits of Dover the solid land of England, formed of Cretaceous and Eocene strata, extended far south into what is now the English Channel. The Isle of Wight still exists as an outlying fragment of that land." (*The Physical Geology and Geography of Great Britain*, Ramsay, p. 223.)

due time came the race which was to be supreme—Teutonic tribes, sometimes called Angles, Saxons, and Jutes, but whom I am content to call English—sailors, many of these, hardy and adventurous. In time came some of their cousins, from Scandinavia and Denmark. All these Teutonic cousins became merged and formed a maritime nation, destined, when Spain and Holland declined, to become masters of the sea. It was over this eastern sea that these men came—it was in



DOVER FROM THE SEA.

this same sea mainly that they learnt to be bold and enterprising, and so largely to develop the commerce of the world."

Things have changed since I first looked upon the sea. Then, every bark was wafted over the crest of the waves by the breezes of heaven, no dirty streaks of smoke obscured the horizon, and a ship in full sail was a thing of beauty, And here, for the present, I will only echo the words of old Edmund Waller—

"Others may use the ocean as their road,  
 Only the English make it their abode,  
 Whose ready sails with every wind can fly,  
 And make a covenant with the inconstant sky:  
 Our *oaks* secure, as if they there took root,  
 We tread on billows with a steady foot."

SEA-URCHIN.





## THE DECK OF THE "OUTWARD BOUND."



OW seldom we dream of the mariners' graves,  
Far down by the coral strand!  
How little we think of the wind and the waves,  
When all we love are on land!

The hurricane comes and the hurricane goes,  
And little the heed we take,  
Though the tree may snap, as the tempest blows,  
And the walls of our homestead shake.  
But the north-east gale tells a different tale,  
With a voice of fearful sound,  
When a loved one is under a close-reef'd sail,  
On the deck of an "outward bound."

How wistfully, then, we look on the night,  
As the threatening clouds go by,  
As the wind gets up and the last faint light  
Is dying away in the sky!  
How we listen and gaze with a silent lip,  
And judge by the bending tree,  
How the same wild gust must toss the ship  
And arouse the mighty sea!

Ah! sadly, then, do we meet the day,  
When the signs of storm are found,  
And pray for the loved one far away,  
On the deck of an "outward bound!"

There is one that I cherish'd when, hand in hand,  
We roved o'er lowland and lea,  
And I thought my love for that one on the land  
Was as earnest as love could be.  
But now that one has gone out on the tide,  
I find that I worship the more,  
And I think of the waters deep and wide,  
As I bask 'mid the flowers on shore.  
I have watch'd the wind, I have watch'd the stars,  
And shrunk from the tempest sound;  
For my heart-strings are wreath'd with the slender spars  
That carry the "outward bound."

I have slept when the zephyr forgot to creep,  
And the sky was without a frown;  
But I started soon from that fitful sleep,  
With the dream of a ship going down.  
I have sat in the field when the corn was in shock,  
And the reaper's hook was bright;  
But my fancy conjured the breaker and rock,  
In the dead of a moonless night.  
Oh! I never will measure affection again,  
While treading earth's flowery mound,  
But wait till the loved one is far on the main,  
On the deck of an "outward bound!"

ELIZA COOK.





## GREAT GALES.

(BY A FELLOW OF THE METEOROLOGICAL SOCIETY.)



“Never was known a night of such distraction,  
Noise so confus'd, and dreadful.”

DRYDEN.



V.

(Continued from page 274.)



IN the continuation of our story of the disasters which occurred during the “Great Storm,” in November, 1703, it has seemed best to arrange in alphabetical order the names of places where, according to the records handed down to us, the greatest calamities happened; for by this method reference is more easily made, and repetition avoided.

We have adopted the following order :—

I. Damages at inland places.

II. Damages at the ports and on the coasts.

### I.—DAMAGES INLAND.

AXBRIDGE, SOMERSETSHIRE.—The wind broke down many trees and damaged houses.

AXMINSTER.—Dr. Towgood had his court gate, with a piece of wall, blown to the other side of the road, twelve feet wide, and stood upright against the hedge. “It was as much as two horses could draw.”

A sheet of lead lying flat was carried near three score yards. Most houses were damaged; the loss in apple-trees was greatest.

BAGSHOT, SURREY.—Many chimnies blown down. Most of the houses were shattered.

BASINGSTOKE, HAMPSHIRE.—A great many houses were blown down, many barns and abundance of trees. In a park, three miles distant, £800 worth of oak and the same value of other trees were blown down, and proportionally in other parts thereabouts. Abundance of houses untiled.

BECCLES, SUFFOLK.—The lead of the great church ripped up; part of the great window blown down, and the whole town exceedingly shattered.

BESSELSLEIGH, BERKS, four miles S.W. of Oxford.—The wind left one very strange mark of its power; a very tall elm was found standing, but perfectly twisted round; the root loosened, but not torn up.

BERKELEY, GLOUCESTERSHIRE.—The Rev. H. Head, vicar of this place, gave an account of the ravages of the storm. He relates that the sea wall by the Severn was broken in many places and consequently much damaged. There was one thing very remarkable happened there; twenty-six sheets of lead, *hanging altogether*, were blown off from the middle aisle of the church, and carried over the north aisle without touching it, and into the churchyard, ten yards distant from the church; and they were taken up all joined together as they were on the roof; the plumber reported that each sheet weighed three hundred and a half."

BRENCHLEY, KENT.—"A stately steeple, in altitude about twelve rods, which strong and noble structure was levelled with the ground; the fall beat down great part of the church and porch." Many houses and barns and other buildings quite demolished.

BROCKETHALL PARK, HERTS, belonging to Sir John Reade, suffered much; above 1,000 trees blown down.

CHATHAM.—"The lead on a church near this town was rolled up, and blown off above twenty rods' distance; the weight was above two thousand six hundred."

CHEPSTOW.—Part of the bridge over the Wye was broken down.

CHEDDAR, SOMERSET.—Much harm done, especially in houses and apple-trees.

CHRISTCHURCH, HANTS.—Much damage done to the church; stones

of two to three hundredweight were blown some rods from the church ; twelve sheets of lead rolled up ; several houses, barns, and chimneys blown down, and hundreds of trees ; some loss of life.

ELY, CAMBRIDGESHIRE.—“ The cathedral church, being a very ancient building, and crazy, could not be imagined able to stand the fury of the wind ; some shocks gave it such motions, that anyone that felt it



ELY CATHEDRAL.

would have thought it impossible it could stand ; . . . though it suffered much in every part, it outstood the storm.”

The lead was torn up, and in divers parts blown up in heaps ; forty lights of glass blown down ; a pinnacle demolished ; five chimnies of the college (where the prebendaries resided) and parts of walls demolished. The damage was about £2,000.

All the windmills in the town and country around were blown down or disabled.

The inhabitants generally suffered much loss, by damage of houses, barns, corn, and hay: "the general loss was about £20,000." (A Mr. A. Armiger wrote the account of this disaster at Ely.)

FAIRFORD, GLOUCESTERSHIRE.—The church here received irreparable damages, especially in the west central window, which was twenty-five feet high and fifteen feet wide, and, another by the side of it, fifteen feet by ten feet;\* a pinnacle and battlements were blown down; the houses of the poor suffered greatly.

FAREHAM, HAMPSHIRE.—Houses and barns blown down; many trees torn up by the roots or broken off in the middle; a large elm fell, and demolished the large west window of the church.

HATFIELD, HERTS.—Great damage to the church, houses, and barns. Many trees destroyed in the parks; the branches formed 100 stacks of wood. The *east* window in Lord Salisbury's chapel was broken.

HAWKHURST, KENT.—Eleven barns blown down; many houses shattered; a waggon laden with straw, tightly bound, was driven back several rods, and forced through a thick hedge into the road, so that six horses could not remove it.

HEREFORD.—In the city chimnies were blown down and abundance of houses untiled ("which was certified by Mrs. Anne Watts"), and at Wormsley a man and his son were killed. Lord Scudamore had several great oaks blown down at Hom (Holme-Lacey), four miles from Hereford; several great elms were levelled at Hinton, on Wye side; and hundreds of fruit trees in other parts of the county.

HUNTSPILL, SOMERSET, near the river Parret, received great damage by the inundation which demolished the sea-walls; four or five vessels were driven a long way up on the land, "from whence, no succeeding tide rising to near that height, they could never be got off."

KENT.—A gentleman (said to have been De Foe) traversed this county a month after the storm: he reckoned 1,107 houses and barns

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\* This church was adorned with twenty-eight celebrated windows, designed by the famous Albert Dürer. They were executed for a church in Rome, but were taken in a prize ship by John Farne. This man, having brought home the glass, purchased the Manor of Fairford of King Henry VIII., and built the church for the sake of preserving intact the glass taken at sea.

blown quite down; "whole orchards laid flat on the ground;" he attempted to count the trees uprooted, and, having counted 17,000, gave up the task.

**KINGSTON-UPON-THAMES**—The damage to buildings was very great; walls were levelled; "few houses there but lost their tiling; multitudes of trees were blown down."

**KINGSCOTE, GLOUCESTER**.—A grove of 600 trees, eighty feet high, covering an area of five acres, was destroyed, "each tree tearing up the ground with its roots, so that the roots of most of the trees, with the turf about them, stood up at least fifteen or sixteen feet high; the laying down of these trees was an amazing sight to all beholders."

**LLANELIEU, BRECON**.—"A poor woman and child were blown away; the child, about ten years old, was taken up in the air two or three yards, and very much bruised and wounded in the fall."

**LEDBURY, HEREFORD**.—Two windmills blown down, and stacks of chimnies. A coachman, fearing the stable would fall, got his master's horses out, and led them to the lee of a haystack; this was blown over, killing one horse and maiming another.

**LITTLETON, WORCESTER**.—The hurricane caused great terror to the inhabitants, who escaped with their lives, though their houses were much shaken; "very many fruit trees, and many mighty elms being torn up, and one elm above the rest, of very great bulk and ancient growth (as reported by Mr. R. Norris), might have defied the strength of all the men and teams in the parish."

**LEAMINGTON-HASTINGS, WARWICKSHIRE**.—The severest blasts were felt between 5 and 6 a.m., on 27th November. The church roof was stripped of lead; "on the ground were found six sheets of lead, at least fifty hundredweight, all joined together, not the least parted, but just as they lay upon the middle aisle-roof, which had been carried in the air by the wind fifty yards and a foot," at this distance the lead was arrested by a tree, one end of the sheet being twisted round the trunk. (The account was given by Mr. E. Kingsburgh.)

**MIDDLETON-STONEY, OXFORDSHIRE**.—The gale began about 12 at night, and was very terrible about 4 or 5 a.m. on the 27th; many large trees uprooted; leads of the church rolled up, stone battlements of the tower blown upon the roof, houses and barns uncovered, and very much damage of a like nature in adjacent places, as attested by the rector, the Rev. W. Offley.

At Marson, four miles off, a great rick of wheat was blown from its straddles to a distance of twenty yards without one sheaf being disturbed, or without standing awry.

MIDHURST, SUSSEX.—The usual untiling of houses and blowing down of chimnies ; at the seat of Lord Montacute, five stacks of chimnies were thrown down ; one fell into the great hall, doing much damage ;



MONMOUTH CHURCH AND CASTLE.

500 trees torn up. The church steeple of Osborn, half a mile away, blown down.

MONMOUTH.—“The lead of the great church was rolled up like a roll of cloth and blown off the church, though on the side from the wind ; there was likewise vast variety of ruins in houses and barns.”

NORTHAMPTON.—Many sheets of lead on churches rolled up like a



scroll ; three windmills blown down ; whole roofs of houses carried into the streets ; the great doors of the sessions-house, though barred and locked, were forced open, and the large windows blown out ; the pinnacle and fane on the Guildhall blown down, and many houses shattered.

**OAKINGTON, BERKS.**—Great damage to houses ; the market-house much shattered and the clock spoiled ; lead of the church torn up ; hundreds of trees, mostly elms, blown down.

**OXFORD.**—A child was killed by the fall of a house in St. Giles's ; two pinnacles blown off Magdalen tower ; one from Merton ; twelve trees blown down in Christ Church walk ; at Queen's College several sheets of lead, judged near six thousand weight, blown from the top of Sir J. Williamson's buildings, and carried against the west end of St. Peter's Church, making such a prodigious noise that people thought the tower had fallen. The rest of the loss consisted for the most part in pinnacles, chimnies, windows, &c.

**PECKHAM (GREAT).**—The steeple—almost as high as that of Brenchley—was blown down, and the church damaged.

**REIGATE, SURREY.**—Great numbers of tall trees blown down or broken quite in the middle ; two windmills demolished. The miller of one of them got up in the night resolving to go and turn it to the wind and set it to work, in order to preserve it from destruction, but he had forgotten the key, and returned to his home to fetch it, in that interim the mill was blown quite down, and this is quoted as a remarkable providence. Corn and hay stacks were scattered in all directions.

**ST. KEAVERNE, NEAR HELFORD, CORNWALL.**—The storm began between 8 and 9 p.m. ; at 12 p.m. it blew a most violent hurricane ; it abated about 5 a.m. on the 27th ; the damage was very great ; houses blown down ; corn carried out of the stack-yards to some furlongs distant. The fruit trees were dismembered and torn ; elms, oaks, and other large timber trees uprooted. " Few gentlemen had any trees left standing about their houses. The damage was very general, both to rich and poor."

At Helford a tin-ship was blown from her anchors and forced out of the harbour between eleven and twelve at night. A man and two boys were on board. The ship was driven as far as the Isle of Wight by eight the next morning, being carried eighty leagues in eight hours, and driven between two rocks. The crew was saved, the ship lost.

**SHAFTESBURY AND SALISBURY.**—There were several remarkable

occurrences during the storm, for the details of which we have not space.

**STOWMARKET, SUFFOLK.**—The spire of the church, the finest in that part of the country, and built only thirty years before, was overthrown ; it fell on the church, doing great damage thereto. This occurred about 6 a.m. of the 27th, so that the greatest force was felt there six hours after it was felt in Cornwall (see St. Keaverne above), another indication of the course and velocity of the storm. A particular account was given by the Rev. J. Farr, the vicar.

**SUDBURY, SUFFOLK.**—"The town fared better than they expected ; they had many barns, trees, chimnies and tiles blown down ; but the neighbouring towns were fearfully shattered."

**TUNBRIDGE, KENT.**—About 500 trees blown down at Penshurst park : the great grove at Southboro' almost entirely destroyed. Scarcely a house in the town escaped serious damage, and the havoc in the adjacent country was very great.

**WELLS, SOMERSET.**—Death of the Bishop of Bath and Wells and his lady at the palace (it was Bishop Kidder). "The palace was the relic of a very old, decayed castle ; only one corner was new built ; but the bishop lay that night in the old apartments, where two chimney stacks fell on the roof, drove into his lordship's bed, forced it quite through into the hall, and buried them both in the ruins. It is supposed he perceived the fall before it came, jumped out of bed, and was making towards the door ; for his lordship had his gown on, and was found at some distance from the bed with his brains dashed out ; the lady wrapped all the bed clothes about her, and in that manner was found smothered in bed." Two houses were blown down in the town ; other damage to roofs, &c., and in the country around a multitude of trees, and wheat and hay stacks overturned.

**WHITESTABLE,** at the mouth of the East Swale of the Medway.—A boat was taken clear off from the water, carried in the air while turning over and over, and lodged on a rising ground fifty rods from the water.

The Second Division of this record of damages, relating to those at the ports and on the coasts, we must leave to be embodied in a subsequent chapter.

S. H. M.





## “RESCUED!”\*



“A double Death, to drown in ken of Shore.”

SHAKESPEARE.



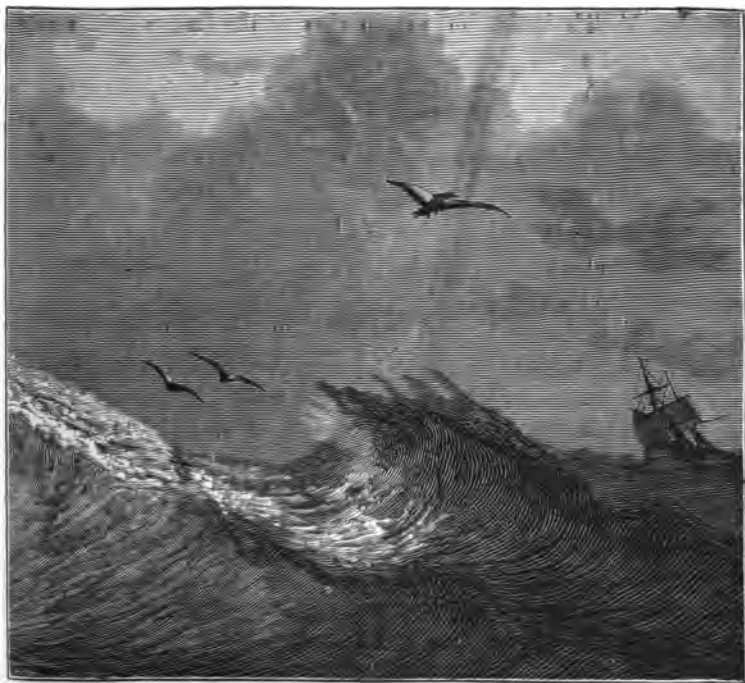
ONE fair October morning of the year now just past, a trim and handy British yacht, yawl-rigged, of 60 tons, smartly put to sea, from the port of Boulogne, to sail over to the English coast, in completion of her season's cruise. There was blowing, at the time, a moderate gale of wind, yet, not more strongly than is oft and oft experienced by those who, Briton-like, essay to do their yachting for the veritable pleasure of real sailing. Of indications of undue disturbance, in wind or sea, there were none apparent, and the briny trip, homeward-bound, was started upon with what was deemed to be the safe and certain prospect of a good fast run across Channel.

To one innately caring for the deep blue ocean, with all its overpowering influences, nothing can well be grander, in the way of human sensations, than to stand on the deck of some truly fine boat, in a gloriously heaving sea; and such a boat this yacht in question certainly was, perfectly found in every respect, and thoroughly and efficiently manned. Splendidly she sailed along, as steadily as a river barge, rising to each following wave, and rushing down between the hollows, at the top of her speed. In a short time, the Kentish cliffs were just in sight, and rapidly looming, as the vessel sped merrily along. All of a sudden, then, the barometer gave alarming warnings

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\* It may be of interest to note that the little vessel, referred to in this narrative, was the yacht *Arab*, wrecked on the “Goodwins,” October 24th, 1882.

of an approaching tempest, and, almost immediately, a succession of fearful squalls burst down upon the luckless yacht. The force of the wind is described by those on board as beyond all possible conception, the driving spray completely blinding the eyes, and shutting out all vision at once. Every shred of canvas was lowered, not required to keep the vessel going ; and there was nothing that could possibly be done, save to run most carefully ahead, till the sky should clear.



DOOMED, ON THE GOODWINS.

It is needless here to detail the successive disasters of the doomed yacht. Whirled, by the unusual strength of the tide, to the edge of the Goodwin Sands, and crippled by the loss of her sails, blown away, with all anchors gone, and mercilessly knocked about in the broken water, the little vessel, two short hours ago in the full pride, so to speak, of her career, was brought to a position as terrible in its surroundings, as it was hopeless in regard to any expectation of rescue therefrom.

To each one on board, quick death was there present, in its most awful form. All around were the leaping waves, lashing themselves into foam, as they washed across the sands. The seas swept over the deck, and, with the fading daylight, the last hope of life grew less and less. Even if the signals of distress had been noticed, what chance was there, in the darkness, that this one little living speck would be seen amongst the billows! Little by little, must the trustfulness of the most stout-hearted man die away, amid such a scene; and, little by little, too, his life itself ebb out, in view of the end which seems so sure to come!

Could there be any more striking instance of the inherent perils of the guardian-waters with which these isles are, happily, begirt—those wild waves which, in their wanton swallowing up of treasure upon treasure, and, alas! of life upon life, engulf alike the rich with the poor, as they suddenly bring down the sturdiest, it may be, in one brief moment, or tardily end, at last, the lingering sufferings of many a storm-tossed crew!

We leave it to the reader, without any further description, to fill up from his imagination the remainder of the story regarding the yacht, when we say that there were watchers throughout that gale, who had seen the imminent peril of the little craft, and who, almost after every expectation and hope had vanished from the breasts of the little band of nine gathered upon her deck, by means of their tug and life-boat, effected a most gallant and daring rescue of every soul on board.

R. A. B. P.



## THE DROWNING SAILOR.



**A**LL faint, to heaven he throws his dying eyes,  
 And, "Oh, protect my wife and child!" he cries—  
 The gushing streams roll back the unfinished sound;  
 He gasps! and sinks amid the vast profound!

FALCONER.



## NOTES OF A LIFE.\*



“Nor love thy Life, nor hate; but what thou liv’st  
Live well; how long, or short, permit to Heaven.”

MILTON.



“And all may do what has by Man been done.”

YOUNG.



It may be said, without fear of unduly flattering the venerable and, happily, still living subject of this sketch, that few lives have been so interesting as his, whether considered from the point of view of the Christian worker, and benevolent friend of suffering and helpless humanity, or from that of the patriot and lover of his country.

Captain the Honourable Francis Maude, R.N., the youngest of a numerous family of no less than nineteen children, was the sixth son of the first Viscount Hawarden; and to glance back upon the career of so old a “British Tar” is to inhale a great draught of sea air blown off the ocean when the century was only six years old, and Trafalgar had but twelve months before been won. For—only think of it!—Captain Maude was actually at sea seventy-seven years ago.

The ship, H.M.S. *Lavinia* (48 guns), on board of which Captain Maude was thus serving, was commanded by his brother-in-law, Lord William Stuart, son of the Marquis of Bute, and, as she was cruising off the coast of Spain, she fell in with another frigate, under the command of Captain—afterwards Sir James—Yeo, R.N. Somehow or other,

\* From “Our Workers,” in “*The Rock*” (October 27, 1882), &c., being Notes of the Life of the Chairman of “THE SHIPWRECKED MARINERS’ SOCIETY,” &c.

the two Captains learned that a Spanish line-of-battle ship was lying in Vigo, having undergone repair, but her sails were not on board; and the Captains forthwith planned a cutting-out expedition. The British ships stood in towards the land, and all the boats, well manned and armed, after dark, with spare sails, were despatched on the duty. Their orders were to pull into the harbour, at night, with muffled oars, board the Spaniard, bend the sails, and bring her out, the wind being then off shore. In another hour or more their object would have been achieved; but just as they reached the mouth of the harbour, and within hearing of the sentinels hailing each other, the wind shifted, and came on to blow hard from the sea, whereupon the boats with great difficulty returned to the ships, after about eighteen hours' strenuous exertion, being greatly over-weighted with the now saturated spare sails. The late Captain the Honourable Sir James Ashley Maude, R.N., G.C.H. (brother of Captain the Honourable Francis Maude, and who commanded H.M.S. *Glasgow* at the Battle of Navarino), was, it may be noticed, second lieutenant on the occasion in question, and in that capacity had charge of one of the boats. It is easy to imagine the anxiety endured by the Captains, awaiting the result, with their ships deprived of crews, except what were called "idlers," such as servants, cooks, and a few marines.

This exciting adventure quickened the love of the, then, young sailor for the sea, instead of quenching it, as his mother, it seems, rather hoped would be the case. In due course he entered the college at Portsmouth, November 20th, 1811, and after witnessing the reception of the crowned heads at Oxford, during the short peace in 1814, joined H.M.S. *Amphion* (Captain J. P. Stewart), when he was ordered to Cork, to proceed with a convoy of one hundred and eighty sail to Madeira, where they branched off to different parts of the world—the Mediterranean, and the East and West Indies. Here they took charge of naval store-ships for Bermuda. It ought to be mentioned, however, that when running down the Channel from Portsmouth, in a fog, it suddenly cleared up, and the good ship found herself within short distance of an American frigate, at that time an enemy. Naturally, the Englishmen beat to quarters, took in their royals and studding sails, and were on the point of pouring in a raking broadside, when the American hoisted a white flag, she having on board at the moment two commissioners of peace; so that, in the end, merely complimentary

signals were exchanged. Curiously enough, in the following January, Mr. Maude sailed with his brother, Sir Ashley Maude, in H.M.S. *Favourite*, taking to New York other commissioners, in connection with the same peace, ratification of which they brought home in March.

Again, as though peace were the object of his early life, Mr. Maude sailed from Spithead, on June 30th, 1815, for India, with three sets of



DECK OF MAN-OF-WAR AT END OF LAST CENTURY.

despatches—one announcing the escape of Napoleon from Elba, the second the Battle of Waterloo, and the third the great peace.

Next, we find him passing a year and a half in the Persian Gulf, looking after the Arab pirates, and subsequently in H.M.S. *Magicienne* (Captain J. B. Purvis) in the China Sea; and, later again, for a year and a half at the Mauritius, and off Madagascar, capturing slave ships,



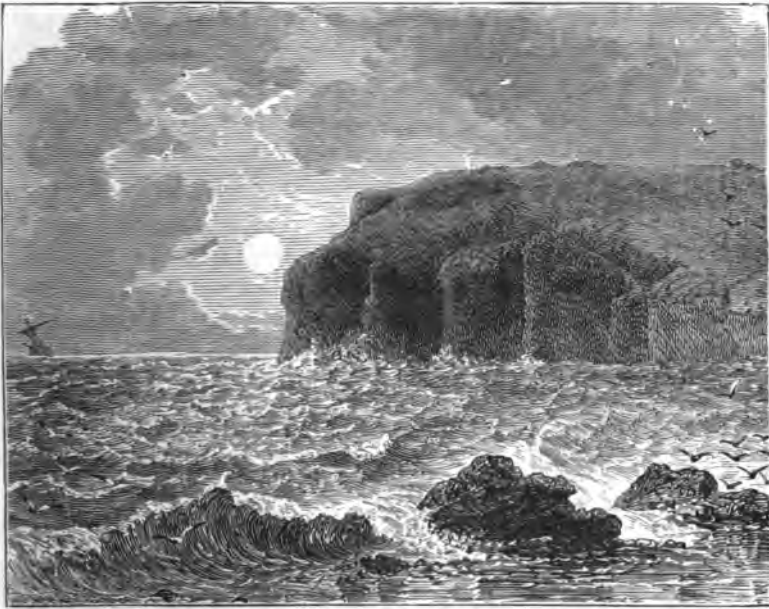
where he was in the great hurricane of 1818, lately reverted to in *The Times*, and in which fifty-six ships and brigs were wrecked.

Coming home then, Mr. Maude's ship was paid off, and he was appointed to H.M.S. *Superb* (Captain White), with *Nelson's* Sir Thomas Hardy, going out as Commodore on the South American station, and Sir Edward Thornton, Ambassador or Plenipotentiary to Rio de Janeiro, accompanied by his staff—the Honourable Francis Forbes and Mr. Caldclugh, as first and second Secretaries of Legation. This last reference to names reminds us that the first attempt at sounding the Atlantic was made by the Mr. Caldclugh here mentioned, under the sanction of the Admiralty, they supplying a large quantity of "deep sea lead line" for the purpose. To show how little was in those times understood regarding the subject, however, it is only requisite to say that, under the mode of procedure adopted, five hundredweight of iron ballast, with thermometers, bottles, &c., were attached together, and the ship "hove to" the day before crossing the Line. The sea being almost calm, with but a slight swell, the experiment was then tried with about 1,200 fathoms of line, passed through a "snatch block," at the main yard arm, so as to act as a spring, and the hauling up, by order, being very gently and carefully performed. As might be expected, immediately the strain came the line snapped, and all was lost, to poor Mr. Caldclugh's great grief. However, when, during the frolics of the usual performances, "Neptune" boarded the ship the next day, he brought in his hand a representation of the lost articles or treasures, saying he had picked them up the day before, and concluded, as their ship was the nearest to his dominions, the things found must belong to them. Upon this, Mr. Caldclugh—whose mind was absorbed in the subject—rushed from under the poop in wild joy, only to be brought to his senses by the bucket of sea water thrown over him, as prepared for the purpose, according to old-fashioned custom, "Neptune," of course, being vociferously cheered by the ship's company for the trick.

On board this same vessel, H.M.S. *Superb*, there were upwards of thirty-two mates or passed midshipmen; but, by a great piece of good fortune, Mr. Maude was lucky enough to get the first vacancy as lieutenant, being provided with an epaulette by a brother officer, who had nailed it outside his cabin-door, promising it to the first midddy that gained his rank, and exchanged the dirk for a sword. It will be

interesting to add, in connection with this little episode, that the officer who thus helped Mr. Maude was Lieutenant the Honourable Frederick Spencer, father of the present Earl Spencer, Lord-Lieutenant of Ireland.

Shortly after securing this very fortunate step of rank, Mr. Maude became first and only lieutenant of H.M.S. *Icarus* (Captain H. A. Eliot), and so remained till 1821. While serving on board of this vessel he noted, once more, a strange incident. The ship was lying at Maldo-



OFF THE COAST OF MAINE, U.S.A.

nado; when a merchant captain, from Buenos Ayres, came on board to report the supposed death of Captain the Honourable Sir Robert Spencer, of H.M.S. *Owen Glendower*, stating that he had been shot on his own quarter-deck, in a duel, by his first lieutenant, named Macdonald. The man's statement entered into detail, and described the minute guns having been fired when the funeral procession of boats left the ship, and the colours being hoisted "half-mast"—in short, so impressing the minds of the Captains and officers of all the English ships there, and especially of Captain Spencer's brother,

Lieutenant Spencer, that the latter obtained leave, and rode night and day to Monte Video, where he embarked for Buenos Ayres. On reaching the *Owen Glendower* the first person he met on board was Macdonald, the first lieutenant, who was struck with the visitor's anxious and haggard appearance, and asked the cause of his sudden arrival. "My brother's death," was the reply. "What! How did he die?" "You killed him!" Shocked at such a charge, he said, "It is all false." "Then, where is he?—prove it," replied Lieutenant Spencer. A boat was immediately manned, and he was taken to where the Captain was shooting with some of the officers. The origin of this almost unaccountable story was, it seems, as follows: An American ship, with an imaginative captain, was lying in the river, when the news of the death of George III. arrived, and the *Owen Glendower* fired a salute, with lowered flags; while, in the course of the very same day, the body of a marine who had recently died happened to be sent on shore for interment, with a firing party, as usual. Captain Spencer had the credit of possessing rather a hasty and imperious temper, and in this way imagination was, no doubt, somewhat aided. The news of the reported sad occurrence was duly received at Liverpool, and the Spencer family at once sent their confidential librarian, Mr. Appleyard, to learn the full particulars; but the brothers, meanwhile, freighted a vessel, to carry tidings of the contradiction and actual facts without delay, and she arrived therewith only after the family had actually been in mourning about a month.

Another little incident which also arose in connection with Mr. Maude's varied service and observation, must not be passed by. When in H.M.S. *Icarus*, at Maranham, he found that vessel detained through want of provisions. A merchant ship arrived, and was boarded by orders of the Commander of the *Icarus*, Captain Eliot, before the pratique boat had visited. This being a veritable breach of international law, the Governor, ripe as he was for insurrection—which was then spreading along the Brazil coast—ordered the ship out of the harbour, double shotting the fort guns, and bringing up two armed vessels, larger than the little British 10-gun sloop, in order to force the Englishman out. Captain Eliot, in view of this threatened hostility, immediately formed the plan of dropping in between the two vessels in question, which had been moored astern of the *Icarus*, taking them, and then bringing all his own and their guns

to bear on and reduce the fort. This seemed so wild a scheme, that Mr. Maclean, the master, and Lieutenant Maude, the only executive officers, agreed to place Captain Eliot under arrest, and themselves take the ship out. They, therefore, begged of the Captain to retire to his cabin, and consider himself no longer in command. However, Captain Eliot eventually gave way, and so this apparent little breach of discipline ended, the authorities, when they heard of it at home, commending the action of Lieutenant Maude.\*



MONTE VIDEO.

From 1824, Lieutenant Maude was on board H.M.S. *Grasshopper* (Captain Canning—eldest son of the distinguished statesman, George Canning), on the Newfoundland station, and finally, in 1827, after

\* In elucidation of the real sentiments entertained in high quarters regarding this peculiar little incident of naval service, it is related that Viscount Melville, then the First Lord of the Admiralty, sitting at the King's (George IV.) Coronation Banquet, in 1821, next to the young officer's brother, Viscount Hawarden (Lieutenant Maude being himself present, as his brother's Page, on the occasion, and reintroduced thereupon to the First Lord), authoritatively stated to Lord Hawarden, in reference to the event—"Your brother was quite right."

his marriage, retired on half-pay. Becoming a widower in 1882, he subsequently came to London, and shortly after began that home career of philanthropic usefulness which has, without break or failure, ever since so disinterestedly absorbed his whole energies.

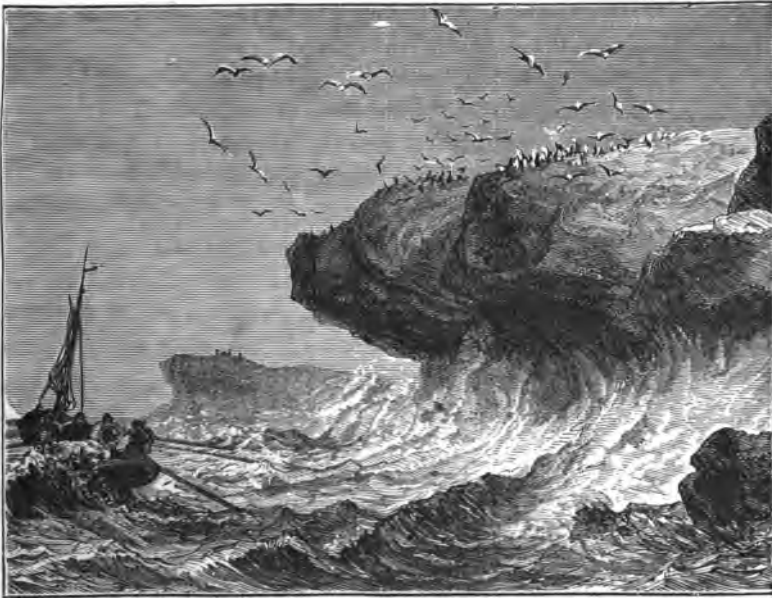
It was in 1884 that we find Captain Maude joining the Naval and Military Bible Society; then, the Church Missionary Society invited his help, and he afterwards became, and has for several years acted as, its treasurer. The Sailors' Home, and the Des'titute Sailors' Asylum, were next the objects of his care. The Home now contains ample accommodation for about 600 officers and men, each having a separate cabin, and is entirely self-supporting. It was founded and built by Captain R. J. Elliot (of the Minto family), who likewise started "The Floating Church," which afterwards branched out into the Thames Church Mission. We may here refer our readers to a telling article which Captain Maude once wrote about this excellent Institution. He went himself and saw the work its missionaries were doing, was witness of the labours of its staff, and ended by becoming, as now, the leading spirit of the Institution's great work.

But, while thus advancing the interests of the Mission just named, Captain Maude was also indefatigably labouring for THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY, at the first public meeting constituting which, in 1889,\* he was present in person, has ever since been responsibly connected therewith, and for years, up to this moment, has filled the offices of one of its Vice-Presidents, and of Chairman of its Committee of Management of thirty-six members. The origin of the Society was a very simple one. A worthy, philanthropic medical man, Mr. John Rye, of Bath, had a servant, who had formerly been a sailor, and was in the habit of reading the newspaper to his master. One morning, in the fresh memory of "Grace Darling's" recent deed of heroism, their attention was arrested by an account of some fearful wrecks of fishing boats, with loss of life, on the north coast of Devon. The servant asked his master if there was any fund out of which help could be obtained to relieve the families of those men. The master replied that he supposed there was, but he

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\* See the interesting Foot-note appended to "The Society's Objects," under Heading of "THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY," at the end of the current Number of this Magazine.

would make inquiries from Admiral Sir Jahleel Brenton, K.C.B., then Governor of Greenwich Hospital, and from him he found that there was none. They then, together, drew up a prospectus, and presented it to the late Admiral of the Fleet, Sir George Cockburn, Bart., G.C.B., who most heartily took the matter up, and, after circulating the appeal widely, called, in February, 1839, the public meeting already referred to. At this meeting Sir George was appointed President, and a number of noblemen and gentlemen formed themselves into a Committee, of



FISHING BOAT ON A PERILOUS COAST.

all the first members of which, Captain Maude, the Society's venerable Chairman of to-day, is now the sole survivor. The following month, Her Majesty the Queen graciously announced herself the Patron of the Society; and so prosperous was the infant Institution, that, on the occasion of the Second Anniversary, at which the late Sir Robert Peel, Bart., M.P., consented to preside, the sum of one thousand one hundred pounds was collected—this amount steadily increasing, year by year, up to the existing income of between thirty and forty thousand pounds, which, large though it be, is yet, alas! altogether incom-

mensurate with the actual needs of the Society, for its vast operations. In connection with these facts, it is worthy of being here noted, that the original half-crown, with which the Society was first started, is still faithfully preserved in its chambers, as a treasured memento.

Captain Maude, himself one of the oldest of sailors, is likewise, and most appropriately, the Chairman of the Royal Alfred Aged Merchant Seamen's Institution, founded under the direct auspices of THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY, and opened, in 1867, in most eligibly situated buildings and grounds, at Belvedere, Kent—the Patron of this highly appreciated House of Rest for the poor homeless seafarer, in his old age and infirmity, being, as implied by the Institution's name, Vice-Admiral His Royal Highness Prince Alfred, Duke of Edinburgh.

Then, there is the Royal Naval Female School, founded in 1840, for which Institution Captain Maude has worked, for forty-two years, as one of the Honorary Secretaries; and the Sailors' Orphan Girls' School and Home at Hampstead, with which he has been connected forty-five years; while, in 1897, he became a member, and latterly Vice-Chairman, of the *Dreadnought* Seaman's Hospital Board, and is, since its removal to Greenwich, a Vice-President of this Hospital, having been specially elected to that post by his colleagues, in recognition of the services he had so long rendered.

Besides fulfilling the responsible duties involved in all these various fields of labour, Captain Maude is, in addition, the Chairman of the Continental and Colonial Church Society (Continental branch); and of the Irish Church Missions; and also a member of the Governing Council of St. John's Theological College, Highbury; and of the Strangers' Home for Asiatics, for shelter of foreign sailors; as well as assisting many another Charitable Institution and object—all testifying to a devotedly useful life of most unremitting and active benevolence, regarding which it may truly be taken as the expression of no mere passing wish to say, that it is fervently hoped it will be even yet much further prolonged, in continued prosecution of such untiring work and labour for God and man. Know we not, at least—

“Mortal Man, immortal is, until his Work be done!”



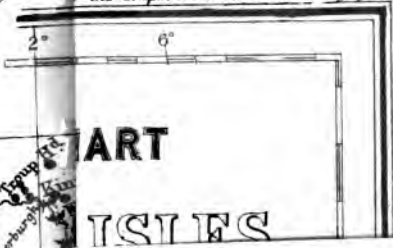
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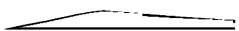
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*the Shipwrecked Mariner's Magazine.*



ART  
ISLES







## THE SEA AND ITS PERILS.



“Oh, many a bark, to that breast grappled fast,  
Has gone down to the fearful and fathomless grave;  
Again, crash'd together the keel and the mast,  
To be seen tost aloft in the glee of the wave!”

SCHILLER.



## WRECK REGISTER AND CHART, FOR 1880-81.\*



AS the revolving year comes round, the direful effects of storms and shipwrecks are vividly brought under our notice by the details of the Wreck Register, recently issued under the auspices of the Board of Trade. From it we regret to observe that the number of wrecks, casualties, and collisions, on the coasts of the United Kingdom, was 1,056 in excess of those of 1879-80, the number shown in the Register being 3,575, and resulting, unhappily, in the loss of 984 lives.

It should, however, be remembered that of these 3,575 wrecks, only 705 cases involved total loss, and that there was loss of life from only 288, or about 1 in 18, of the vessels lost or damaged.

After deducting 705 from the casualties of the year, we find that the remainder is made up of 1,314 more or less serious, and 1,556 minor disasters.

Thus, the Wreck Register, for the period under consideration, is full of information concerning the fearful storms which raged on our coasts during the year, and of the shipwrecks, the immense destruction of valuable property, and the fearful loss of lives.

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\* From “*The Life-Boat Journal*.”

When, however, we take into account the great and increasing shipping interest of the United Kingdom, and the certainty and violence of the storms which visit every year our seas and coasts, shipping disasters appear to be inevitable.

From the last annual statement of navigation and shipping, it appears that the number of British and foreign vessels that entered inwards and cleared outwards to and from ports of the United Kingdom last year, including their repeated voyages, was 668,000—representing a tonnage of 184,079,629, and carrying on board probably between three and four millions of persons on all occasions.

The National Lifeboat Institution has periodically called attention to the annual record of shipwrecks on our coasts, and, taking the list of them from 1854 to 1880-81, the total number of wrecks in these twenty-seven years was 55,416, with, what is still more lamentable, the actual loss of 19,584 lives from these very disasters. It is, however, gratifying to find that, during the same period, 1854-1881, the lifeboats of the Institution were fortunately the means, under God, of saving 12,667 lives.

The 3,575 wrecks, casualties, and collisions, reported as having occurred on and near the coasts of the United Kingdom during the year 1880-81, comprised 4,297 vessels. The number of ships in that period is unfortunately larger than the total of the previous year by 1,159, and is in excess of the casualties reported, because in cases of collision two or more ships are, of course, involved in one casualty. Thus, 713 were collisions, and 2,862 were wrecks and casualties other than collisions. On subdividing these latter disasters, we find that 636 were wrecks, &c., resulting in total loss, 670 were casualties resulting in serious damage, and 1,556 were minor accidents. During the year 1879-80, the wrecks and casualties, other than collisions, on and near our coasts, numbered 1,916, or 946 less than the number reported during the twelve months now under discussion.

Excluding collisions, on which we shall presently have a word to say, we observe that out of 2,862 casualties, 2,569 occurred to vessels belonging to this country and its dependencies, and that 293 happened to ships which belonged to foreign nations. Of these 2,569 British vessels, 1,732 were employed in our own coasting trade, 667 in the (oversea) foreign and home trade, and 170 as fishing vessels. There were 15 casualties to ships belonging to foreign countries and states employed in the British coasting trade, and 220 to foreign vessels bound to or from British ports, although not actually engaged in our coasting trade; while there were 58 casualties to foreign ships which were not trading to or from the United Kingdom.

The localities of the wrecks, still excluding collisions, are thus

given :—East coasts of England and Scotland, 1,088 ; south coast, 503 ; west coasts of England and Scotland, and coast of Ireland, 987 ; north coast of Scotland, 82 ; and other parts, 202 ; total, 2,862.

The loss of life, collision cases now being included, was as follows :—East coast, 585 ; south coast, 94 ; west coast, 162 ; north coast, 54 ; other parts of the coast, 89 ; total, 984. It will thus be seen that the greatest loss of life happened, as usual, on the east coast of England.

The accompanying Wreck Chart is for the past year, and its appearance is certainly most striking, and, we are compelled to add, very discouraging, from the fact that, whilst the lifeboats and the rocket apparatus save undoubtedly every life that it is practicable to save, the number of shipwrecks on our coasts every year is overwhelming, and baffles not only all means for their prevention, but all efforts for their yearly appreciable diminution.

In twenty years—between 1861 and 1881—the number of British and foreign ships that came to grief on our coasts, and from which life was lost, was 3,347, resulting in the sacrifice of 15,695 lives.

It is distressing to observe that the number of English ships, excluding collision cases, which appear to have foundered or to have been otherwise totally lost, on and near the coasts of the United Kingdom, from defects in the ships or their equipments, during the year, is 84 ; while 92 happened through the errors, &c., of masters, officers, crews, or pilots, 319 through stress of weather, and 95 from other or unknown causes.

The number of casualties arising from the same causes, during the year, and resulting in serious damage, is as follows :—Through defects, 32 ; errors, 86 ; stress of weather, 368 ; other causes, 122 ; and the cases of minor damage were, through defects, 82 ; errors, 155 ; stress of weather, 954 ; and other causes, 230.

The ages of the vessels wrecked during the past year are also thus given in the Register. Excluding foreign ships and collision cases, 146 disasters happened to nearly new ships, and 322 to ships from 3 to 7 years of age. Then there were 506 to ships from 7 to 14 years old, and 982 to ships from 15 to 30 years old ; followed by 463 old ships from 30 to 50 years old. And having passed the service of half a century, we come to the very old ships, viz., 59 between 50 and 60 years old, 34 from 60 to 70, 6 from 70 to 80, 7 from 80 to 90, 5 from 90 to 100, and 6 upwards of 100 years old ; while the ages of 83 are unknown.

Excluding collisions, 495 steamships, and 2,367 sailing vessels, were lost or damaged on our coasts last year.

Of the 2,569 British ships which met with disaster, 1,341 did not exceed 100 tons burthen, 791 were from 100 to 300 tons, 170 were

from 300 to 500 tons, and 267 were above 500 tons burthen. Of the 540 British vessels totally lost, irrespective of collisions, 44 are known to have been built of iron; and of this number 34 were steamships, and 10 were sailing vessels.

As regards the force and direction of the wind, the Wreck Register only gives the winds in 1,553 out of the 3,575 cases of the year. Dealing with these 1,553 cases only, we find that the winds that have been most fatal to shipping, on and near the coasts of the United Kingdom, during the year, were as follows:—N. to E. inclusive, 660; E. by S. to S. inclusive, 412; S. by W. to W. inclusive, 322; and W. by N. to N. by W. inclusive, 157; variable and unknown, 2; total, 1,553.

On distinguishing these last-named casualties near our coasts, according to the force of the wind at the time at which the disaster occurred, 421 happened with the wind at forces 7 and 8, or a moderate to fresh gale, when a ship, if properly found, manned, and navigated, ought surely to be able to keep the sea with safety; while no less than 1,132 disasters happened when the force of the wind was 9 and upwards, that is to say, from a strong gale to a hurricane.

The casualties to ships in our rivers and harbours continue, also, to be numerous; the number during the year having been 821, of which 81 were total losses, and 790 were partial casualties.

Of these, collisions numbered 540, founderingings 14, strandings 180, and miscellaneous 87.

The 821 casualties caused the loss of, or damage to, 1,397 vessels, of which 727 were British sailing vessels, 562 British steam-vessels, 80 foreign sailing vessels, and 28 foreign steam vessels. The lives lost in these casualties were, happily, only 13.

With reference to the collisions, on and near our coasts, during the year, 63 of the 713 collisions were between two steamships both under way; 148 between steam and sailing vessels, both being under way; and 72 between steamships under way and steam or sailing vessels at anchor. The importance of these facts cannot be overrated, for it is hardly possible to conceive a casualty more fearful often, in its ultimate consequences, than a collision between two great ships at sea.

As regards the loss of life, the Wreck Abstract shows that, as we have above mentioned, the number was, unhappily, 984 during the twelve months. Of these, 66 were lost in vessels that foundered, 96 through vessels in collision, 481 in ships stranded or cast ashore, and 237 in missing vessels. The remaining 104 lives were lost from various causes, such as through being washed overboard in heavy seas, explosions, &c. Of the 238 ships, from which the 984 lives were lost, 208 were British, involving the loss of 852 lives, and 30 were foreign, causing the loss of 132 lives.

## "HEROES OF THE SEA."\*

**N**OW the entire heart of England bounded with feelings of lively satisfaction, when the news was flashed to our shores of the victories of Kassassin and Tel-el-Kebir, is now matter of history. How, subsequently, from the Queen to the lowliest of her subjects, the heroes of these conflicts received a hearty welcome home, and an enthusiastic "well done," is also well known. England is justly proud of the deeds of valour wrought by her sons on the battle-field, and, it may be, is apt to think that these are the only heroes the nation can produce. The same spirit, however, which animated the troops under Sir Garnet Wolseley, and the sailors who manned the fleet which attacked the Alexandrian forts, is very widespread in our mercantile marine, and it is perhaps nowhere more conspicuous than in that gallant body of men who man our fishing-smacks. Never does a destructive gale sweep over the North Sea but some of the fishing-smacks are instrumental in saving life, which, but for their heroic endeavours, would inevitably be lost. It is perhaps very difficult for anyone who has not been at sea in one of these small but exceedingly handy craft, and seen them "weather" what the fishermen call a "treble reef breeze," to realise the dangers and hardships which our fishermen undergo. We speak, now, more particularly of the trawlers, for the open boats fishing out of the northern ports run for shelter whenever a gale comes on. Not so the trawler. He had to travel too great a distance to be able to do this; and he would not do it if he could, for the simple reason that he wants to be at his work as soon as the weather moderates; and so, no matter how hard it may blow, the trawler keeps to the sea. When the gale becomes too strong to fish the vessel is "smugged" down, and laid to, the crew hoping for better weather. So widespread are the fishing grounds, now, that there is scarcely a mile of the North Sea, from the Holman southward, that is not constantly being sailed over by fishing-smacks. This being the case, it will be seen that if a disabled vessel keeps afloat but a few hours she is almost sure to be fallen in with by some fishing-smack or other, and, to the honour of the fishermen be it said, they never leave their fellow-creatures to perish, no matter how great may be the odds against which they have to fight in effecting a rescue.

It is so common a thing for the last gale to be "the worst ever known," both amongst sailors and fishermen, that one is apt to think

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\* From "The Hull News."

that the dangers and discomforts of a storm are soon forgotten when once they have passed away. From the testimony which we have heard from those who weathered the late disastrous gales, the experience must have been terrible indeed. Said one skipper, "The sea all round was feather-white for days." The testimony of another was, "When our smack was in the trough of the sea I could not see the schooner's mast-heads, although there was only one sea between us." Another said, "One day I saw a mast drive past our weather side, but, for the snow and the foam of the sea, I could not see what kind of mast it was." All this points to a most fearful state of things; but the numerous wrecks in which the entire crews of the lost vessels have perished, speak still more emphatically. That the loss of life would have been much greater is proved by the fact that the Hull and Grimsby smacks saved, during the recent storm, scores of lives. Into Hull alone, on two days, twenty-five shipwrecked seamen were brought by three fishing-smacks, and we know of no more thrilling record than that which is supplied by the action of these brave fellows.

The terrible gale had scarcely subsided when the smack *Liberty* arrived at Hull, having on board fourteen shipwrecked seamen, who had been rescued in the most gallant manner from the Swedish barque *Charlotta*. The *Liberty* had left Hull on the 2nd December, for the fishing grounds, and had only arrived where it was intended to prosecute her fishing when the terrible gale burst upon them, preventing them from fishing. The vessel was hove to under a treble reef mainsail, but of course, in such a gale, made considerable way. Whilst driving about in the huge seas, which the storm drove before it with almost resistless fury, the look-out descried a vessel which was evidently in a waterlogged condition, and a nearer approach showed that she had a distress signal at the mizen-head. The master, Captain E. Cawood, at once altered his course, and made for the disabled barque. On coming closer, he observed that the crew had taken refuge on the deck-house aft, the deck itself being for the most part burst up, and the planks, together with the cargo, also of wood, were being rapidly washed away. The distressed crew, worn out with constant pumping, shortness of food, and exposure to the pitiless storm, begged to be taken off, the cry coming from most of the poor helpless fellows, "Save us! save us!" With decks washed away, and boats either smashed or carried overboard by the heavy seas which constantly broke over the vessel, the Swedish crew were absolutely powerless to help themselves. The master of the smack *Liberty* tried to cheer the poor fellows, by telling them he would do the best he could for them; but a mountainous sea was running, and it appeared to be almost certain death to anyone who should venture in the

smack's boat. Collecting his crew, and placing each man on the weather side of his vessel, Captain Cawood directed them to take each a rope, and, as he sailed past the barque, to throw these ropes for the distressed seamen to catch, and by this means be hauled on board. The *Liberty* was then sailed past the *Charlotta*, but it was soon apparent that the rescue could not be effected over the side, as each time the vessel rolled, large planks and pieces of timber, forming her cargo, were thrown out with such force that it would have been dangerous to make the attempt at hauling the sailors on board the smack. The *Liberty*, therefore, was placed under the lee of the barque, where the water was not quite so rough as in other parts, and the master appealed to his men whether they would risk themselves in the boat. He said, "I know it is almost certain death, but what are we to do?" The second hand, George Hame, and the third hand, named Turner, simply said, "Let us launch the boat, skipper; we can't leave all these poor fellows yonder." The small boat was promptly launched, and those two gallant fellows plied the oars so vigorously that they were soon under the lee quarter of the barque. Their instructions from their master were that they should only bring half the Swedish crew at once, and, taking seven in the boat, they commenced the return journey, rendered more perilous by the increase in the numbers. Several of the remaining men on the sinking vessel, fearful that the boat might not be able to return for them, jumped into the sea, and risked the safety of the whole lot by necessitating the putting about of the boat to pick them up. All the four who had leapt into the sea were, however, safely got into the boat, and in a few minutes they were hauled over the side of the smack, almost helpless, and Captain Cawood the next moment pushed off the boat's bow, so that she might return for the three who still remained on board the *Charlotta*. Hame and Turner never hesitated, but away they rowed back—many a time, during that perilous trip, being hid from view of those on board the smack by the mountainous seas which rolled between them. Without accident, the master and the chief and second mates of the barque were taken into the boat, and they, too, were soon safely on board the *Liberty*. By the time that the men had well got on board, the kettle was boiling, and nourishment of various kinds was prepared as quickly as possible, as the men had been thirty-six hours without food. Dry clothes were also supplied, and the shipwrecked ones were made as comfortable as possible.

The day after the *Liberty* arrived at Hull she was followed by the smack *Lusty*, also owned, like the former vessel, by Messrs. W. and J. McCann, having on board the crew, six in number, of the Dutch schooner *Anna Helena*. The crew of this vessel had been compelled



to take to the deck-house, the schooner, which was also timber-laden, being waterlogged. In this case the crew were taken off, under circumstances precisely similar to those which occurred in the case of the *Charlotta*, by the second and third hands of the *Lusty*, named respectively John Brown and Edward Hantz. These men, one of them a Norwegian, took their lives in their hands in this forlorn-hope, battled manfully against fearful odds, and brought safely from their sinking vessel the six men forming the crew of the *Anna Helena*. It is very sad to think that Hantz, within a few hours of so gallantly helping to save the lives of six of his fellow-creatures, should himself have fallen a victim to the fury of the storm. It was about three o'clock on the afternoon of the 18th December, that this brave lad went away on his errand of mercy, and at twenty minutes to nine o'clock the same night, whilst it was his watch on deck, a sea struck the vessel and carried him away.

The third vessel bringing in wrecked crews was the *Minerva*, owned by Mr. Birch, and to say how her hands manned the boat, and battled with the fury of the waves, would be to repeat the story we have just narrated. The hardships endured in that one gale will never all be told; but we are glad to be able to show how, as far as possible, our gallant fishermen, of whom we may well be proud, did their best to alleviate suffering and to save precious life. In the case of the *Liberty*, at least, she had been driven out of her course by the gale, and but for that circumstance the crew of the *Charlotta* would undoubtedly have perished, either through the sinking of their vessel or from exposure. The fishermen ought certainly to be well treated, when, after such a gale, they arrive in port. About the services these men have rendered they are very modest—the story has to be almost dragged from them, and, to their credit be it said, in every case they have declined to receive money rewards for the saving of life.

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### A TALE FROM THE OCEAN.\*

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**F**ROM time to time, items of intelligence, extraordinary, tragical, ghastly, and always full of a wild, striking interest, come to us from the sea. It is hard to account for the peculiar fascination which ocean news possesses. Is it because the bareness, and barrenness, of the great salt surface cannot but give a significance, that one seeks for in vain among the throng of interests

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\* From "The Daily Telegraph."

ashore, to all reports which arrive from its swelling and limitless waste? Is it because nothing happens there that does not catch something of the mystery of the universe of fathomless waters? Not a ship's report, commonplace as it may be, and referring to little more than winds, and parallels, and meridians, but kindles the imagination as no other plain statement could; and, in reading that she rounded the Horn on such-and-such a day, took the South-East Trades in such-and-such latitude, and crossed the Equator in such-and-such longitude, a picture of the sea is put before us. The stormy Antarctic headland is there, with its roaring surges and the green acclivities of its giant icebergs; the trade wind is there, whipping the ocean into leagues of running silver, filling the white canvas and holding it steady as carven marble, and chequering the heaven of the southern hemisphere with those swelling masses of trade-cloud which soar above the horizon; the broiling Equator is there, breathless under the burning eye of the sun that centres the sky and makes no shadow, and nothing to tarnish the copper brightness of its surface but a catspaw in the far distance, travelling slowly and fading presently like the moisture of breath upon a looking-glass. These are the inspirations which glow from the most prosaic narrative of the shipmaster; but the deeper magic is felt when he brings home with him some brief and dreadful tale, oftener a hint rather than a narrative, though more suggestive and full in that form than were all the particulars related and the story rounded to completion. Recently the maritime journals, which devote the whole of their space to sea matters, have been more than usually crowded with ocean incidents. Hardly a day passes but there is printed some extract from a log-book, some deposition before a Receiver, some report hastily shouted from one ship to another as they sweep past far out upon the sea, which strikes the imagination either for its horror or for its wild picturesqueness, or for the curious and startling distinctness with which it defines the mariner's life, and the terrible experiences that befall him, as compared with ordinary existence on shore.

There has just appeared in our columns a peculiar illustration of what the sailor sees and what he endures—the bitter hardship, the lonely agony, the obscure and nameless end, that often fill up the measure of his time in the stormy and tossing world to which he belongs. It was a piece of news occupying only five or six lines. It was brought by the master of a steamer, named the *Dora*, belonging to Sunderland, and ran thus:—

“Off Harboro', Nov. 16, Harboro' light vessel bearing E.S.E., wind “E. and blowing a strong gale, with a high cross sea, passed a large

“raft, securely lashed with ropes, which appeared to have two or three dead bodies lashed to it, the sea washing over them.”

The reader notes with a real feeling of relief that it was blowing a strong gale at the time, for in that lies the excuse of the *Dora's* people for not making some effort to ascertain what those two or three bodies were, and whether they were or were not the forms of living persons. When a sailor describes the violence of the wind as a “strong gale,” we may be sure that it would come pretty near to a landsman’s notion of a tremendous hurricane. In such a sea as a gale of wind would bring up, it is not to be supposed that the *Dora* could have done anything more than roll and foam past the terrible object which had risen, like an apparition, among the high cross seas. No boat could have been lowered, and, failing that, there would be no means of learning whether life still lingered in the unhappy creatures, over whom the seas were washing, with that icy edge in them which the November East flings into the gale. But the imagination cannot lose sight of that raft as she passes away astern of the steamer, coming and going amid the roaring folds, and finally disappearing to the sight among the boiling waters. Who were these men? What was their country and what their ship? Were they the floating relics of a vessel that had carried many beating hearts to the bottom with her, and whose fate would never be known outside the cruel barrenness of the word “missing”? Above all, was any one of those lashed and prostrate bodies alive? For if so, the most vivid fancy would be powerless to image the agony of dying despair which freighted that raft, as the steamer toiled on past it, through the bursting surges, and gradually disappeared in the haze of the blowing spray. Many a floating seaman’s tomb has been encountered; many a boat holding men whose eyes sparkled with the fires of famine; many a water-logged vessel in whose rigging the sailors, fastened with ropes, gaped with parched and speechless mouths at the ship that had been sent by Heaven for their deliverance; but in its way there never could have been met at sea a more ghastly and saddening object than this raft. The brief, grim description of it haunts the imagination; we see her hove, end on, up the roaring surge that breaks over her and veils her; we see the motionless bodies, tossing up and down in the crystal-line sheets of water which thunder over them and leave them exposed; we feel the bitter frost of the piercing gale, and wonder whose children those motionless forms were, and what hearts, by and by, will be mourning over their long, strange absence.

In all pity it may be wished, that those men were dead when the steamer passed the raft; for sweet as life is, yet death itself is incomparably better to a man so situated, whose dying gaze is kindled by

the approach of a vessel, but whose heart is made to drop like lead in his suffering breast, as the ship goes by without heeding him, and his last hope expires in her wake. The captain of a Swedish brigantine, in a recent narrative, reminds those, who read his report, of the intolerable anguish that is caused to the shipwrecked by a vessel passing and taking no notice of their distress. He had abandoned his vessel in the North Sea, west of Horn's Reef, on the 16th of this month, and he adds: "When lying with my crew in two small ship's boats, one already capsized, a British, schooner rigged steamer, black funnel, with white hull, and black centre hull, passed us about two p.m. within one hundred and fifty yards, without making the slightest effort to save us, although we had signal of distress up, and they must have heard our cries." It is to be earnestly hoped that the Swedish captain was mistaken as to the nationality of this steamer; for our faith in the brave and humane spirit of the British sailor is much too high to suffer us to believe that there is any English seaman afloat who would disgrace his honourable flag by an act so utterly at variance with the traditions of his calling. We will not suggest that, if an English built, or even English owned boat, she might have been commanded by one of those foreigners who are just now in great request in the British mercantile marine; but, if we are forced to accept this steamer as a countryman, then it will be safe to surmise that the besetting sin of the merchant service pursued her, in the shape of no look-out being kept, and that she would have plumped into another ship with the same nonchalance with which she passed the shipwrecked Swedes. Be this as it may, in the narrative of the Swedish captain the terrible mental sufferings imposed upon distressed men, by the approach and departure of vessels is displayed; and, though no object to be met at sea could possess more horror than that of the raft passed by the Sunderland steamer, the worst part of such pictures of human misery vanishes when it is known that the men were dead, and incapable of that anguish, worse than twenty deaths, which comes when hope, having been aroused, sinks and expires, and leaves the helpless victim to freeze or strangle amid the crash of colliding seas, and under a heaven dark with storm, and bellowing with the voice of the hurricane. As we have already pointed out, it need not be doubted for a moment that the master of the *Dora* was powerless to approach the raft, or in any manner to inform himself about its occupants. Yet none the less ought it to be incumbent upon every captain, when the state of the sea renders the act possible, fully to examine such waifs as boats and rafts, and to suffer no other consideration to weigh with him than the hope of saving life, or the chance of obtaining information that may allay the restless and distressing doubts which, for years, haunt

scores of loving hearts, who know no more than that the vessels in which their husbands, sons, sweethearts, brothers sailed, are "missing."

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WRECKS AND CASUALTIES.

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**A**MONGST the thrilling incidents of the various Maritime Disasters which have more recently occurred—in numerous instances involving the total destruction or abandonment of vessels, both large and small, with, unhappily, much terrible privation and loss of life to crews, &c.—there might well be recorded many and many a harrowing story of luckless voyaging, from storm and tempest, only too sadly exemplifying, in case after case, some one or other of the countless "Perils of the Sea" to which both Ship and Sailor are at all times so imminently exposed.

It would, however, be wholly impossible, within the limits of any available space, adequately to detail even the bare narratives of the several exceptionally noteworthy wrecks, and minor casualties, of which the exact particulars may be fully known—each tale but differing, too, in the special intensity of its own calamitous surroundings, or, perchance, in the brighter halo cast over the darksome picture, through the devoted fortitude and heroic daring of Ocean's brave sons.

Apart from every other cause to which the long list of late disasters is to be set down as due, the terrific gales prevailing during the last three months of October, November, and December, resulted in an amount of havoc to shipping of all kinds, on our coasts, as well as at sea and abroad, which brought about most fearful loss and distress, as a sequel to the already terrible records of the current year, in the course of which it is noted that the deep swallowed up some 1,790 vessels, and claimed 4,129 lives. Happily, these numbers show a slight decrease, namely, of 5 in the lives and of 249 in the wrecks. Altogether, 945 British-owned vessels were lost in 1882, and 445 of these off our own shores, where 131 foreign ships also perished; while the majority of collisions likewise took place near these coasts, or 93 out of 139. Within the last five years no less than 20,763 persons have, it is computed, perished at sea.\*

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\* The timely aid and relief to the shipwrecked sufferers themselves, or the suddenly bereaved and distressed dependents, directly or indirectly afforded, almost without exception, by THE SHIPWRECKED MARINERS' SOCIETY in London, and its 1,200 local Honorary Representatives and Agents at Home, Abroad, and in the Colonies, will be found included in the General Statistics of the Society's Work, as given, under the Society's Heading, at the end of each Number of this Magazine.

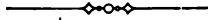


## MARITIME NOTES.



“The Sea! the Sea! the open Sea!  
The blue, the fresh, the ever free!”

PROCTER.



“Thou glorious mirror, where the Almighty's form  
Glasses itself in tempests!”

BYRON.



## IN AN OPEN BOAT AT SEA.\*



BEYOND the shortest of notices in the press, nothing has been made public of one of the most remarkable of boat voyages on record—a voyage of some 700 miles across the Bay of Biscay to Southampton, in bad weather, during which the skill and experience, &c., of Captain Frederick Harvey, R.N., and Captain H. Whalley Nicholson, Army Reserve (late of the 82nd Regiment), came out in bold relief, and the excellent qualities of the boat (a Berthon), for not only saving but preserving life, were proved beyond question.

The boat in which this remarkable voyage has been accomplished is made of canvas, and shuts up to a breadth of some eighteen inches; indeed, when hoisted inside of the ordinary boat hanging to the davits, and covered with tarpaulin, it is a hard matter to distinguish it from part of the ship's gunwale or bulwarks. The dimensions of the boat used on this occasion were 28 ft., by 8 ft. 6 in., by 2 ft. 6 in., and her weight a little over one ton, namely, 21 cwt.

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\* From “*The United Service Gazette.*”

The following is extracted from the log of the voyage in question:—

"The complement of this boat's crew on leaving Southampton, August 11, 1882, was as follows:—Captain F. Harvey, R.N.; Captain H. Whalley Nicholson, A.R. (late 82nd Foot); boatswain, John Paddon (one of the survivors of the *Teuton* disaster); James Peters, A.B.; William Turner, carpenter, of Romsey; William Farley, A.B.

"Started from Southampton Docks in the R.M.S.S. *Essequibo*, Captain Edey, at 10 a.m. August 11, 1882, the collapsible boat stowed amidships, partially folded, the intention being to leave that ship on her route at a distance of from 400 to 500 miles from the Land's End.

"August 12, 1882.—Crew of the boat employed in fitting up the gear found uncompleted by the Berthon Boat Company.

"August 14.—Finding the wind increasing—the ship rolling somewhat heavily and having already reached 400 miles from the Lizards—it was considered advisable to leave the ship. A successful launch was thereupon accomplished at 9.50 a.m., much to the satisfaction of the officers and crew of the *Essequibo*, as also to the crew of the boat; the risk being much enhanced (in the opinion of the sailors) from the fact that this boat had never before been tried in the water—a most unusual condition under which to despatch any craft, especially upon so hazardous a voyage and for a special experiment upon which the practical value of this class of boat amongst others (not yet tried) so much depended. 10.10 a.m.—Dropped astern clear of *Essequibo*. This ship by previous arrangement stayed in the vicinity until it was ascertained the boat intended to proceed. 10.45 a.m.—Found it necessary to lighten the boat, which was effected by throwing overboard ballast, tanks, &c. Proceeded on course E.N.E., wind being from W.N.W.; lost sight of *Essequibo*. Everyone in the boat saw the vessel disappear with regret, for nothing could exceed the kindness shown on board that ship. 12 noon.—Heavy swell, much rain. One of the crew, viz., the mechanic from Romsey, shipped on account of his knowledge of the construction of the boat, caused some alarm from his complete prostration, it is supposed from combined sea-sickness and nervousness; other hands working ably. 4 p.m.—By this time things had shaken into their places. 10 p.m.—Wind freshened from the N.W., accompanied by heavy sea and squalls of wind and rain; shipped much water during night; boat kept under storm lug.

"August 15, 4 p.m.—Passed full-rigged ship on starboard bow. The weather being thick she was hardly observed until close on board. Her attention was attracted by Captain Nicholson sounding bugle calls and 'Rule Britannia' on the cornet, which instrument throughout the voyage proved a most valuable substitute for the fog-horn, which had through someone's neglect not been provided. Noon.—Weather clearing; the observation for latitude was taken, the result of which could only be considered approximate on account of the difficulty to obtain a good horizon. 2 p.m.—Shifted casks, &c., and baled out boat, she having shipped much water. Wind strong from W.N.W. 5.30 p.m.—Crew feeling much chilled, weather being most trying; oil stove tried for first time; and some hot chocolate, after much patience, was served out, the stove provided being most unsuitable for this service, eventually melting away—the greatest precautions being necessary, also,

lest the canvas, of which the boat is constructed, might be fired. Strong wind W.N.W., our course N.E. Midnight.—Shipped heavy seas. N.E. course continued. All very wet and chilled.

“August 16, 4.30 p.m.—Carpenter Turner had by now recovered sufficiently to take his first turn of watch. Noon.—By observation the latitude was again approximately ascertained. Shoals of porpoises accompanied boat for some time, diving under her bottom and all around. Speed by log,  $7\frac{1}{2}$  knots. 3 p.m.—Obtained longitude by chronometer, and found we had made good offing. 4 p.m.—Passed ship to leeward of us, bearing S.E. 9.30 p.m.—Passed vessel standing E.S.E. Rainy and squally. Still under storm sails.

“August 17, 7 a.m.—Observed a steamer in the distance. 8 a.m.—Sighted a barque on the port beam; made for her to verify position. Showed colours and called her attention by bugle. Barque hove-to for a few minutes; but filled and proceeded on her course before we could come up with her. This extraordinary behaviour on the part of the barque is inexplicable. 8.30 a.m.—Proceeded again on our course. Boat's speed, as ascertained by log, 9.6 knots. Still under storm sail. Noon.—Latitude observed 41 deg. 36 min. Altered course to E.S.E., for the Scilly Isles. Speed reduced to from 4 to 5 knots. 3 p.m.—Longitude by chronometer, 8 deg. 37 min. W. This being the only fair chance yet afforded of obtaining the longitude, which proved most valuable. Shaped course for St. Mary's. 8 p.m.—Calm nearly all night, swell on.

“August 18. Daylight. Light winds. 7 a.m.—Observed a barque bearing W., made for her, and obtained bearing and distance from the Lizards, which agreed with our own reckoning, viz. eighty miles E.N.E. from Lizards. Played ‘Rule Britannia’ and ‘Auld Lang Syne’ on the cornet, on parting company, which was politely acknowledged by the crew of the barque *San José*. Noon.—Wind shifting to the N.E. it became judicious to make for the Scilly Isles, for the purpose of reporting our safety so far through the Bay of Biscay. 8 p.m.—Wind freshened, boat realising a speed of about 10 knots. Sighted a steamer.

“August 19, 0.45.—Sighted St. Agnes Light. 1.30 a.m.—Sighted the Bishop's Light. 4 a.m.—Rounded the Bishop's, current being very strong, almost a race. Channel was not made until 5 a.m. 5.30 a.m.—Proceeded by the chart, through the Broad Sound, to St. Mary's. The entrance by this channel is difficult, even to those acquainted with the islands. 6.30 a.m.—Anchored off the town of St. Mary's. The crew being much fatigued, the boat was placed in charge of a man from the shore, and the crew granted liberty for the day, which was probably turned into night. Foremast being insecure, bought stay for ditto. 6 p.m.—By the advice of the Governor of these islands, Mr. T. A. Dorrien-Smith, the boat and crew were shifted to his island of Tresko, and towed there by his launch, the officers availing themselves of Mr. Smith's kindly proffered hospitality. Engaged a pilot (Mr. Walter Hicks) to be in readiness to start next day for Southampton.

“August 20.—Wind blowing hard from S.W., barometer falling fast. 3 p.m.—The Governor concurred in our decision to start at 3 p.m., although the crew, at the instigation of the pilot, were disinclined to obey their sailing orders with that promptitude which they had hitherto displayed, in conse-



quence of the extreme roughness of the weather, with a falling barometer, in an open boat. 4 p.m.—Passed the N.E. end of the islands, and shaped course for the Lizards. 8.30 p.m.—Passed a steamer, the *Ebbw Vale*, of Cardiff, who bore down for us, thinking we required assistance. Blowing hard, and heavy rain all night. Speed from 7 to 9 knots. Wind S.W.

“August 21, 1.30 a.m.—Abreast the Lizards. 9.30 a.m.—Passed the Eddystone. Wind strong, S. westerly. Speed about 7 knots. 2 p.m.—Passed the Start. 11 p.m.—Off Portland. 11.30 p.m.—Off Shambles.

“August 22, 0.30.—Sighted the Needles light. Entered the Channel at 8.15 a.m., being thirty-five hours' run from the Scilly Islands. 11.30 a.m.—Arrived at the Quay, Southampton.”

In concluding this very brief account of the proceedings of the collapsible boat, the voyagers state it is impossible to express too highly the deep sense of obligation to the Royal Mail Steam Packet Company for the great facilities afforded by them in every way towards testing the efficiency of this means of saving life, which, with its defects remedied, and certain obvious improvements made, cannot fail to prove of the greatest use on board ship.

There have been many adventurous boat voyages, from that of Bligh in the Pacific to the last trip in an open dingey across the Atlantic, but it may safely be said that none are more remarkable for daring and usefulness than that so successfully and manfully accomplished by Captain Harvey and his gallant companion Captain Nicholson, with four hands, in a canvas collapsible boat. The run of about 300 miles, in some thirty-five hours, from Tresco, in the Scilly Islands, to the Docks at Southampton gives a very good idea of the speed to which these boats may attain; indeed, on more than one occasion the boat logged ten knots.

The originator of this experimental voyage was Captain Harvey. He was very forcibly impressed with the value of Mr. Berthon's collapsible boat, and, as one of the jurors at the Exhibition of Means and Appliances for the Protection and Preservation of Human Life, lately held at the Alexandra Palace, he was the means of conferring the Gold Medal on Mr. Berthon's invention. His anxious desire, therefore, to place beyond the range of theory an invention which, he believed, might be made of incalculable benefit to those who “go down to the sea in ships” is very easily understood. Besides all this Captain Harvey is an authority on boats, and boat sailing, and his opinion on the seagoing merits of the Berthon boat is accordingly of the greatest value.

Captain Nicholson, who also was one of the jurors by whom the Gold Medal was awarded to the Berthon boat, seconded Captain Harvey's efforts with a zeal and energy deserving all praise. It seems from the log that Captain Nicholson was great on the cornet,

and invariably treated a passing ship to "Rule Britannia;" his cornet likewise acted, it appears, in lieu of the fog-horn, and proved a very fair substitute. Captain Nicholson's performance of "Rule Britannia," in an open boat during heavy weather, under a plethora of moisture in the Bay of Biscay, is probably unique. His imperturbable good-nature, pluck, and endurance, proved of essential importance in keeping up the spirits of the crew, under no ordinary circumstances of depression. As an author and traveller this officer has already made his mark, and it is earnestly to be wished that he may have continued success in his career.

The crew were volunteers, and all did their duty: Mr. Paddon, the boatswain, one of the survivors of the ill-fated *Teuton*, certainly proving that his nerve had not been affected by the fearful scenes passed through when that ship foundered.

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S E A P I C T U R E S .

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[From *Good Words*.]



Ah me! the wet wind, and the bar that chafed and muttered,  
 The dwindling line of misty lights along the crowded quay  
 And, ah me! the light words, the false, wild words I uttered,  
 The while my heart yearned out to him, across the broadening sea!  
 Ah me! my weary heart, that found not where to rest,  
 Poor heart, that knew its only home was close against his breast!

Ah me! the still sea that lapped on beach and boulder,  
 The gleam on every brick-red sail far out across the bay!  
 And, ah me! my flushed cheek that drooped upon his shoulder,  
 While showers of glad, repentant tears washed all the past away!  
 Ah me! my happy head that found its shrine of rest,  
 Blest head, that nestled safe and warm against his faithful breast

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**E**ARLY NAVIGATION. — An Arabic manuscript of the year 1365, from which Herr Gilde-meister has translated several extracts for the Gottingen Society of Sciences, affords an interesting peep at nautical matters among the Arabians of those times. The author deals separately with the ships of the Mediterranean, of the Indian Ocean, and Red Sea, and of

the Nile and other rivers. *Inter alia*, he describes a mariner's compass; and this is noteworthy, inasmuch as only one description of the instrument in an Arabian work has hitherto been known (it is of date 1242). The following is a curious picture:— "A ship (of the Indian Ocean) carries generally four divers, whose only duty is, when the water rises in the

ship, to smear themselves with sesame oil, stop their nostrils with wax, and, while the ship is sailing, jump into the sea. Each has two hooks connected with a thin line; one of these he fixes in the wood of the ship, and with the other he dives. He swims, like a fish, a little under the water, and uses only his ear. Where he hears the trickling of water, he stops with wax, where there are holes stopped with palm stems; and where there is sewing, he often passes a piece of cocoa fibre through the fixed palm stem. The thing is easy to him; in a day he stops over twenty or thirty leaks. The diver comes up without inconvenience, whether there is wind or calm."—*Nature*.



**REMARKABLE FISH.**—During the recent scientific cruise of the *Travailleur*, there was taken off the coasts of Morocco, and from a depth of about 1,270 fathoms, a fish of very singular character. It is about a foot and a half long, and of a deep black colour. Its most distinguishing feature, however, is a huge mouth cavity, which is quite disproportionate to the small, tapering body, and capable, through the arrangement of the jaws, and presence of extensible membranes, &c. (as M. Vaillant describes in *Comptes Rendus*), of very wide enlargement of the cavity. It may be fitly compared to the well-known pouch of the pelican, and M. Vaillant thinks it probable that food accumulates in the pouch and is there partly digested. The locomotive organs are of the most rudimentary nature. The paired fins are represented merely by two very small appendices, which may be considered pectoral fins; there are no ventral fins, but a dorsal and anal are present. The respira-

tory apparatus is of unique composition. There is no swimming bladder. It is proposed to call this peculiar fish *Eurypharynx pelecanoides* (the fish with the pelican-like, wide pharynx, so to speak).

**LIFE SALVAGE.**—Some tables relating to life salvage, for the year ended June 30, 1882, have just been issued by the Board of Trade. From these we observe that, during the year 1881-2, 260 lives were saved by means of the rocket apparatus, being 897 less than the number saved by the same means during the previous year. This great diminution in the number of lives saved during the past, as compared with the previous year, is principally owing to the absence of disastrous gales similar to those which prevailed on our coasts on Oct. 28, and Jan. 18, of the year 1880-81, when 264 and 189 lives were respectively saved. In order to stimulate the exertions of the men employed in the service of saving life from shipwreck, the Board of Trade now give medals in bronze and silver for acts of special gallantry. The lifeboat, and the rocket apparatus, form the principal means adopted for saving life on the coasts of the United Kingdom. With few exceptions, the lifeboats are the property and under the management of the National Lifeboat Institution. The lifeboats at Ramsgate and Fair Isle are now the only lifeboats under the superintendence of the Board of Trade. The rocket apparatus, on the contrary, are the exclusive property of the Board of Trade. During the year 1881-2, the number of life-saving apparatus stations (in which four cliff-ladder stations are included) was increased from 288 to 293, six new stations

having been established, and likewise one previously existing station altogether abolished.

THE ATLANTIC NEAR THE NORTH AMERICAN COAST.—At the recent annual meeting of the United States National Academy of Sciences, Professor Verrill, of Yale, gave the results of various observations made during eleven years off the coast between Chesapeake Bay and Labrador by the United States Fish Commission. One of these results is, that there is an error in maps and charts, in placing the warm belt, or Gulf Stream, too far from the shore by 30 or 40 miles. From the shore to about 60 miles out the fauna is Arctic; in the warm belt it is tropical or sub-tropical. The 100-fathom line has been taken to mark the border of the Gulf Stream; but it would be more correct to say the 65 or 70 fathoms line. Professor Verrill holds that there is no variation in the body of the stream (as has been supposed) in summer and in winter, though there is some variation in the surface water. The proof lies in the distinct line of separation of the two kinds of life on the bottom; if there were variation there the sub-tropical life would be destroyed. The portion of the warm belt south of the New England coast, 70 to 120 miles from the coast, teems with life. In 1880 the dredges brought up 800 species of fauna, over one-third of which were wholly new, including 17 kinds of fishes, 270 of molluscs, and 90 of crustacea. To the 100-fathom point there is a gradual descent from the shore, then comes a precipitous descent to 1,000 fathoms or more. The warm belt seems to extend down this precipice only about 125 fathoms. Among other points noted in the

animals found at great depths is their (generally) red or orange-yellow colour; supposed to be a means of defence by rendering invisible. The bottom of the Arctic belt is a coarse gravel or sand; but that of the Gulf Stream is of sand so fine that the grains can only be distinguished with the microscope. Mixed with minute shells, this sand seems to form a bed as level and hard as any floor. Boulders are sometimes found on this bottom among the dense animal and vegetable life with which it is carpeted; they have probably dropped from ice cakes. The dredges sometimes brought up a rock, possibly of pliocene age, filled with fossil shells, like those now found on the bottom. The absence of all vertebrate fossils is remarked on. The dredges, also, never brought up any evidence of the existence of dead vertebrates, though the water swarmed with sharks, dolphins, &c.; nor was any evidence of man's existence met with, except an india-rubber doll, dropped from some vessel. Yet the territory dredged was in the track of European vessels, many of which must have gone down there, and lives been lost. Such facts lead Professor Verrill to doubt the negative evidence in geology.

IRON SAILING SHIPBUILDING.—When the Suez Canal was opened, thirteen years ago, it was predicted that no more sailing ship tonnage would be built, as it was thought that there was then more than enough afloat for the services of the few trades that would be left it, and that the cargo steamship with the new coal economising compound engines would more speedily and cheaply transport the products of the East and West, from one to the other, by the new and short

route. In consequence of this opinion prevailing throughout the shipping world, many interested in sailing ships hurried out of this kind of property to invest in steam vessels, and the value of iron ships became lower than ever had been known. In less than three years after, it was discovered that the day of the iron sailing ship was not over, and the shipyards of the country were busy building iron ships of 1,500 to 1,700 tons register, at prices that reached as high as £20 to £22 per ton, or three times the price at which ships of the highest class changed hands in 1870. During the period of general depression of trade, 1877 to 1880, few iron sailing ships were built, but on the revival of the freight market two years ago many orders for new ships were placed; and at present a large number of iron sailing ships are under construction, a great part of which are of tonnage that a few years since was considered too large to be conveniently worked under canvas, and for single firms to charter for cargo on account of their large capacity. When the American commercial marine was in existence it contained a greater proportion of very large ships than belonged to this country, and the iron ships we now are building for the Eastern and San Francisco trades are not much larger than those built by the shipowners of New York and Boston previous to the destruction of their commercial navy. The British shipowner has cautiously advanced the size of his ship, for the great trades, from 1,000 tons 20 years ago, to 1,200 tons in 1868, 1,600 tons in 1875, and now the favourite ship has a register of 2,100 tons. A magnificent ship of this size, having a displacement of 4,800 tons, was recently launched from the dockyard of Messrs. Archibald M'Millan and Son,

at Dumbarton, and named the *Imberhorne*. A beautiful model of this ship and her sister, the *Falconhurst*, now building in the same yard, was shown at the late International Exhibition of ship models, held in the Fishmongers'-hall, under the auspices of the Shipwrights' Company, and gained Messrs. M'Millan, for the second time, the gold medal of the guild. The *Imberhorne* and *Falconhurst* are to form additions to the fleet of Messrs. W. R. Price and Co., of Lloyd's, London.

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**W**HALEBONE.—Owing to the discovery and extended use of petroleum, on the one hand, and the multiplied ways of utilising whalebone, on the other, the latter substance has become the most valuable, instead of the least valuable of the products of whale-fishing. America has the lion's share of the whalebone industry. According to the German *Polytechnische Zeitung*, the improved product is there supplied from only seven works—four in New York and three in Boston. The principal application of whalebone, now, is that in making whips and corsets. Steel has mostly displaced whalebone in umbrellas and parasols. Some years ago umbrella-ribs were made in France of an excellent imitation of whalebone—not distinguishable, indeed, till fractured; but it is no longer heard of. Genuine whalebone is often made white, and used with garments of muslin or the like, not being seen through these so easily as the dark sort. The newest application of whalebone is that to hats; it is cut into fine strips and interlaced with straw. Such hats are very dear. Another novelty is “whalebone riband.” For this, white whalebone

is generally used, and the shaving is so thin that ordinary print can be read through it. It is often coloured blue, red, or green, and used by saddlers in making rosettes. Walking-sticks of whalebone are also in good demand. The exceptionally thick strips cut for this purpose are rounded by being drawn through holes in a steel plate. Billiard pads of whalebone must be very smooth, and cut of a certain exact thickness. Fishing rods are made of two carefully worked strips of whalebone, with thick silk thread wound round them. Penholders, and other small articles, are made of whalebone at the lathe. The hair cut off the raw whalebone was formerly used for brushes, but it is now mostly replaced by other materials. It is largely crimped and used as a filling for mattresses. This list by no means exhausts the uses of whalebone, which is continually being applied in new ways.

**B**UOYAGE SYSTEMS.—It has been announced that a conference of representatives of the several Lighthouse Boards, and some of the local maritime authorities, of this country, is being held at the Trinity House, London, with a view to devising one uniform system of buoyage for the United Kingdom. At present, different systems, in regard to the mode of marking the channels leading into the most important rivers and harbours of the British Isles, prevail. In some instances buoys of different colours indicate the two sides of a channel, and, in other cases, buoys of peculiar shapes afford this most necessary information to the mariner. Thus, from want of a uniformity of plan, navigation is rendered needlessly more difficult, and even dangerous.

Could one uniform simple system, therefore, be determined upon—one which would commend itself for adoption in other countries—it is manifest that most beneficial results would ensue to the maritime community at large. It is, accordingly, earnestly to be desired that the conference will be the means of attaining the laudable object for which it has been convened.

**F**OG SIGNALS.—The desire to establish, at certain classes of our lighthouses, a more powerful fog signal than that obtained by the sounding of a bell has long existed. The attainment of this object by the fog-horn, or siren, as used at some of the lighthouse establishments on the shore, has not been practicable at most of the outlying rock lighthouse stations, such as the "Wolf," and "Bishop," &c. This has arisen from the want of the requisite room in the lighthouse tower for the necessary machinery, and the difficulty of access to the station, to effect repairs to the engine when out of order. The gun, it may readily be conceived, would be still more objectionable at these isolated rock stations, inasmuch as, if fired from the gallery of the lighthouse, the concussion from the explosion would break the lantern glass. The rocket, or some kindred signal, pointed to a solution of the difficulty, and this has been adopted at some few establishments, where sufficient accommodation for the stowage of a considerable number could be found. But, even here, the quantity to be kept and maintained in stock, to continue a discharge at each few minutes' interval, during some days of fog, was such as to preclude its general adoption. The desired object, how-

ever, seems to have been recently attained. By a notice which has been issued by the Corporation of the Trinity House, it appears that, at the Longship Rock Lighthouse, there will shortly be instituted the following signal during foggy weather, viz., two explosive reports (each sounding like the discharge of a gun) will be given every ten minutes, the interval between the two reports being five seconds. We learn that, by an invention of the Engineer in Chief of the Trinity Corporation, the danger of injury to the lantern has been overcome, and at the same time the difficulty of stowage of the requisite quantity of explosives. The invention consists of apparatus by which gun-cotton charges are made to explode at a safe distance above the lantern. It may be described as a long iron rod, or balance lever, placed over the roof of the lantern, and worked on a joint or pivot fixed thereon. To one end of the lever is attached a line, which runs through the roof, and enables the keeper to elevate or lower the other end of the rod. Over this other end there hangs an electric wire or cable, which is also carried along the rod to the roof, through which it is passed to the interior of the lantern, close to a small magneto-electric machine. When fog sets in, the keeper attaches a charge of gun-cotton, weighing three or four ounces, to the electric cable at one end of the rod, and, by means of the line, elevates the charge some 20 feet above the lantern-glass. He next fixes the electric cable to the magneto-electric machine, causes a current to pass along the cable, and the charge explodes. It may be safely assumed that other lighthouse authorities than the Trinity House will not be slow to adopt so simple an invention, as it

will afford a more certain means of giving a distinctive character to rock lighthouses during fogs, and of enabling masters of vessels to determine their position. It is a matter for congratulation when contrivances of this character are devised; as not only is navigation thereby materially facilitated, but the danger of shipwreck lessened, or, it may be, in some instances entirely averted.



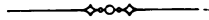
**P**APAL STEAM YACHT.—About twenty-four years ago, Pio Nono, after his return to Rome from Gaeta, determined to have his own steam yacht, to be kept in readiness should he find it necessary again to quit the Vatican at short notice. Accordingly, a commission of officers was sent over to London, and, under their guidance, a handsome, strong steam yacht, the *Immacolata Concezione*, of about 600 tons, was built, and fitted with engines, of 150-horse power, for a speed of 12 knots. The vessel was equipped as a corvette of war, with eight large rifled brass guns, and a full equipment of small arms; and no expense was spared in fitting her out, in the best style, at a total cost of about £50,000. In due time, the corvette arrived at Civita Vecchia, where she was received by the Pope, and duly blessed and anointed. Afterwards, she remained in the harbour there, in daily preparation for his Holiness, for about twenty years, always in the charge of a full staff of officers and men, and kept in the highest state of efficiency and preservation. After the changes effected in the temporal power, the corvette was removed to the Mediterranean, and recently to the Thames for sale.



## MISCELLANEOUS JOTTINGS.



“Here a little, there a little.”



“O Reader! had you in your mind  
Such stores as silent thought can bring,  
O gentle Reader! you would find  
A tale in everything.”

WORDSWORTH.



## WEATHER PROGNOSTICS.\*



WHEN winter has just entered upon his season of office, and has already given us a taste of his quality, the remainder of his period of dictatorship is looked forward to with some anxiety. There is a conviction abroad that what has passed is but preliminary to longer and perhaps severer inflictions. Such alarms are in the air at the approach of each successive winter. The oldest inhabitant invariably predicts an exceptional inclemency, and has such a profound way of shaking his head when a fine open season ensues, that people believe in him year after year, and fancy the patriarch right, and the weather inconsistent and irregular. A host of ordinary folk, moreover, are willing to hazard a prophecy which will probably be forgotten when the time for its fulfilment arrives. This last year's anticipations of a severe winter were much more prevalent than usual, and the reason of their prevalence is not difficult to ascertain. The ordinarily received prognostics of hard

\* From “*The Globe*.”



weather had nearly all put in an appearance, and both weather, rhyme, and quasi-scientific dictum, pointed to the same event.

If the hedges and trees are full of berries, this is commonly thought to portend a hard winter. The notion probably had its origin in a pretty fancy, something akin to Sterne's tempering of the wind to the shorn lamb. The full crop of berries, to the popular mind, was a provision of Providence for feeding the wild birds through a time of frost and snow. The oracle of the berries was rather doubtful in its utterance this last year. In the south of England, berries were, on the whole, very abundant. The hollies especially were thickly sprinkled with scarlet, the hips showed plentifully the darker crimson of their winter hue, and haws were abundant, though less so than they were the previous year. In the north, however, there was said to be a much scantier crop of berries. It may comfort people, however, to know that the berry prognostic has signally failed, and may always do so again. In the autumn of the year before last there was a wonderful provision of almost every kind of wild berry, and the ensuing winter was the mildest that the present generation has known.

The variations in the numbers of immigrant birds, and the periods of their visits, are held with more show of reason and probability to be indicative of the weather to be expected. But some observers have striven to prove that birds are possessed of such extraordinary powers of forecasting the seasons that their actions are regulated by their knowledge of what will happen some months later. Professor Brehm, a German naturalist, wished to raise this kind of weather forecasting to the rank of a science, and instanced many cases in which he supposed such prescience to have existed. He believed, for example, that when birds bred unusually late in the year, a mild winter would ensue, that an early discontinuance of breeding indicated the reverse, and that an emigration of sand-martens, from their ordinary banks to water surrounded with steeper banks, was a certain forerunner of floods. It is to be feared that many of his discoveries were the result of that not uncommon process of grasping the few facts that favour a preconceived theory, and ignoring the many that invalidate it. His remarks on the migration of birds in connection with weather prognostics, however, rest on a broader basis, and are by no means peculiar to himself. The migration of birds is a mysterious movement; but, however complex may be the causes and workings of it, this fact relating to it seems clear—that when our common winter visitants arrive early or in larger numbers than usual, or when many of the rarer visitants come with them, a hard winter may be expected. But even to this rule many local and general exceptions may be cited.

This past year there were a great many early arrivals. Flocks of fieldfares, for instance, were reported to have been seen at very early dates, and by people not likely to mistake their relations, missel thrushes, for them. While the autumnal colours as yet only burned, here and there large flocks of these birds were to be seen upon the escarpment of the North Downs, feeding upon the berries of the yew and the whitebeam tree.

It has been a matter of frequent observation that the seasons of severest frosts are those which follow periods of excessive rainfall. Gilbert White has noticed this, and remarks that "there is great reason to believe" that "intense frosts seldom take place until the earth is perfectly glutted and chilled with water, and hence dry autumns are seldom followed by rigorous winters." He gives several instances. Shortly before the remarkable frost in 1776 there had been a week "uncommonly wet and drowned with vast rains from every quarter;" "the autumn preceding January, 1768, another frosty time, was very wet;" in the month of September alone a fall of six and a half inches of rain was registered at Lyndon, in Rutland. The long and severe frost of 1789-40 also succeeded a rainy season. The great frost of 1861, it will be remembered, came after a summer of umbrellas in 1860. The rainy summers of 1869 and 1880 were each followed by winters of extreme severity. The rainfall of the past autumn has been very copious; in October especially it was excessive, and this circumstance rendered the occurrence of severe and continued frosts this winter very probable. There is an old saw pointing to a hard winter to come, which must be taken for what it is worth—

If the cock moult before the hen,  
We shall have weather thick and thin;  
But if the hen moult before the cock,  
We shall have weather hard as a block.

This past autumn, so far as the writer's experience goes, the cocks without exception moulted later than their consorts. Against this may be set another weather saw—"that if the ice bear a goose before Christmas, it will not bear a duck after Christmas." These two sayings may be harmonised should the great frost of any winter arrive before Christmas Day; but if later, they would decidedly conflict.

Should a severe winter ever come, it can receive but a mixed welcome. The supposed unhealthiness of a green Christmas is not supported by statistics, and invalids and aged people dread the cold as much as young and vigorous people welcome it. There is a similar variance of reception among farmers. A frost-bound and snowy season is not likely to be favourable to those who depend upon sheep

and cattle, although there be the fine crop of hay of the summer to draw upon. But to the farmers with whom tillage is the main thing, a severe winter is a boon, especially to those who have heavy land, rather than one with no frost to pulverise the clods, or to destroy the injurious insects and their broods.

**EXTRAORDINARY WINTERS.**—“The winter of 1881-1882 will probably,” says a foreign contemporary, “take rank in the list of warm winters given by meteorological historians. All around us are mentioned phenomena resulting from the mild temperature.” The writer gives examples of still warmer winters. “In 1172 the winter was so mild that the trees were in full leaf, and the birds built their nests and hatched their young, in February. In 1289 there was no winter. In 1421 the trees blossomed in March, and the vines in April, cherries were ripe in that month, and grapes in May. In 1588 the gardens were full of flowers in January. In 1585 corn was ripe at Easter. In 1659 there was neither frost nor snow. In 1692 not a stove was lighted in Germany; 1781, 1808, 1828 are remarkable for their mild temperature, as is also 1866, the year of the great inundation of the Seine.”

**FORESTS AND HAILSTORMS.**—It is now not only an established fact that forests are a safeguard against avalanches, and a hindrance to freshets and snowdrifts, but also that they are a preservative against hailstorms. Herr Riniker, the chief forester of Canton Aargau, Switzerland, supplies some interesting data on this head. In support of his theory that where there are forests there are no hailstorms, he adduces a

very remarkable fact, which is also vouched for by others. In the south of Aargau there is a little chain of mountains known as the Lindenberg. The Lindenberg are about twenty kilometres long, of an average height above sea-level of some 800 feet, and completely covered with wood. About twenty years ago, the forest was divided in two places by wide gaps, with the consequence that the valleys at the foot of the mountains were soon after visited with frequent hailstorms. The hail-charged clouds were seen to traverse the gaps. In 1868, the wider of the two open spaces was closed by a plantation of firs, and since 1871 no hailstorm has crossed the forest. Herr Riniker suggests that, as hail-clouds are saturated with positive electricity, and trees conduct from the earth negative electricity, the meeting of the two currents develops sufficient heat to prevent the complete congelation of the clouds, and even to thaw the hailstones contained in them, for the clouds of this description pass very near the earth, and so convert the frozen particles into rain. Herr Riniker's conclusions will doubtless lead to careful observations in other countries, with the object of further verifying this important discovery.

**THE AMERICAN NATION.**—By way of demonstrating the enormous changes which must be constantly in

progress in the population of the United States, it may be stated that during the year which ended June 30th, 1882, no fewer than 789,000 emigrants landed at the various ports in the States. This was equal to the whole population of the State of Maine, Connecticut, or Minnesota. And the census of 1880 revealed the fact that the families of emigrants who have settled in the United States during the last ten years are multiplying rapidly. Although there are no tables in this census showing the difference between the increase by births in the United States of people of different nationalities who have lately settled there, the Canadian census furnishes such details, and similar conditions may naturally be assumed to exist in the United States. The facts are very interesting. The tables giving the nationality and descent of every inhabitant of the Dominion show that for every German immigrant who settled in Canada there are at the present time 10·8 persons of German descent in that country—that is, the Germans, by natural increase, have multiplied nearly elevenfold; the Scotchman has increased 6·1 fold; the Englishman, 5·4; the Irishman, 4·1; the Italian, 2·4; and the Scandinavian, 2·1. The Anglo-Saxon is, therefore, very far behind the German. In the United States a quarter of a million Germans arrive annually from Europe to swell the millions of Teutons already there, and if this rate of emigration continues the United States must become largely Germanised in character, while Germany herself must suffer severely from this great depletion of her population. It is claimed with regard to the United States that, “the effect of this admixture of national and race traits

will be the most cosmopolitan people, in another century, of any country in the world; a people, who—under the favourable operation of a beneficent climate and of free institutions which will permit the exercise and development of every form of thought and experiment—will combine less of the narrow and clannish, and more of the liberal and progressive characteristics of human nature than any other nationality can possibly achieve. When the 2,000th century is reached, the American nation will have assumed its permanent character, and not before.” At that date, if the present rate of emigration be maintained, America will have received upwards of 90,000,000 more emigrants, in addition to the enormous native growth of the population in the interim.

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**A** CEYLON JUNGLE. — Professor Haeckel has been giving, in the German *Rundschau*, an account of his travels in Ceylon, and recently he described his first attempt to penetrate a Ceylon jungle. He found it correspond to the idea of a primeval forest with its dense and impenetrable mass of trees of all kinds, surrounded and overgrown by a wilderness of creeping and climbing plants, of ferns, orchids, and other parasites, so thickly intertwined as to convince the traveller of the impossibility of his undertaking, except with the aid of axe and fire. After a prolonged struggle he was fain to make good his retreat, stung by mosquitoes, bitten by ants, with torn clothes, and arms and legs bleeding from the thorns and prickles with which the climbing palm (*Calamus*), the climbing hibiscus, the euphorbia, and a multitude of other jungle plants, repulsed every attack made on their

impenetrable labyrinth. "But the attempt," observes the professor, "had not been made altogether in vain, for it enabled me to gain a very fair idea of the jungle as a whole, more especially of the magnificence of its trees and creepers, besides introducing me to many separate varieties of animal and vegetable life, which were of the highest interest. Here I saw the magnificent *Gloriosa superba*, the poisonous climbing lily of Ceylon, with its red and amber flowers; the prickly *Hibiscus radiatus*, with large, cup-shaped, brimstone-coloured flowers, deepening to violet in the hollow; while around them fluttered gigantic black butterflies with blood-red spots on their tail-shaped wings, and chafers and dragon-flies flew past with a metallic gleam. But my delight reached its height when, on this my first attempt to penetrate a jungle in Ceylon, I came across the two most characteristic of its inhabitants from among the higher class of animals—parrots and apes. A flock of green parrots flew screeching from a lofty tree, as they became aware of the gun in my hand, and at the same moment a herd of great black apes sprang with a growling cry into the thicket. I did not succeed in getting a shot at either one or the other; they appeared to be too familiar with the look of a gun. I was consoled, however, by securing with my first shot a colossal lizard, or iguana, 6ft. long, of a kind held in much awe by the superstitious natives (*Hydrosaurus salvator*). The huge crocodile-like beast was sunning himself on the edge of a water-tank, and the shot hit him so precisely on the head as to kill him at once. Had it struck any less vital part he would probably have dived into the water and disappeared. When seized, the iguana has the power of hitting so sharp a

blow with its scaly tail as to cause a severe wound, and even sometimes a broken limb."


AREA OF MODERN STATES.—Some interesting facts may be gleaned as to the relative size, according to area, of the various European and American States. The largest State in the civilised world is Texas, which boasts an area of 274,356 square miles; the smallest is the little State of Monaco in Europe, which has only an area of six square miles. The Austrian empire contains 240,943 square miles; the German Empire, 212,091; France, 204,091; Spain, 177,781; Sweden, 168,042; California, 157,801; Dakota, 150,932; territory of Montana, 143,776; Norway, 122,280; New Mexico, 121,201; Great Britain and Ireland, 120,879; Italy, 114,296; Arizona, 113,916; Nevada, 112,090; Colorado, 104,500; territory of Wyoming, 97,883; Oregon, 95,274; territory of Idaho, 86,294; territory of Utah, 84,476; Minnesota, 83,531; Kansas, 80,891; Nebraska, 75,995; territory of Washington, 69,994; Indian territory, 68,991; Missouri, 65,350; Turkey in Europe, 62,028; then come a number of other American States, after which are Roumania, 45,642; Bosnia and Herzegovina, 28,125; Bulgaria, 24,360; Servia, 20,850; Netherlands, 20,527; Greece, 19,941; Switzerland, 15,235; Denmark, 14,553; Eastern Roumelia, 13,500; Belgium, 11,373; and Montenegro, 1,770.

INFLUENCE OF FORESTS ON CLIMATE.—Dr. Schomburgk, the Director of the Botanical Gardens at Adelaide, has added to his recently issued report an appendix on the

subject of the influence of forests on climate. The object of this paper is to prove that the destruction of forests usually has the effect of reducing the rainfall, while, on the contrary, the planting of trees broadcast over a country is one of the best methods which can be adopted for ameliorating its climate, and increasing the annual fall of rain. It cannot, indeed, be proved that the climate of South Australia is altering for the worse in this respect. In fact, a comparison of the meteorological records will show that the annual average rainfall for the colony during the past ten years has been 21.1 in., as compared with 20.1 in. for the previous ten years. The fact is that in the agricultural districts of the colony, and especially in those which were not originally timbered, the bringing of the land into cultivation has had the effect of slightly favouring the fall of rain. Ploughed land attracts moisture to a much greater degree than the unbroken soil. In considering the effect which the removal of forests, *per se*, has in altering the climate in South Australia, the only direct test that could be taken from the records issued by the Government astronomer is the experience of the neighbourhood of Adelaide. If the time is divided which has elapsed since 1839, the year in which observations were commenced, into two periods, there is found for the first an average rainfall of 22.8 in., and for the second one of 21.7 in. It will thus be seen that, on the whole, the rainfall at Adelaide is diminishing, though very slightly, and perhaps the diminution in the amount of timber may have something to do with the change. Dr. Schomburgk, in searching for illustrations of the effect of trees on

climate, goes further afield, and brings forward some striking instances, in which it is evident that loss of forests means loss of rainfall, and *vice versa*. He recalls how the Russians, by burning down some of the Trans-caucasian forests at the time of their struggle with the Circassians, converted the country from a fertile land into a desert, simply through the cutting off of the supply of rain. Similar instances of rain having deserted a country denuded of forests have occurred in the Mauritius, in Jamaica, the Azores, and, it may also be added, to a still more remarkable extent in several of the smaller West India islands. No sooner had the forests of these places been destroyed than the springs and rivulets ceased to flow, the rainfall became irregular, and even the deposition of dew was almost entirely checked. On the other hand, it is generally accepted as a fact that Mehemet Ali increased the fertility of Egypt enormously by planting trees. He alone planted some 20,000,000 on the Delta, his successors followed up the work, and it is a noteworthy circumstance that the rainfall rose from 6 in. to 40 in. Planting has also, it would seem, produced remarkable effects in France and Algiers. Extensive regions have been planted with gums and other trees, which, for the most part, grew to about 80ft. or 40ft. in height, and it is noticed that the quantities of rain and dew which now fall on the adjacent land are double what they formerly were.

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 AUSTRALIAN BIG TREES.—The Minneapolis *Lumberman* has an article on the gigantic trees of Australia, of which the following is

an extract:—"The trackless forests in the west of Tasmania contain huge timber, and bushmen report that they have met with specimens of eucalyptus measuring 200 feet from the ground to the first branch, and fully 350 feet in all. Until 1873 there was standing on the eastern slope of Mount Wellington, within four miles of Hobart Town, a eucalyptus measured at 86 feet in girth, and more than 300 feet in height, and its ruined boll still forms a grim chamber, in which many a merry party have enjoyed a picnic. The famous tree of the Huon forest measures 70 feet in girth at six feet from the ground, and is stated to be 240 feet high; yet in the deep gorges of this grand forest the writer has seen higher trees than this, though not of quite equal circumference. But Victoria now claims the glory of holding the biggest of all the living 'big trees' in the world, so far as height is concerned. In the Dandenong district, at Fernshaw, has recently been discovered a specimen of eucalyptus amygdalina, or almond-leaf gum, which has been accurately measured as reaching the enormous height of 380 feet, before throwing out a single branch, and 430 feet to the top, and having a girth of 60 feet at some distance above the ground. Some idea of what a height of 430 feet represents may be gained from the fact that this gum-tree, if growing by the side of the Houses of Parliament at Westminster, would overtop the Clock Tower by exactly 100 feet."


RAILWAY ACCIDENTS.—A Blue-Book has been published containing returns of all accidents and casualties reported to the Board of Trade, by railway companies, during


the six months ending June 30, 1882, together with special reports on certain accidents which were inquired into. From this we learn that 522 fatal accidents occurred in that time, against 497 in the corresponding preceding period. Of the killed, 56 were passengers who lost their lives from various accidents, such as collisions between passenger trains, failure of couplings, falling between the carriage and the platform while the train was in motion, &c.; 252 were companies' servants, and the rest were chiefly trespassers, 117, including 31 suicides; 37 were killed while passing over railways at level crossings. The number of injuries not fatal was 2,072, as against 2,009 in the same period of last year. In the case of companies' servants, the most fruitful causes of accidents were—coupling and uncoupling, to which 194 injuries are put down, 18 being fatal; shunting, which caused 28 deaths and 417 injuries; working on the permanent way, during which 66 were killed and 58 injured; and walking, crossing, or standing on the line on duty, by which 54 met with death and 94 with injury.

HURRICANE.—Pastor Strasser, of Grindelwald, has given, in the *Oberland*, a graphic account of the terrible storm which wrought such havoc in the valley on Friday, October 27. "The 'Föhn,' as to whose origin the meteorologists are not yet agreed," he writes, "which all summer brought with it nothing but rain, has just played us a prank that was little short of tragical, and will be remembered in the valley for generations. It began to blow at 4 o'clock in the morning, and went on for nearly twenty-four hours with a ter-

rific violence, of which those who did not witness its effects can have no conception. There have been fierce 'Föhn' before, but never anything like this. Words can convey only the faintest idea of the tragic reality. In the neighbouring valley of the Hasle the 'Föhn' blew straight, and did little damage; in this kettle-shaped gorge it lashed about like a windy whirlpool. It rushed madly through the rifts of the higher and lower glaciers, down both the Scheideggs, threw itself against the Faulhorn, and tore through the narrow pass at the end of the valley. The wind-demon roared behind the Mühlbach, and as the day advanced the wilder grew the storm. Our Grindelwald houses are well protected against the 'Föhn,' but this time it was too much for us. The heaviest roof stones were blown off like chips; lumps of rock weighing a hundred pounds apiece were sent spinning through the air like cannon balls in a battle. Inside the houses there was no safety, outside nobody could live. Windows were blown in, roofs carried away bodily, and many families fled in terror to their cellars. In the afternoon a few brave men, at the risk of their lives, went on the roof, and tried to repair damages; but it was impossible to do anything. As fast as they replaced the stones they were dislodged, and several of the men thrown to the ground. By a strange caprice, the storm left more than one old and rickety building unharmed, and destroyed the newest and strongest. The school-house behind Intramen, although its walls were solidly built and well pinned with oaken beams, fell like a house of cards. A house by the Gummenbach, and another in the Berglaenen Grund, shared the same fate. And

the woods! Great trees were split from top to bottom, and trunks a metre thick snapped like matches. Those that fell broke down others; the number of trees uprooted is past telling. As night set in the storm raged still more fiercely. Shortly after twelve there came a lull, followed, at a short interval, by such a 'Föhn-rain' as was never seen before. The winter provision of forage, already scattered by the wind, was completely drenched and spoiled past using. Let those who read this account by quiet firesides try to picture to themselves this fearful night. When morning came the 'Föhn-rain' still held on, but we could repair our roofs a little, and put the women and children under cover. It is a wonder of wonders that we have no loss of life to deplore. On the day of the hurricane the road from Interlaken to Grindelwald was exposed to such a shower of missiles—tree branches, stones, and tiles—that no one could traverse it without the risk of fatal injury."

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“ N THE WATCH.”—An event is to take place this year, 1888, which has not occurred before during this century, and attached to which is an old prophetic saying. The event is that Easter Day will fall on Lady Day, the 25th of March, and the old saying is—

“When Easter Day falls on Lady Day’s lap,  
England will meet with a great mishap.”

Is it that coming events thus throw their shadows before, in warning of the most terrible storm ever experienced in England, as predicted to occur on the 11th of March, 1888?





## QUIET THOUGHTS FOR QUIET HOURS.

—  
“Pii orant tacite.”  
—

“The turf shall be my fragrant shrine ;  
My temple, Lord ! that Arch of Thine ;  
My censer's breath the mountain airs,  
And silent thoughts my only prayers !

My choir shall be the moonlit waves,  
When murm'ring homeward to their caves ;  
Or when the stillness of the sea,  
Ev'n more than music, breathes of Thee !”

MOORE.

## TEMPERANCE ON SHIPBOARD.\*



CENTURY and a half ago, Admiral Edward Vernon ordered his sailors, when in the West Indies, to dilute their rum with water, and, in compliment to its originator, the sea term applied to the new drink was “grog.” It appears that Admiral Vernon—as gallant a sailor as these lands ever sent forth to walk the quarter-deck—was in the habit of wearing grogram breeches at sea, whence he received the appellation of “Old Grog.” “The meteor flag of England” might indeed have been said to “burn terrific” when committed to his charge ; and, such was the popularity attaching to Admiral Vernon after he had taken Portobello and Chagres, that to this day his name lives at Portsmouth, Bristol, and Plymouth, in company with those of Nelson and Collingwood, of Benbow and Howe. . . .

During the whole of the last century, and for a longer time during the present than we care to recall, drink was the curse of the British Navy. The consumption of rum on board a line-of-battle ship, if

\* From “*The Daily Telegraph*.”

Southey's figures may be accepted—and they are more than confirmed by collateral evidence—would have astounded Falstaff himself. It was, then, a matter of no small importance when Admiral Vernon, an officer as popular as he was manly and brave, ordered water to be served out with their rum to his sailors. Before and after Vernou there had been Admirals—among them old Benbow might have been included—who deemed that hard drinking and hard fighting went together, and who winked at the prodigious consumption of liquor on board the vessels under their charge, so long as their tars were sober enough to man the guns with a will when the pinch came. Among our temperate Admirals, Vernon, Nelson, and Collingwood were nobly conspicuous, and much would it have gladdened their hearts to hear that “a very large quantity of rum, sent out to Egypt for consumption by the British fleet, has just come back to Portsmouth, because it could not be used in the Mediterranean.” Time was, when liquor sent out from England to a foreign station would never have come back, but would have found some customers ready either to drink or to purchase it “for a consideration,” whether consigned to the Tropics or to Nova Scotia, to torrid Brisbane or to Zembla's frost. . . .

“The Soldier's Pocket-Book,” by General Lord Wolseley, abounds with evidence that its distinguished author has been a determined opponent to the issue of spirit rations to armies engaged in active service, and that he holds such alcohol in abhorrence. “Give your men,” he exclaims, “as little spirits as possible; tea and coffee are much more sustaining and more portable. The old superstition that ‘grog’ is a good thing for men before, during, or after a march, has been proved by the scientific men of all nations to be a fallacy, and is only maintained by those who mistake the cravings of habit for the promptings of Nature herself. It is the commonest thing to see men taking brandy to keep them warm. It is an ascertained fact that alcohol of any sort reduces instead of increasing the temperature of the body.” Lord Wolseley proceeds to explain that the medical officers who have accompanied Polar Expeditions are unanimous in condemning spirits as preventives against cold. “No men,” he observes, “stand in need of greater endurance and undergo harder physical toil, than the lumber-men of British North America, and yet tea is their constant beverage.” As a rule, no spirits have ever been issued to our armies in South Africa, the result being that the men were singularly free from sickness. During the Indian Mutiny, our soldiers were very often cut off from fermented liquor for months together, and they were healthier than subsequently, when it was issued to them as a ration. Harder work was never done by men than by those whom Lord (then Colonel) Wolseley led—it was his first really independent command—during the Red River Expedition. “No

spirits of any sort," he adds, "were issued to them, but they had as much good tea as they could drink, and illness was unknown." . . .

One other instance Lord Wolseley might have given from his own experience. During the American Civil War he paid a visit to the Confederate Army in Virginia, and made the acquaintance of its gallant commander, General Robert E. Lee. When the war broke out General Lee was fifty-four years of age—some five years older than Lord Wolseley is at this moment, and eight years older than Napoleon and Wellington when they met at Waterloo. It is difficult to estimate the strain to which General Lee was exposed during those four years of unequal conflict, and yet, despite the miserable food which he shared with his men, and the constant pressure of an enemy outnumbering him in the proportion of three, four, and sometimes five to one, his superb physical health never gave way from first to last. Nothing stronger than coffee ever crossed his lips, and his favourite drink, when he could get it, was butter-milk.

It is satisfactory to observe that the crusade against alcohol is extending beyond the limits of the army and navy, and that employers of labour are beginning to recognise the advantages of Total Abstinence for men exposed to hardships and trials of an abnormal kind. Thus we read that Mr. John Burns, the experienced Chairman of the Cunard Steamship Company, announced that "on and after the 1st of December, 1882, no grog or alcoholic drink will be served out to the company's crews, but that coffee will be substituted." With one reservation, the new regulation of the Cunard Company deserves the heartiest approbation, and will, no doubt, commend itself upon experience to other steamship lines. That reservation is that, to some constitutions, coffee is not so digestible as tea, and it might with advantage be left to the crews of Cunard vessels to choose coffee or tea, according to the men's taste. In practice it will be found that tea is as warming and stimulating as coffee, and in some cases it is found to be more easy of assimilation. Throughout British North America, and over the whole of the vast island-continent of Australia, tea is the universal beverage, whereas in the United States the consumption of coffee, as compared with tea, is in the ratio of five to one.

With what sensations would Father Mathew have lived to see the day when the greatest steamship company in the world proclaimed that henceforward it would serve out no more alcoholic drink to its crews! The long crusade waged by the apostles of Abstinence against the drink fiend is at last beginning to produce wholesome fruit. . . . Who can say whether a time may not be at hand when the Royal and Mercantile Navies of Great Britain will vie with each other in sending no spirits to sea, other than those required for medical purposes?

THE FREE SAILOR.



**I**N earth and sky, in sea and land,  
 He sees his Father's loving Hand,  
 And knows that Nature waits on God's command.

His ship, an atom on the sea—  
 The crew, to him, one family—  
 He learns in them a charge from God to see.

He rules with firm and gentle sway,  
 None dare the Captain's word gainsay,  
 For well they know that he, too, can obey.

In the calm stillness of the night,  
 With only sea and heaven in sight,  
 He muses on the unseen Guiding Light.

If loneliness assert her sway,  
 Those dearly loved far, far away,  
 In One Great Heart he solace finds alway.

As little bird, upon the mast,  
 Finds breathing space from labour past,  
 So looketh he for home and peace at last.

When waves and winds for mastery race,  
 One glance upon the Captain's face—  
 And youngest sailor-lad takes heart of grace :

Murm'ring, " He fears not—why should I ?  
 Although the storm is wild and high,  
 I know the Captain feels that God is nigh ! "

If, human skill of no avail,  
 Succumb they must, before the gale,  
 Firm at his post stands he, and will not quail.

The ship he quits the last—*anew*,  
 With hopeful words, he cheers the crew,  
 And bids them, like himself, “Be brave and true:”

“The raft may bring them yet to land,  
 If not—God has them in His Hand—  
 True sailors will not question His command!”

E'er facing danger steadfastly,  
 Calm and resigned, of purpose high,  
 As nobly he has lived, so will he die.

SARAH M. CROSSMAN.

**I**NDIVIDUAL RESPONSIBILITY.—Some men seem to regard life as a play-ground, others treat it as a sleeping-room. They use it, with all its vast opportunities, as a something that is only to be dozed away. They shrink from its demands on their exertions, from the repeated calls to do something for God's glory—something for the benefit of others—something for true self-improvement—as if these invitations were merely the importunate voice of an undeserving beggar, or the ravings of a maniac. They say that when they are thirty they will be active men—men of prayer—men of work—men of resolution and sacrifice; but thirty comes, and finds them, if I may say so, still in bed, with just those companions round them who assure them that they will be in time to make a fair use of life if they are up and doing at forty. The years soon pass, and forty is upon them, and they are still where and what they were. They are still alive to the necessity of some effort; but a man, so they say, is not old at forty, and, meanwhile, “yet a little sleep, a little slumber, a little folding of the hands to sleep.” And so they reach fifty, or sixty, when

youth has fairly passed and habit has stiffened around them, and it is too late to rise. If anything can save them, surely it is the overwhelming thought of the account which they must give, the account of all they have received—strength, intellect, it may be, income, time, friends, God's grace, good thoughts and impulses, bright visions of usefulness and happiness, repeated discontent with self—only to be wasted, only to be thrown aside, as if they had never been received at all.—*Liddon*.

**D**URATION OF LIFE.—The maturity of man, calculated by the complete condition of the skeleton, is twenty-one years. Twenty-one years multiplied by five, or one hundred and five years, is, therefore, the natural duration of the life of man on this estimate, and, with a certain natural limited range, may be accepted as the true and full duration. But, when the actual value of life is taken, it is found to present, in this country, an average of forty-two years; so that there are grand agencies at work which are reducing the national life to a very low value. If the inquirer enters further into the

matter, he will observe that the grand agencies leading to this reduced value of life must be in some way removable, because they are not always in action to reduce every form of life to the same level of duration. He will discover that the domestic animals which surround us, if we do not kill them outright with hard labour, privation, or exposure to the vicissitudes of seasons, are so much longer lived than we are; that they exist, practically, to their full term with as much exactitude as we exist to the first part of our second stage of existence; or, to put the matter in another light, he will discover that, if our lower domestic animals were to die in the same ratio that we die, their duration of life, as it is now known, should be reduced nearly to half what it is; the dog would have an average term of eight years, and other animals a similarly reduced term of life. Such observations as these will lead the sanitarian to find a uniform object in his labour. In the first place he will learn, from an analysis of the data he may collect, that man is the subject of many more diseases than the inferior animals are; that he suffers from certain diseases of the mind, incidental to his possession of a mental organisation superior altogether to theirs, and from which diseases they are exempt; that he suffers from such diseases springing from human vices from which the lower animals are also exempt; that he suffers from some contagious diseases from which they are exempt; that he suffers from diseases connected with industrial pursuits from which they are exempt; that he suffers from indulgences in certain luxuries of a deadly kind from which they are exempt; that he suffers from various accidents

from which they are exempt; that he suffers from hereditary taints of disease from which they are exempt.

—*Dr. B. W. Richardson, F.R.S.*

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**WYANT OF SLEEP.**—Are you afflicted with sleeplessness? Perhaps you have too much time for sleep. Perhaps you depend too much on sleep for rest and recuperation. For sleep is not the sole rest of used-up nerves. Sociability, congeniality, and the enjoyment of good company rest the body quite as much as sleep. The dreary monotony of life in many a household, involving this tumbling into bed with the mechanical regularity of a machine at 9 or 10 o'clock in the evening, does not always rest weary bodies. "Early to bed and early to rise" does not always make a man healthy, wealthy, or wise. Numbers of organisations are only capable of five or six hours of sleep at a time, and their early lying down to rest is often succeeded by an early waking up, and a consequent restless tossing for hours preceding daybreak. These practisers of punctuality are often surprised after breaking their own cast-iron rules, and passing two or three later hours of mirth and jollity past their usual bedtime, to find themselves even more refreshed in the morning than usual. The relaxation of sociability has rested them more than would sleep or an attempt to sleep. But these are conditions not so easily reached in the average family. In fashionable life we have a formal, exhausting, and mechanical evening of more or less dissipation. On the other hand, the evenings of great numbers of families are generally of monotonous humdrum. They involve an assemblage of the same people, the same surroundings, the

same paterfamilias yawning over his paper, and the same querulous mamma overladen with family cares. Fresh people with fresh thought, fresh atmosphere, anything to stir up and agitate the pool of domestic stagnation, are sadly needed and sadly scarce. There needs to be also a constant succession of such fresh people to bring about these results. The world is full of men and women, and in a better regulated life it would be the business, after the day's work was done, to entertain each other and give each other fresh life. As it is now, hundreds, if not thousands, of our households are little better than cells for the incarceration of each family. Thousands are thus worn out prematurely from the utter lack of domestic recreation. There might be written over the graves of thousands, "Bored to Death by the Stagnation of Domestic Life."—*New York Graphic*.



**M**AHOMEDANISM. — At a recent meeting of the Royal Society of Literature, Sir Patrick Colquhoun, one of its vice-presidents, read a paper on Mahomedanism, being one of a series on the leading religions of the world. He confined himself as far as possible within literary limits, avoiding religious polemics. He gave a sketch of the prophet's life from his birth, A.D. 570, to his death in A.D. 632, twenty-two years after the first promulgation of his doctrine. In its inception, he said, Mahomed aimed merely at bettering the moral condition of the Arab tribes, deeply steeped in lawlessness, savage violence, and the grossest superstition. The development of his doctrine of the Unity of God "without equal or companion" came afterwards. His

social standing as a member of the leading tribe of the Koreish, the guardians of the Kaaba, or sacred stone, gave him an advantage which was greatly enhanced by his marriage with the rich widow whose commercial agent he became, and with whom, his first wife and first convert, he lived in monogamy until her death. His primary work was the institution of a tribal police to maintain local order. He next attacked idolatry and fetishism, of which he was the uncompromising foe, and after many narrow escapes from assassination he succeeded in purging his countrymen of their worst superstitions and in rallying them round one solid faith. Mahomed thus founded an empire, which, in a single century, built up a greater dominion than had ever been ruled by Rome. The Jews, who were at one time ready to welcome him as their Messiah, withdrew from the new religion on Mahomed's refusal to acknowledge their own supremacy as God's elect people. Attention was next drawn to what the lecturer regarded as vulgar errors respecting the Mahomedan faith, which, in his view, differed in no respect, save in name and outward form, from that of Buddha and Christ. He maintained that Mahomed enfranchised the female sex, that he introduced the doctrine of a future state, abolished the immolation of human beings and the lower animals as sacrificial atonements, promulgated the maxim, "Let there be no violence in religion," and ignored any priestly caste. On the other hand, he denied the divinity of Christ, recognising Him as a prophet and divinely inspired teacher only, calling Him the Spirit of God. He denied His crucifixion in His own person, as well as the dogma of the Trinity, but the

'moral basis of his system agreed with that of all great preceding teachers, a basis without which no religion could succeed.

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**M**ISAPPLIED LABOUR.—In all ages the love of overcoming great difficulties, without any proper end in view, has been seen in a greater or less degree. Some notice of a few of these may be given. Dr. Oliver gives an account of a cherry-stone seen by him, in 1687, on which were carved 124 heads, so distinctly that the naked eye could distinguish those belonging to popes, emperors, and kings, by their mitres and crowns. It was bought in Prussia for £300, and thence conveyed to England, where it was considered an object of so much value that its possession was disputed, and became the subject of a suit in Chancery. In ages far more remote we are told of a chariot of ivory, constructed by a Grecian, which was so small that a fly could cover it with his wing; and also of a ship, formed of the same material, which could be hidden under the wing of a bee. Pliny tells us that the Iliad of Homer, a poem of 15,000 verses, was written in so small a space as to be contained in a nutshell; while Elian mentions an artist who wrote two lines of poetry in letters of gold, which he enclosed in the rind of a grain of corn. In our own country, in the reign of Queen Elizabeth, similar feats of penmanship were performed. Peter Balest, an Englishman, wrote the whole Bible, and put it in a large English walnut no bigger than a hen's egg. There were as many leaves in the book as the great Bible, and there was written as much on one of these

little leaves as on a great leaf of the Bible. In a work called the "Curiosities of Literature" we meet with many other similar accounts, which show what pains and labour may effect, although they lead us to regret that so much industry and talent should have been so ill-bestowed. There is a drawing of the head of King Charles II., in the library of St. John's College at Oxford, wholly composed of minute written characters, which, at a small distance, resemble the lines of an engraving. The lines of the head and the ruff are said to contain the Book of Psalms, the Creed, and the Lord's Prayer. In the British Museum is a portrait of Queen Anne, not much above the size of the hand. On this drawing are a number of lines and scratches, which, it is said, include the entire contents of a thin folio volume, which is there also to be seen.

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**T**HOUGHTS.—A man is known by the company he keeps. If I should study the character of those who study my neighbour's door-plate, I should know what manner of person he is. Good people ring often at certain door-bells; the frivolous who merely wish to kill time—that worst of murders—ring frequently at others. So with regard to the thoughts to which we give heart-room; for as a man thinketh in his heart so is he. This lies deeper yet than even the creed we profess, for it determines the whole trend and drift of the tastes and the affections. A holy man gives house-room to pure and elevating thoughts, and he is constantly striving to bar up door and window against wicked intruders.







THE  
SHIPWRECKED FISHERMEN AND MARINERS'  
ROYAL BENEVOLENT SOCIETY.

——  
"There is Sorrow on the Sea."

——  
THE SOCIETY'S OBJECTS.  
——



THE SHIPWRECKED FISHERMEN AND MARINERS  
ROYAL BENEVOLENT SOCIETY was formally and  
responsibly INSTITUTED on the 21st FEBRUARY, 1839,\* and  
thereafter—

*[The better to carry into effect the Society's charitable and  
benevolent Designs, for the benefit of the Seafaring Classes for whose  
welfare it was originally Instituted, and—*

*Further to carry out the same by undertaking or promoting,  
as part of the Objects and Designs of the Society, not only the Objects  
and Purposes before sought and undertaken by it, but also ANY OTHER  
Objects, Designs, or Purposes of a benevolent character, for the benefit  
and welfare of all and every or any of such Classes of Men, or those  
dependent on them]—*

duly INCORPORATED by "THE SHIPWRECKED FISHERMEN AND MARINERS'  
ROYAL BENEVOLENT SOCIETY" ACT OF PARLIAMENT, "18TH AND 14TH

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\* The disastrous storm in the Bristol Channel, in conjunction with some fearful calamities to fishing-boats, with great loss of life, on the North coast of Devon—which happened whilst there was still vividly impressed on the mind of the whole British Nation the remembrance of the wreck of the passenger steamer *Forfarshire*, on Hawker's Rock, in the Farne Islands, Northumberland, between the night of the 6th and the morning of the 7th September, 1838 (being the occasion of "Grace Darling's" daring deed of heroic rescue, with her father, in their coble-boat, from the Longstone Lighthouse)—led to the formation of "THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY" during the ensuing winter, at a specially influential Public Meeting, held in the London Tavern, on February 21, 1839, as recorded.

VICTORIA, CAP. LXXIII.,” with ROYAL ASSENT of 29th JULY, 1850, having—amongst all the Society’s many other benevolent Functions and Operations, thus under Special Statute permissible to it as a Charitable Corporation—the following NATIONAL OBJECTS in view :—

I.—ASSISTANCE TO THE SHIPWRECKED.

To render Necessary Assistance, and Board, Lodge, Clothe, and Forward Home, *all* Shipwrecked Fishermen, Mariners, &c., or other Poor Persons, of all Nations, cast Destitute upon the Coasts.

II.—RELIEF TO MEMBERS.

To relieve Fishermen, Mariners, &c., *Members of the Society*, for Loss of their Boats or Clothes (by Shipwreck, Storm, or other Accidents of the Sea), and otherwise in their Need and Extremity; and also to relieve their Widows and Orphans, &c.

III.—RELIEF TO NON-MEMBERS.

To administer Relief to Others, and those Dependent on them, of the Seafaring Classes for whose benefit the Society was Instituted and Designed, *although not Members of the Society*, according to the Circumstances of the Case, &c.

IV.—REWARDS FOR SAVING LIFE.

To grant Gold and Silver Medals, and other Honorary or Pecuniary Rewards, for Heroic or Praiseworthy Exertions to Save Life, from Shipwreck, &c., on the High Seas, or Coasts of the Colonies.

The Society’s foregoing National Objects, with the various other Functions and Operations devolving upon it, are carried out by the Central Executive in London, and about 1,200 Honorary Representatives and Agents of the Society, stationed on every part of the Coast of the United Kingdom, as well as Inland, Abroad, and in the Colonies—by whom, in direct co-operation with the General Committee of Management, the Society’s immediate organised relief is personally extended, on an average, to between 13,000 and 14,000 individuals annually.\*

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THE SOCIETY’S PROCEEDINGS.

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HE administration by the Society, as the one National Institution existing for the purpose, of the varied charitable aid embraced within the immense scope of its several National Objects, &c., necessarily involves a most comprehensive and very voluminous series of Proceedings, of almost world-wide extent and

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\* See the “ Annual General Statistical Return ” of the Society’s Operations, as given at the commencement of “ The Society’s Work,” under this Heading of “ THE SHIPWRECKED FISHERMEN AND MARINERS’ SOCIETY.”

bearing, fully to detail which, from time to time, would be entirely beyond the available limits of any periodical record.

Amongst many other similarly noteworthy and interesting references to the Society's Operations, however, the subjoined Announcements, &c., have appeared in the columns of the Public Press, as shown, since the issue of the last Quarterly Number of this Magazine :—

#### NORTH-EAST COAST EXHIBITION, TYNEMOUTH.

**A** GAIN following up the precedents of the late Fisheries Exhibitions, held in Norwich and in Edinburgh (as alluded to in the Society's Forty-third Annual Report, 1882\*), THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY was duly entered as an Exhibitor at the more recent Tynemouth Exhibition of Naval Architecture, &c., and, in addition to its usual special exhibits thereat, was enabled to place on public view for the occasion, under its own particular charge and auspices, as a relic most peculiarly interesting in connection with the Society's first formation in 1839, the renowned "Grace Darling Boat," so memorably turned to noblest use by the undaunted heroine, in 1838.†

The following Notices afford some account of the Exhibition in question, and its general contents :—

[FROM "THE NEWCASTLE DAILY CHRONICLE," SEPTEMBER 6, 1882.]

**T**HE opening of the Maritime Exhibition at Tynemouth Aquarium, to-day, September the 6th, falls upon an anniversary which "is yet held in remembrance all over the North-east Coast. The

\* See the Annual Volumes of this Magazine, No. xxviii., for 1881, at pp. 163, 235; and No. xxix., for 1882, at pp. 161, 231, 241, 311.

† See Foot-note in regard to the Institution of the Society, appended under "The Society's Objects," at the commencement of this Heading, p. 70.

It may be here further explained, that this "Grace Darling Boat" was bought, in 1873, by the late Colonel John Joicey, M.P. for South Durham, of Newton Hall, Stocksfield-on-Tyne, from Grace Darling's brother, George Darling (who is still living in Northumberland), and was with the utmost kindness placed at the Society's disposal by Mrs. Joicey, for the Tynemouth Exhibition, where it was eagerly visited by about 23,700 persons—the small Admission Fee in the aggregate realising, with the sale of nearly 700 Photographs of the Boat, a very considerable sum on the Society's behalf, as noted in the "Special Contribution List" given at the end of this Heading, p. 78.

On the part of this NATIONAL SOCIETY, and, indeed, of the Nation at large, it is with no little satisfaction that the Society's General Committee of Management find themselves placed under additional obligations to Mrs. Joicey, for the kindly promised loan of the "Grace Darling Boat," for re-exhibition by the Society, in connection with the Great International Fisheries Exhibition, in London, this year.

“wreck of the passenger steamer *Forfarshire* took place on the rocks of the Farne Islands, between the night of the 6th and the morning of the 7th of September, 1838; and there were circumstances connected with the disaster itself, and more especially with the rescue of the survivors from the wreck, which make the occasion one well worthy of being held in remembrance by all the dwellers in the vicinity of our coasts.

“The appropriateness of inaugurating the proceedings of the Maritime Exhibition, on such an anniversary, cannot be questioned. The real purpose intended to be served by this enterprise is the improvement of the means by which our sea trade is carried on; and, concurrently with that, the minimising, to the utmost degree, of the risks and dangers incident to the avocations of the mariner and the fisherman. In view of these aims, and as a means of giving earnestness and purpose to those engaged in forwarding them, the story of the *Forfarshire*, and of Grace Darling’s heroism, may well be reverted to.”



[FROM “THE TIMES,” SEPTEMBER 7, 1882.]

AT Tynemouth, yesterday, the 6th September, was opened the North-east Coast Exhibition of Naval Architecture, Marine Engineering, Fishery, Life-saving, and Coast Lighting Appliances. The Exhibition is held in the Aquarium, on the long sands, about half a mile to the north of the Castle and Priory, and is a centre of attraction to the mercantile and seafaring people of the North. Models are shown of most of the best types of naval and passenger traffic boats that have been floated in the past half-century—from that of the *Royal George* to those of the *Calais-Douvres*, and the latest addition to our naval walls of iron. Every kind of vessel is represented, from the fast-sailing Atlantic liner to the cargo-carrying coal steamer. All the great shipbuilding places in Great Britain are well represented. The Clyde, still foremost of all the shipbuilding rivers, is conspicuous with specimens of the craft that have been put afloat there. The marine engineering portion of the display will be most interesting. All the leading firms from the Thames to the Clyde are represented, and every improvement of the marine engine is to be seen. Boilers, screws, crank shafts, stern-posts, in bewildering variety, are shown in all the most improved shapes and designs. Another section of the vast aggregation of marine inventions, and one worthy of special attention, is that relating to life-saving apparatus. . . . Coast lighting and submarine engineering have also each a place in the show. One of the latest inventions relating to submarine appliances is that of applying the telephone

“ to the diving-bell, and one very interesting fact is that as the depth  
 “ of the bell increases the sounds are more easily distinguished by the  
 “ hearer. Workmen’s models of ships, engines, &c., are also exhibited.

“ The Earl of Ravensworth, the president of the committee of  
 “ gentlemen who got up the Exhibition, accompanied by the Duke of  
 “ Northumberland, Earl Percy, M.P., Sir William Armstrong, C.B.,  
 “ and many of the chief engineers and shipbuilders of the North,  
 “ delivered the inaugural address, alluding to the various departments  
 “ of the Exhibition, and reminded his audience that the day was the  
 “ forty-fourth anniversary of the rescue of the crew of the *Forfarshire*,  
 “ by ‘ Grace Darling,’ on that very coast.”



URGENT RELIEF ISSUES, AND SPECIAL GIFT OF  
 BAROMETERS FOR FISHERMEN.

[FROM “ THE TIMES,” “ THE MORNING POST,” &c., NOVEMBER 13, 1882.]

**A**T the last periodical meeting of the Central Board of Management of THE SHIPWRECKED FISHERMEN AND MARINERS’ SOCIETY, held at the Central Office of this Royal National Benevolent Institution, Hibernia Chambers, London Bridge, Captain the Hon. FRANCIS MAUDE, R.N., in the Chair, an exceptionally large number of Maritime Disasters were recorded as brought to the Society’s notice— these numerous casualties chiefly affecting smaller craft on our seas and coasts, during the recent continued gales and tempestuous weather. For days together, through the medium of the Society’s comprehensive organisation of Honorary Agencies, embracing every port, fishing-town, &c., crew after crew of Shipwrecked Sufferers, for the most part landed or cast ashore utterly destitute and friendless, had been immediately taken over, fed, clothed, medically attended where requisite, and promptly forwarded to their homes or other destinations. Large issues of relief to bereft Widows and Orphans had likewise been urgently necessitated, and many, further applications were still expected. So great, and, through the late protracted storms, so sudden was the drain thus caused upon the Society’s resources, that the Board were forced to enter into special obligations adequately to meet the pressing claims daily arising.

“ In furtherance of that portion of the Society’s functions and objects directly relating to the Saving of Life at sea, the Central Board of Management had just been intrusted by a philanthropic donor, ‘ Delta,’ with a special gift of 100 of Messrs. Dollond’s new Marine Aneroid Barometers, for presentation from the Society to

“Fishermen at any of its 1,200 Stations at Home, Abroad, and in the  
“Colonies—‘To help them to save their own lives, and encourage them  
“in saving the lives of others.’” \*

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THE CENTRAL HONORARY AND EXECUTIVE STAFF,  
AND LOCAL REPRESENTATIVES, &c.

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**S**INCE the last announcement, the name of the Right Hon. the Earl of Ducie, F.R.S., &c., † has, by kind consent, been added to the list of the Society's Vice-Presidents; and, also, Captain William Woolcott (an Elder Brother of the Corporation of the Trinity House) has been duly elected to fill an existing vacancy upon the Society's General Committee of Management, in London.

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**D**URING the past Quarter, likewise, the whole of the Society's Executive have, with the deepest regret, mourned over the very untimely loss sustained by themselves individually, and by the Society at large, through the death, on 26th October, of Mr. Charles K. McAuliffe, who for several years had most ably, most zealously, and most faithfully rendered invaluable service to the Society, and its great National cause, as a District Travelling Secretary. In formal recognition of the sentiments thus universally entertained, a special Resolution, expressive of Mr. McAuliffe's worth, and tendering their personal condolences to his bereaved widow and family, was unanimously passed by the Chairman and Members of the Committee of Management.

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**I**N connection with the arrangements necessitated through the above-mentioned event, the opportunity has been taken of seeking still more to extend the great benefits of the Society, on behalf of the entire Fishing and Maritime Classes throughout Ireland, by the acceptance on the part of the Committee of Management of the

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\* A short “Explanatory Description” of the Aneroid Barometer, with suitable definite “Instructions” as to its great value and due use, is being issued with each Instrument by the Society.

† See the interesting allusions to the Earl of Ducie's own personal experiences as a “Shipwrecked Mariner,” made by His Lordship himself, and other speakers, upon the occasion of the Society's Forty-third Anniversary Meeting, at the Mansion House, London, on the 21st July last, as given in the Annual Volume of this Magazine, No. xxix., for 1882, at pp. 315, 318, 319.

further kind co-operation and good offices, as a labour of love, of Mr. Thomas F. Brady, Her Majesty's Inspector of Irish Fisheries, who has accordingly been authoritatively appointed the Society's "Honorary Representative and Agent-General in Ireland."

AMONGST its 1,200 stations, &c., on the Coast, Inland, Abroad, and in the Colonies, as many as twenty-six fresh appointments of Local Honorary Representatives and Agents of the Society have, from death, change of residence, or other unavoidable cause, been rendered necessary since the previous reference to such alterations, in this Magazine. In recording their obligations, on behalf of the Society, to all those who had thus—in some instances for very many years—so heartily laboured in furthering the Society's charitable work, the Committee of Management have specially had to deplore those changes occasioned by the decease of Honorary Representatives and Agents, as follows: Lerwick (Shetland Isles)—Joseph Leask, Esq.; and Oswestry—C. Minshall, Esq.

### THE SOCIETY'S WORK.

UNDER the subjoined "Annual General Statistical Return," as well as "Quarterly General Summary of Relief, &c."—comprising particulars of the Society's Work, in accordance with its several specified National Objects,\* and various other Functions—will be found the interesting, and, in many respects, touching record of the Society's benevolent Operations on behalf of all the Seafaring Classes of Men, and those Dependent on them, both during the whole of the past year, 1882, with those preceding it, from the Society's first Institution in 1839, and since the issue of the last Annual or Quarterly Statements:—

#### ANNUAL GENERAL STATISTICAL RETURN.

ASSISTED, AND RELIEVED, &c.—UNDER "OBJECTS I., II., III."

<b>S</b>	HIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS, FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—DEPENDENT WIDOWS AND ORPHANS, &c.	Last Year (1882) 13,145
		Previous Year.. 325,046

TOTAL NUMBER, FROM THE INSTITUTION OF THE SOCIETY, IN 1839 .... 338,191

\* See the details given under "The Society's Objects," at the commencement of this Heading of "THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY."

THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY. 77

LIFE-SAVING REWARDS, &c.—UNDER "OBJECT IV."

<b>H</b> ONORARY AND PECUNIARY REWARDS FOR SAVING LIFE .....	}	GOLD MEDALS .....	38
		SILVER MEDALS.....	301
		PECUNIARY AMOUNT, £2,358	
<b>L</b> IVES SAVED, FOR WHICH RECOGNITION HAS BEEN GRANTED .....			7,208

MARINERS, &c., PROVIDENTLY "SELF-HELPING"—UNDER "OBJECT II."

<b>A</b> NNUAL NUMBER (1882) CONTRIBUTING THE REGULATED SMALL YEARLY PAYMENT, TO THE SOCIETY'S FUNDS, AS "MEMBERS" * .....	53,500
--	--------

QUARTERLY GENERAL SUMMARY OF RELIEF, &c.

**T**HE total Number directly succoured or otherwise relieved, &c., by the Society's Central Executive in London, and by its Honorary Representatives and Agents in all parts of the United Kingdom, as well as Abroad, and in the Colonies—under the Society's respective National Objects, viz., I. "Assistance to the Shipwrecked;" II. "Relief to Members;" III. "Relief to Non-Members;" IV. "Rewards for Saving Life, &c."—was as follows, during the past Quarter, ending 31st December, 1882:—

SHIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS,  
FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—  
DEPENDENT WIDOWS AND ORPHANS, &c., &c. .... 3,606

**O**F the many Honorary Agencies from which the more numerous claims embraced within these figures were received, the following (appending also the names of the Society's Local Honorary Representatives), with the Amounts allotted to each, may be specially mentioned, viz.:—Aberdeen (Mr. D. Mearns), £72; Newcastle (Messrs. James Potts and Son), North Shields (Mr. George French and the Rev. C. M. Woosnam), South Shields (Messrs. Crisp and Hails), Sunderland (Mr. R. M. Hudson), £755; Grimsby (Mr. B. Monds), £76; Hartlepool (Mr. S. Armstrong), £96; Hull (Mr. J. W. Day) £86; Lowestoft (Mr. W. Johnson), £69; giving a total of £1,154 (out of the Quarter's Amount of £4,918, granted for these particular "Objects of the Society") as issued, during the past Quarter, at these Agencies and Seaports, &c., alone.

**T**HE details of various special awards, just recently made, of the Society's Silver Medals (to the number of seventeen, in all), &c., may, it is hoped be available for inclusion in the next Number of this Magazine.

\* This Number of Contributing "Members," here given, which is being largely added to from year to year, represents those Mariners and Fishermen, &c., of all grades, embraced within the scope of the Society's wide-spread efforts, as quoted in its published Prospectus, &c., for "Specially helping all the Fishing and Seafaring Classes providently to help themselves."



## SPECIAL CONTRIBUTION LIST.

COLLECTIONS, DONATIONS, LEGACIES, SERMONS, &c., ON BEHALF OF THE SOCIETY, RECORDED SINCE THE ISSUE OF THE LAST QUARTERLY STATEMENT.

	£	s.	d.		£	s.	d.
<b>L</b> ONDON. — A Thank-offering from Mr. and Mrs. Alderson Berthon, in token of gratitude for rescues in connection with the wreck of the yacht <i>Arab</i> , October 24th, 1882, on the "Goodwins"*	30	0	0	<b>L</b> ONDON ( <i>continued</i> ). London post-mark . . . .	0	5	0
Peter Reid, Esq. . . . .	29	10	0	London post-mark . . . . .	0	5	0
Messrs. Williams, Deacon & Co. (Bankers to the Society)	25	0	0	Miss Stubbs (no address)	1	0	0
G. T. Drummond, Esq. . . . .	50	0	0	Richmond post-mark . . . .	1	0	0
James Hiscutt Crossman, Esq. (Member of the Committee)	15	15	0	S. Fry, Esq. (no address)	0	3	0
The Marine Insurance Company (Limited) . . . . .	52	10	0	<b>A</b> PPLEDORE. — Congregational Collection in Northam Parish Church. . .	6	12	11
The Salters' Company . . . . .	21	0	0	Ditto in Westward Ho Parish Church, both after Sermons by Rev. D. D. Churchward, M. A. (per Capt. Edward Williams, Hon. Agent) . . .	3	15	7½
George Bentinck, Esq. . . . .	50	0	0	<b>S</b> ERRANS. — Part of Collection in Church, after Harvest Thanksgiving Service (per Rev. J. A. Leakey, M. A., Hon. Agent)	2	11	6
J. Henderson, Esq. (annual)	20	0	0	<b>S</b> OUROCK, N. B. — Proceeds of Lecture by Professor Wilson, Provost Bennie in the chair (per Mr. J. Macmillan, Hon. Agent) . . . .	3	15	0
R. Henderson, Esq. (annual)	20	0	0	<b>T</b> IMBERKILNS, N. B. — Congregational Collection in United Presb. Church, after Sermon by Rev. J. G. Crawford (per Capt. John Reid, Hon. Agent) . . .	8	13	3
<b>C</b> OLLECTING Boxes on board—				<b>S</b> OWESTOFT. — Part of Congregational Collection in St. John's Church, after Sermon by Rev. J. R. Pelham, M. A., Vicar (over 300 fishermen and mariners being present), on Sunday, Nov. 19, 1882 . . . . .	10	0	0
SS. <i>Chimborazo</i> . . . . .	0	11	9				
SS. <i>Roms</i> . . . . .	0	10	7				
<b>C</b> ONTRIBUTIONS received without name or address—							
A. B. C. (London post-mark)	0	2	6				
"A Friend" (Paddington)	0	10	0				
"A Sailor's Sister" . . . . .	0	2	6				
"A Sympathiser" (Clonmel) . . . . .	1	0	0				
Anonymous . . . . .	0	1	0				
C. S. (as acknowledged in <i>The Morning Post</i> ) . . . .	10	0	0				
Devonport post-mark . . . . .	0	10	0				
High Court of Justice, Probate Registry . . . . .	1	0	0				
L. M. (for the Sufferers from Storms) . . . . .	0	4	11				

\* See further allusion to the circumstances of this Wreck, as given under the title of "Rescued!" at p. 18 of the current Number of this Magazine.

THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY. 79

	£	s.	d.		£	s.	d.
<b>NOTTINGHAM.</b> —Collecting Box at Aquatic Club (per P. Ellis, Esq., Hon. Agent at Ilkeston) .....	3	8	0	<b>PLYMOUTH.</b> —Proceeds of Admission Fees, &c., to view "Grace Darling" Boat, on loan from Mrs. J. Joicey, of Newton Hall, at "North East Coast Naval Exhibition," September and October, 1882 (per Capt. R. H. Ivey, the Society's Visiting Secretary for Sailors) * .....	129	0	0
<b>DOLRUAN.</b> —Part of Congregational Collection in the Parish Church of Lanteglos-by-Fowey, on 29th October, 1882, after Sermon by Rev. H. Maclean, M.A., Vicar (per Mr. Sam. Slade, Hon. Agent) .....	4	8	6	<b>WELLS (NORFOLK).</b> —Congregational Collection in the Independent Chapel, after Sermon, by Rev. J. Meaton (per Capt. Wm. Temple, Hon. Agent)....	1	15	6
<b>PETERHEAD, N. B.</b> —Contribution from Bicycle Club (P. Scrogie, Esq., Sec.), being part of clear proceeds of Annual Races, October 14, 1882 (per A. Robertson, Esq., Hon. Agent) .....	1	1	0	<b>WHITBY.</b> —Moisty of Harvest Thank-offering at Sleights Church—received from Rev. T. Walker, M.A. (per Capt. J. N. Lawson, Hon. Agent)....	1	11	6
<b>SUGBY.</b> —Proceeds of an Amateur Concert on October 31, 1882 (per Miss Vicars, Lady Collector)..	16	0	0	<b>WITHERNSEA.</b> —Congregational Collection at St. Nicholas Church, after Sermon, by Rev. Chas. Day, B.A. (per Mr. P. B. Fugh, Hon. Agent).....	1	15	7
<b>SALCOMBE.</b> —Congregational Collection in Salcombe Church, after Sermon, by Rev. M. Kelly, M.A., Vicar (per Rev. F. O. H. Randolph, M.A., Rural Dean)	2	6	11	<b>WYVENHOE.</b> —Proceeds of a Lecture by James Jackson, Esq., of Wyvenhoe Hall (per Mr. Wm. Ham, Hon. Agent) .....	6	9	0
<b>GRAHAM HARBOUR.</b> —Congregational Collection at Harvest Thanksgiving, on Oct. 4, in Parish Church, after Sermon by Rev. Canon Falconer, Rural Dean (per Rev. James Colling, M.A., the Vicar) less expenses.....	6	16	4	<b>WARMOUTH (GREAT).</b> —Congregational Collection in Parish Church, after Sermon, by Rev. Canon E. Venables, M.A. (per Mr. G. T. Watson, Hon. Agent)	16	0	5
<b>KENNEN COVE.</b> —Collecting Box at Mr. W. Thomas's Refreshment-rooms, Land's End Point (per Mr. W. Steed, Hon. Agent).....	0	5	0	Congregational Collection by Rev. A. J. Spencer, M.A., at Harvest Thanksgiving in St. John's Church, on Oct. 3, 1882, after Sermon by Rev. S. Hooke, Rector of Clopton (per Mr. G. T. Watson, Hon. Agent)....	8	7	4
<b>STIFFKEY AND WELLS.</b> —Congregational Collections in Wells Church, on December 17, 1882, after Sermon by Rev. J. R. Pelling, M.A. (per Capt. W. Temple, Hon. Agent)	1	10	0	—◆◆—			
				<b>LEGACIES RECEIVED:—</b>			
				Miss Jane Mudie .....	100	0	0
				Miss Alice Cuff.....	100	0	0

\* See reference to this most interesting event, at p. 72 of the current Number of this Magazine.



THE YEAR, AND THE MONTHS.

1883.

[Jewish Calendar—5643-44. Mohammedan Calendar—1300-01.]



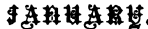
OLDEN NUMBER—3: SOLAR CYCLE—16: DOMINICAL LETTER—G: JULIAN PERIOD—6,596: EASTER SUNDAY—MARCH 25 WHIT SUNDAY—MAY 13: ADVENT SUNDAY—DECEMBER 2.

THE SEASONS.

“ SPRING—Showery, flowery, bowery: SUMMER—Hoppy, croppy, poppy. AUTUMN—Wheey, sneezy, freezy: WINTER—Stippy, drippy, nippy.”

LINES OF FRENCH CALENDAR, 1793.

SPRING, March 20, Sun enters Aries, 11 P.M. | AUTUMN, Sept. 23, Sun enters Libra, 10 A.M.
SUMMER, June 21, Sun enters Cancer, 7 P.M. | WINTER, Dec. 22, Sun enters Capricornus, 4 A.M.
The EQUINOXES—at Spring and Autumn; and the SOLSTICES—at Summer and Winter.
ECLIPSE OF THE MOON (PARTIAL)—April 22, invisible at Greenwich.
ECLIPSE OF THE SUN (TOTAL)—May 6, invisible at Greenwich:
ECLIPSE OF THE MOON (PARTIAL)—October 16, visible, partly, at Greenwich.
ECLIPSE OF THE SUN (ANNULAR)—October 30-31, invisible at Greenwich.



Under water, dearth— Under snow, bread.”

PROVERB.

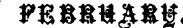
SUN.

1st DAY ..... Rises 6h. 8m. Sets 3h. 52m. | 15th DAY ..... Rises 6h. 3m. Sets 4h. 17m.
8th DAY ..... Rises 6h. 6m. Sets 4h. 7m. | 22nd DAY ..... Rises 7h. 55m. Sets 4h. 29m.

MOON.

1st DAY .. Last Quarter 6h. 50m. P.M. | 16th DAY ..... First Quarter 0h. 48m. A.M.
9th DAY ..... New Moon 5h. 59m. A.M. | 23rd DAY ..... Full Moon 7h. 16m. A.M.
31st DAY ..... Last Quarter, 10h. 27m. A.M.

IN PERIGEE, 12th DAY ... 9 P.M. IN APOGEE, 28th DAY ... 7 P.M.



A' the Months o' the Year Curses a fair Februer.”

PROVERB.

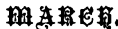
SUN.

1st DAY ..... Rises 7h. 41m. Sets 4h. 47m. | 15th DAY ..... Rises 7h. 17m. Sets 5h. 12m.
8th DAY ..... Rises 7h. 30m. Sets 4h. 59m. | 22nd DAY ..... Rises 7h. 3m. Sets 5h. 25m.

MOON.

7th DAY ..... New Moon 6h. 10m. P.M. | 14th DAY ..... First Quarter 9h. 55m. A.M.
22nd DAY ..... Full Moon, 0h. 18m. A.M.

IN PERIGEE, 8th DAY ... 3 P.M. IN APOGEE, 25th DAY ... 11 A.M.



A pack of March dust Is worth a King's ransom.”

PROVERB.

SUN.

1st DAY ..... Rises 6h. 46m. Sets 5h. 37m. | 15th DAY ..... Rises 6h. 17m. Sets 6h. 2m.
8th DAY ..... Rises 6h. 32m. Sets 6h. 50m. | 22nd DAY ..... Rises 6h. 1m. Sets 6h. 13m.

MOON.

2nd DAY ..... Last Quarter 5h. 26m. A.M. | 15th DAY ..... First Quarter 6h. 31m. P.M.
9th DAY ..... New Moon 4h. 31m. A.M. | 23rd DAY ..... Full Moon 6h. 5m. P.M.
31st DAY ..... Last Quarter, 8h. 21m. P.M.

IN PERIGEE, 9th DAY, 11 P.M. IN APOGEE, 24th DAY, 5 P.M.

ILLUSTRATED] "The Shipwrecked Mariner." [MAGAZINE.

JANUARY, 1883.



FRONTISPIECE.—“The Shipwrecked Mariner.”—APRIL, 1883.



“OCEAN.”

No. CXVIII.

VOL. XXX.

# THE SHIPWRECKED MARINER

"There is Sorrow on the Sea."

Quarterly Maritime Magazine.

APRIL, 1883.

Published under the Auspices of "The Shipwrecked Mariners' Society."

## IDYLLS OF THE SEA.

"The murmuring billows of the deep  
Were languishing to silent sleep."

### II.—EVENING BY THE SEA.



THE sun has disappeared behind the hills,  
And eventide is coming on apace:  
The wind, which blew from westward all day long  
In fitful gusts, ruffling the surface of  
The main, lulled as the orb of day declined.  
The ocean yielded to the gen'ral mood;  
Big breakers ceas'd to lave the pebbly beach,  
And now the crystal bosom's undisturbed  
By foam. Soon will arise the gibbous moon,  
Behind yon floating *cumuli*, decking  
Their round edges with a silvery fringe:

Pale beams will sleep upon these waters wide!

The harsh clangour of the busy throng is  
Here unheard—no jarring sound intrudes, and,  
Save a faint murmur whisper'd by the shore,  
Soft stillness over all the scene prevails.

Would that

No idle phantasy should me beguile,  
Nor the stern cares of life obscure my mind,  
When contemplation shall allure my thoughts!  
And, while I sip at the Pierian spring,  
Or make some rude essay in prose or verse—

'Teach me, ye powers, some happy art of speech,  
To dress my purpose up in gracious words,  
Such as may gently steal into her soul.'

But ere the moon arise, I will away to the further margin of this promontory—there to recall an old conception, and perchance indulge, as in the flower of life, in joyous reverie. 'Tis on a spot like this alone, and when the elements are quiescent, that one can get a glimpse of the earth's rotundity.

The visibility of the air favours my experiment. All minor things around seem to be effaced, or absent from my ken, and only the sharp line of the horizon, as one great curve, is present to my gaze. My eye sweeps along this arc—now and again—till the terrestrial ball comes up to my view, seeming to bound majestically onward—carrying me the while through the realms of space.

How silently it speeds! With what rapidity it rolls through the obsequious ether; no friction impedes its flight as it traverses the orbicular course of many million miles. To me this noiseless motion is a source of wonder! and how it contrasts with the uproarious rattling of the iron way! or the deep thudding of the paddle, or swift revolving screw, and all their attendant harsh roar and racket—indeed, with all such devices of ingenious man. Yet, methinks, there may be, in the abyss of space, some sounds inaudible to earthly beings:—

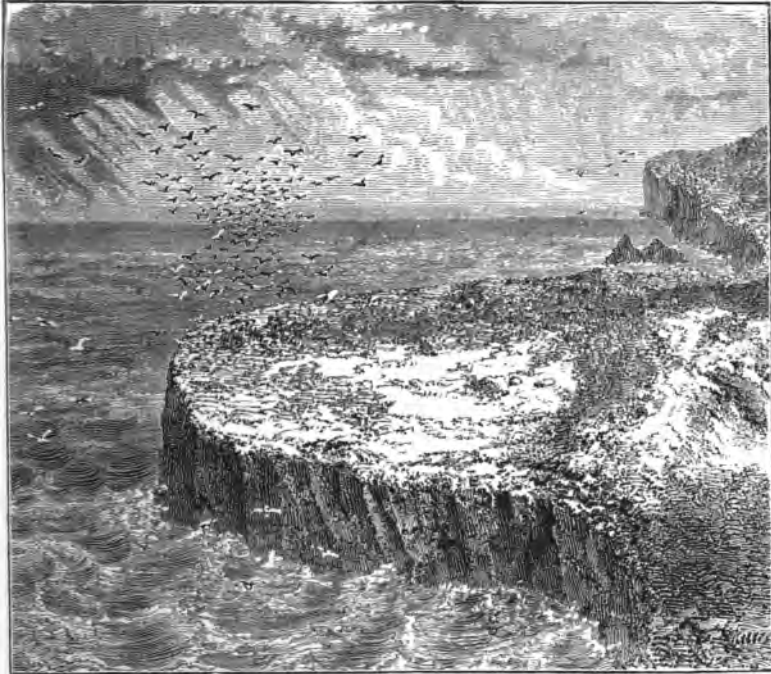
Perhaps some "music of the spheres,"  
That reaches only angels' ears.

See! how the lunar rays begin to glimmer in the eastern sky. The moon rising, another aspect will be thrown upon the scene. The transition diverts my flight of fancy, and, like a gentle admonition, keeps within bounds my speculative mood. This stands in stead of my good friend Adelpheos' counsel. He is not here to act as Mentor, or to check the exuberance of my musing; but his precepts merit my regard, for they are ever persuasive—never withering. One sentiment recurs to me. "I look upon a sound imagination as the greatest blessing of life; next to a clear judgment and a good conscience." Thus he gives encouragement to the pleasures of the mind, the cultivation of the reflective faculties, or to poesy.

He knows full well, that, in this age of feverish haste and hurried toil, men find but little leisure for meditation on the higher purposes of life, but follow one almost ceaseless round of anxious enterprise. It's

progression without a goal—a craving that brings no contentment. Would it be otherwise if each was as rich as Cæsus ?

But, alas ! I fear that Mammon has had a long sway, and has held his rule with a firm grasp. Ay, surely the love of pelf existed before



A DISTANT HORIZON.

the *age of steam* ! Hear what our British sailor poet\* said, more than one hundred years ago :—

“ Can sons of Neptune, gen'rous, brave, and bold,  
 In pain and hazard toil for sordid gold ?  
 They can ! for gold, too oft, with magic art,  
 Subdues each nobler impulse of the heart.  
 This crowns the prosp'rous villain with applause,  
 To whom in vain sad Merit pleads her cause :  
 This strews with roses life's perplexing road,  
 And leads the way to Pleasure's blest abode ;

---

\* William Falconer, lost at sea in 1769.



With slaughter'd victims fills the weeping plain,  
 And smooths the furrows of the treach'rous main.\*

“O'er the gay vessel, and her daring band,  
 Experienc'd Albert\* held the chief command;  
 The' train'd in boist'rous elements, his mind  
 Was yet by soft humanity refin'd.  
 Each joy of wedded life at home he knew;  
 Abroad, confest the father of the crew!  
 Brave, liberal, just! the calm domestic scene  
 Had o'er his temper breath'd a gay serene.  
 Him, science taught by mystic lore to trace  
 The planets wheeling in eternal race;  
 To mark the ship in floating balance held,  
 By earth attracted and by seas repell'd,  
 Or point her devious track thro' climes unknown,  
 That leads to every shore and every zone.  
 He saw the moon thro' heaven's blue concave glide,  
 And into motion charm the expanding tide;

\* \* \* \* \*

Inur'd to peril, with unconquer'd soul,  
 The chief beheld tempestuous oceans roll;  
 His genius, ever for th' event prepar'd,  
 Rose with the storm, and all its dangers shar'd.”

No longer I'll digress. The lamp of night has risen some degrees above the horizon, and is reflected on the boundless flood, on which her attractive influence will soon attain its height. She's past her first quadrature, and the time of spring tides is drawing nigh.

What did our Shakespeare mean by this?—

“The sea her bosom lifts above the shores,  
 And makes a sop of all this solid globe.”

For, as I have heard, it is the moon that lifts the waters, and the sea itself is passive; but could she so raise these waters as to cause a general deluge?

Can it be that, before the materials of this globe were consolidated, a portion was torn off from this primeval world, leaving a great cavity now filled by the southern oceans? That the spinning motion of the united mass far exceeded the present speed of rotation, that the distance

---

\* However, Albert, the commander of the *Britannia*, whose voyage was being described, was no sordid man; his character deserves our admiration.

of the smaller mass gradually increased, that the day grew longer and longer, till the moon reached her present distance ?

When the vapoury elements around the globe condensed into water the attractive force set up a motion in a direction opposed to that of rotation ; then, if this occurred when the moon was only half her present distance, the lifting power was immensely greater than now, and was capable of submerging the solid portions of the earth. It



"THE LAMP OF NIGHT."

cannot be that our poet took such a retrospect, but merely wrote a hyperbole ?

So many influences are attributed to the moon, that they might be supposed the remnants of traditions of its nearer relation to our globe. Her various phases are looked upon as omens to mankind. He

appearances, as modified by the conditions of the air, are regarded as the precursors of storms, as when the poet says—

“The waning moon, behind a wat’ry shroud,  
Pale glimmer’d o’er the long protracted cloud.  
A mighty ring around her silvery throne,  
With parting meteors cross’d, portentous shone.  
This in the troubled sky full oft prevails;  
Oft deemed a signal of tempestuous gales.”

And now, for a while, I will take a parting look at this deep blue sea, whose vastness, freeness, and freshness fill my soul with the impress of sublimity, and I reflect, as I look upon its tranquil surface, that only external forces can disturb its cool composure, and that, though—

“Oft on the troubled ocean’s face  
Loud stormy winds arise;  
The murmuring surges swell apace,  
And clouds obscure the skies:—  
Yet when the tempest’s rage is o’er,  
Soft breezes smooth the main;  
The billows cease to lash the shore,  
And all is calm again.”

SEA-URCHIN.



## THE FISHERMAN.



THE fisherman has a peculiar claim upon the world’s favour. He is the most domestic of our marine figures. He blends his sturdy form with seaside holiday memories. We think of the calm summer sea, but the recollection comes always with the image of the picturesque smack gently heaving on the blue folds of the deep, and giving the charm of a quaint and tender bit of colouring to the gleaming leagues of water. The little vessel alongside the quay or wharf is recalled, her well full of glittering fish, and the smacksman himself, homely and hearty, swinging and shuffling along in his great sea boots from his fishing vessel to his lowly home.

Of all seafarers the fisherman is the most associated with shore-going life, for his habitation is in a hundred places frequented by all; his blue jersey, his high boots, his sou’-wester, are familiar objects; his little ship may be seen going and coming; and the interest which his manly vocation excites, the pleasure that is felt in watching him at work upon his brown nets, or scrubbing the sides of his craft, or poising his robust form at the tiller, as with flowing sheets his vessel bounds like a colt across the sea, into the vagueness of the long and lonely horizon, are never to be exhausted.



## BIGGEST THINGS ON EARTH.



A SHORT ACCOUNT OF SOME OF THE WONDERS OF THE WORLD—MARVELS  
OF NATURE—STUPENDOUS WORKS ACCOMPLISHED BY MAN.



HE highest range of Mountains are the Himalayas, their mean elevation being estimated at from 16,000 to 18,000 feet.

The loftiest Mountain is Mount Everest or Guarisanker of the Himalaya range, having an elevation of 29,002 feet above the sea level.

The largest Theatre is the New Opera House in Paris. It covers nearly three acres of ground. Its cubic mass is 4,287,000. It cost about 100,000,000 francs.

The largest City in the world is London. Its population numbers 3,020,871 souls. New York, with a population of about 1,250,000, comes fifth in the list of great cities.

The largest Suspension Bridge would appear to be the one between New York and Brooklyn. The length of the main span is 1,595 ft. 6 in.; the entire length of the bridge 5,989 feet.

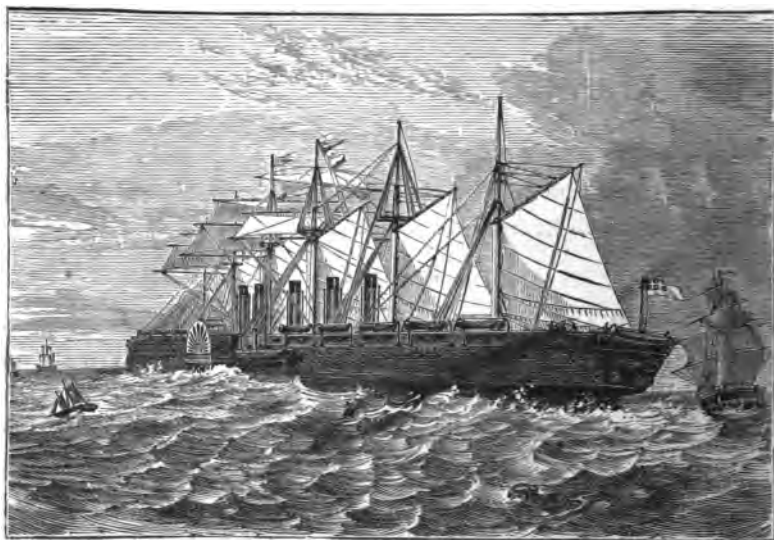
The loftiest active Volcano is Popocatepetl—"smoking mountain"—thirty-five miles south-west of Puebla, Mexico. It is 17,784 feet above the sea level, and has a crater three miles in circumference and 1,000 feet deep.

The largest Island in the world, which is also regarded as a continent,

is Australia. It is 2,500 miles in length from east to west, and measures 1,950 miles from north to south. Its area is 2,984,287 square miles.

The longest Span of Wire in the world is used for a telegraph in India over the river Kistnah, between Bezorah and Sectanagram. It is more than 6,000 feet long, and is stretched between two hills, each of which is 1,200 feet high.

The largest Ship in the world is the *Great Eastern*. She is 680 feet



"THE LARGEST SHIP IN THE WORLD."

long, 83 feet broad, and 60 feet deep, being 22,927 tons builder's, 18,915 gross, and 13,344 net register. She was built at Millwall, on the Thames, and was launched January 31, 1857.

The largest University is Oxford, in England, in the city of the same name, fifty-five miles from London. It consists of twenty-one colleges and five halls. Oxford was a seat of learning as early as the time of Edward the Confessor. University College claims to have been founded by Alfred.

The most extensive Park is Deer Park, in the environs of Copenhagen, in Denmark. The inclosure contains about 4,200 acres, and is divided by a small river. The largest pleasure ground in America,

and one of the largest in the world, is Fairmount Park, Philadelphia, which contains 2,740 acres.

The largest Bell in the world is the great bell of Moscow, at the foot of the Kremlin. Its circumference at the bottom is nearly 68 feet, and its height more than 21 feet. In its stoutest part it is 23 inches thick, and its weight has been computed to be 448,772 pounds. It has never been hung, and was probably cast on the spot where it now stands. A piece of the bell is broken off. The fracture is supposed to have been



THE GREAT BELL OF MOSCOW.

occasioned by water having been thrown upon it when heated by the building erected over it being on fire.

The highest Monolith is the Obelisk at Karnak, in Egypt. Karnak is on the east bank of the Nile, near Luxor, and occupies a part of the site of ancient Thebes. The obelisk is ascribed to Hatasu, sister of Pharaoh Thothmes III., who reigned about 1,600 B.C. Its whole length is 122 feet, its weight 400 tons. Its height, without pedestal, is 108 feet 10 inches.

The longest Tunnel in the world is that of St. Gothard, on the line of railroad between Lucerne and Milan. The summit of the tunnel is 980 feet below the surface at Andermatt, and 6,600 feet beneath the

peak of Castlehorn, of the St. Gothard group. The tunnel is  $26\frac{1}{2}$  feet wide, and 19 feet 10 inches from the floor to the crown of the arched roof. It is  $9\frac{1}{2}$  miles long,  $7\frac{1}{2}$  miles longer than the Mont Cenis tunnel.

The biggest Trees in the world are the Mammoth Trees of California. One of a grove in Tulare County, according to measurement made by members of the State Geological Survey, was shown to be 276 feet high, 106 feet in circumference at base, and 76 at a point 12 feet above the ground. Some of the trees are 376 feet high, and 34 feet in diameter. Some of the largest that have been felled indicate an age of from 2,000 to 2,500 years.

The largest Inland Sea is the Caspian, lying between Europe and Asia. Its greatest length is 760 miles, its breadth 270 miles, and its area 180,000 square miles. Great Salt Lake, in Utah, which may be properly termed an inland sea, is about 90 miles long, and has a varying breadth of from 20 to 35 miles. Its surface is 4,200 feet above the level of the sea, whereas the surface of the Caspian is 84 feet below the ocean level.

The largest Empire in the world is that of Great Britain, comprising 8,557,658 square miles, more than a sixth part of the land of the globe, and embracing under its rule nearly a sixth part of the population of the world. In territorial extent the United States ranks third, containing 3,580,242 square miles, including Alaska; in population it ranks fourth, with its 50,000,000 of people. Russia ranks second in extent, having 8,352,940 square miles.

The largest Library is the Bibliothèque National, in Paris, founded by Louis XIV. It contains 1,400,000 volumes, 300,000 pamphlets, 175,000 manuscripts, maps and charts, and 150,000 coins and medals. The collection of engravings exceeds 1,300,000, contained in some 10,000 volumes. The portraits number about 400,000. The building which contains these treasures is situated on the Rue Richelieu. Its length is 540 feet, and its breadth 130 feet.

The most remarkable Whirlpool is the Maëlstrom, off the north-west coast of Norway and south-west of Moskenæsø, the most southerly of the Lofoden Isles. It was once supposed to be unfathomable, but the depth has been shown not to exceed twenty fathoms. The whirlpool is navigable under ordinary circumstances, but when the wind is north-west it often attains great fury and becomes extremely dangerous.

Under strong gales the Maelstrom has been shown by official statistic to run at the rate of twenty-six miles an hour.

The biggest Cavern is the Mammoth Cave, in Edmondson County, Kentucky. It is near Green River, six miles from Cape City, and about twenty-eight miles from Bowling Green. The cave consists of a succession of irregular chambers, some of which are large, situated on



THE ECHO RIVER. — MAMMOTH CAVE.

different levels. Some of these are traversed by navigable branches of the subterranean Echo River. Blind fish are found in its waters..

Among the most remarkable natural Echoes are—that of Eagle's Nest, on the banks of Killarney, in Ireland, where it repeats a bugle call until it seems to be sounded from a hundred instruments; and that on the banks of the Naha, between Binges and Coblenz, which repeats



a sound seventeen times. The most remarkable artificial echo known is that in the Castle of Simonetta, about two miles from Milan. It is occasioned by the existence of two parallel walls of considerable length. It repeats the report of a pistol sixty times.

The largest Desert is that of Sahara, a vast region of Northern Africa, extending from the Atlantic Ocean on the west to the valley of the Nile on the east. The length from east to west is 3,000 miles, its average breadth about 900 miles, its area 2,000,000 square miles. The town of Timbuctoo, about eight miles from the Niger River, is surrounded by desert, but at a distance of a few days' journey to the north-east and north are the oases of Mabrook and Arawan. Rain falls in torrents in the Sahara at intervals of five, ten, and twenty years. In summer the heat during the day is excessive, but the nights often are cold. In winter the temperature is sometimes below freezing point.



## ON THE SEA SHORE.



IN some rude fragment of the rocky shore,  
Where, on the fractur'd cliff, the billows break,  
Musing, my solitary seat I take,  
And listen to the deep and solemn roar.

O'er the dark waves the winds tempestuous howl;  
The screaming sea-bird quits the troubled sea:  
But the wild gloomy scene has charms for me,  
And suits the mournful temper of my soul.

Already shipwreck'd by the storms of fate,  
Like the poor mariner, methinks I stand,  
Cast on a rock; who sees the distant land,  
From whence no succour comes—or comes too late.  
Faint and more faint, are heard his feeble cries,  
Till, in the rising tide, the exhausted sufferer dies.

SMITH.





## GREAT GALES.

(BY A FELLOW OF THE METEOROLOGICAL SOCIETY.)



“The crashing ribs divide—  
She loosens, parts, and spreads in ruin o'er the tide.”

FALCONER.



### VI.



AVING, in our last Paper upon this interesting subject, and in continuation of the story of the disasters which occurred during the “Great Storm,” in November, 1703, given, under the head of “Damages Inland,” an alphabetical list of the inland places where, according to the recorded statements, the greatest calamities happened, we will proceed now to complete the account by similarly putting before our readers some notes of the “Maritime Damages” locally caused by the storm in question, as follows :—

#### II.—DAMAGES AT THE PORTS AND ON THE COASTS.

BRISTOL.—The storm was felt in its greatest fury for six hours. The cathedral and several churches were much damaged, but the greatest disaster was caused by the overflowing of the tide; the banks or sea walls were broken down, some houses washed clean away, and much damage done to merchants' cellars; thousands of hogsheads of sugar and fifteen hundred hogsheads of tobacco were

spoiled; the damage done in the city alone was estimated at £100,000.\*

The loss in the country around, in cattle, corn, and hay was ruinous; above eighty persons were drowned in the marshes and rivers—whole families perished together.

In Kingroad, at the mouth of the Avon, ships were driven from their anchorage and carried on the land. One large vessel broke in pieces and nearly all hands were drowned, and several men lost from others. The damage by the banks of the Severn was £200,000. Many heads of cattle were drowned, and 15,000 sheep. In North Marsh the waters broke in and ran six miles into the country.

BRIGHTON (then Brighthelmston), “being an old and poor, though very populous town, was most miserably torn to pieces; it made a very picture of desolation.”

“At Shoreham, the market house, an ancient but strong building, was laid flat to the ground, and all the town shattered.”

BURNHAM, Somerset.—Near the saltworks five coasters (trading between Wales and Bridgewater) were driven at least 100 yards upon pasture ground.

CARDIFF.—A breach was made in the town wall, part of the church steeple blown down; most of the inhabitants suffered much in their houses; many trees were uprooted; the river overflowed, and hundreds of sheep were drowned.

COWES.—Several ships were driven out to sea; one full of soldiers, and two merchantmen, were never heard of. Abundance of ships were saved by cutting down the masts.

THE DOWNS.—“We had here the Rear-Admiral of the Blue, in the ship *Mary*, a third rate, the very next ship to ours, sunk, with Admiral Beaumont and above 500 men drowned; *The Northumberland*, about 500 men all drowned; *The Restoration*, all sunk and drowned. These ships were close to us, which I saw; they fired guns all night and day, but the storm was so fierce and raging, none would save them. . . . There were above forty merchant ships cast away and sunk.” (From a letter by Miles Norcliffe in *The Shrewsbury*.)

DEAL.—Many poor wretches floated on pieces of wreck and got on

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\* In this and other places, the value is given as money went then, *i.e.*, the early part of the eighteenth century.

the Goodwin Sands when the tide was out. There they made signal for help, and they must all have perished had it not been for Mr. Thomas Powell, the Mayor of Deal. The Custom-house officers refused both men and boats, whereupon, the Mayor, at his own risk, took the Custom-house boats by force, and made a general offer of five shillings per head for all the men who could be saved. He obtained a stout-hearted crew, who brought on shore above 200 men, whose lives must



ON THE COAST AT DEAL.

have been lost a few minutes after the tide came in again. But the men were greatly distressed from hunger, cold, and nakedness, and as the Queen's agents refused all help, the Mayor provided the men with food and lodging. On the next day several died, and he sent the rest on to Gravesend when they were recovered from their fatigue.

**EDDYSTONE.**—The lighthouse was swept away on the night of the 26th November, having been completed only about three years;

nothing more was seen of it "except some iron stanchions and a chain" (it had been constructed by Mr. Winstanley; was begun in 1696 and completed in four years. The constructor and five workmen perished, the lighthouse being then under repair).

FALMOUTH.—Eleven ships were stranded, but most got off again.

GLOUCESTER.—The damages to this city were computed at £12,000; the sea walls damaged to the value of £5,000; all the country lay under water for 20 or 30 miles.

GRAVESEND.—Several ships driven on shore below Tilbury Fort; among them, five bound for the West Indies.

There was great damage among small craft in the Thames; the watermen reckoned 500 wherries lost, mostly dashed to pieces—ships' boats without number; above sixty barges and lighters were driven foul of the bridge, but only about twenty-two persons were known to be drowned.

GRIMSBY.—Not much damage was done to the town. There were nearly 100 ships in the roads—some accounts say eighty, "fifty whereof were wanting after the storm;" the wrecks of four were seen at low water, their men all lost. Mr. Walls, master of the Spurn light tower gave a particular account of what he witnessed. He counted some twenty-seven vessels driving about the Spurn-head, on the morning of the 27th, "some having cut, others broke their cables, but all disabled and rendered helpless." Mr. Walls thought his pharos, which was 20 feet high, must have been blown down; "the tempest made the fire burn so vehemently that it melted down the iron bars, on which it lay, like lead."

HULL.—The storm was violent, "but moderate compared with the stupendous fury with which all the southern part of the country was attacked."

LYME REGIS, DORSET.—Most houses damaged; many trees blown down; a Guernsey privateer of eighty guns went on shore at Seaton and forty men drowned; five boats driven out of the Cobb and one vessel lost. Most houses in Chidock were uncovered, and one man killed in bed.

LYMINGTON, SOUTHAMPTON.—A Guernsey privateer coming through the Needles, had to cut away his mainmast by the board and lost his fore-top mast; had twelve men washed overboard by one sea, and the next wave carried three of them off the deck again; there was con-

siderable destruction among the houses; 4,000 trees were torn up by the roots in the New Forest. The farmers suffered severely.

LYNN, NORFOLK.—The damage to buildings was computed at £1,000; seven vessels, valued at £3,000, belonging to that port were lost; in them twenty men perished.

MALDON, ESSEX.—A spire of the church blown down, and the churches much shattered. Some houses blown down or severely



FALMOUTH HARBOUR.

damaged. Several vessels in the harbour much shattered, and corn to the value of £500 lost.

MARGATE, KENT.—Hardly a house escaped without damage; several families narrowly escaped being killed in their beds; the churches received a great deal of damage; most towns, villages and farms in the Isle of Thanet suffered much. A vessel off Sandwich, carrying passengers from London, was blown out of the roads, and all were lost.

MILFORD HAVEN.—Several ships of the Royal Navy lay here, having under convoy about 130 merchant ships; about thirty of the latter

were lost, how many men was not known. The alarm was terrible, guns were fired from one ship or another all night, but the sea was so high and the darkness so intense that no help could be rendered.

MINEHEAD, SOMERSET.—All the ships in the harbour, about twenty-four, besides fishing boats, were (except two) driven from their moorings; one dashed to pieces, nine driven on shore; several fishing boats destroyed; three seamen drowned, one squeezed to death. The church, houses, trees, &c., met the same fate as in other parts. One gentleman had 2,500 trees overthrown.

NEWPORT, ISLE OF WIGHT.—Houses demolished. Many in the town and other parts of the Isle were uncovered. Many wrecks on the south and south-west coasts. The fleet, which went out with the King of Spain, came back here for shelter.

PLYMOUTH.—Three merchant ships cast away in "Plymouth-road" and most of their men lost. *The Monk*, man-of-war, rode out the gale, but had to cut away all her masts by the board, as several men-of-war did in other places.

PORTSMOUTH.—There was a great fleet here; several ships were driven out to sea, and some of them never heard of again. *The Newcastle* was cast on the Sussex coasts and lost with 210 men; *The Resolution* was lost, but her men saved.

SOUTHAMPTON.—Few houses escaped damage; most of the ships in the river, and those which lay off from the quays, were blown on shore. Three or four were carried so far that they had to be unladen and channels dug to get them afloat at a spring-tide.

SWANSEA.—The storm began about midnight, and was most violent at 4 a.m. on 27th, when the greatest part of the houses were uncovered. The south aisle of the church was wholly uncovered; four large stones about 200 pounds each, were blown from the end of the church, besides other damage. The tides did much damage. In Cline (Clyne) Wood, belonging to the Duke of Beaufort, 200 large trees were blown down, and 80 large oaks by the river near Briton Ferry. At Rhosilly, and other places in Gower, most houses were unroofed.

YARMOUTH, NORFOLK.—There was a great fleet in the roads, but many escaped destruction by slipping their cables and running northward. *The Reserve*, man-of-war, just come in as convoy to a fleet from Russia, foundered with 242 men on board; no help could be rendered from the shore, the sea being too high; "not one man was saved."

## GENERAL SUMMARY OF DAMAGES.

In London, 128 persons were killed, with £2,000,000 damage ; the total loss of life, including that in Holland, exceeding 8,000 persons.



A VIEW OF SWANSEA.

**CHURCHES.**—More than 100 uncovered. Seven steeples quite blown down, and abundance of pinnacles, battlements, &c.

**HOUSES.**—Above 800 were blown down in different parts.

**WINDMILLS.**—Above 400 overset or broken to pieces.

**PARKS.**—Twenty-five lost more than 1,000 trees each.

**ROYAL NAVY.**—Altogether twelve men-of-war were lost, with 1,611 men and 524 guns—in one ship 386 men. *The Resolution* and the *York* were lost, three days before, off Harwich—most of the men saved.

S. H. M.





## “POOR JACK.”\*

BY A SEAFARER.



Our anchors are cast, our sails are all furled,  
We have weathered the Ocean's deep chiding,  
And, safe from the buffeting waves of the world,  
Here, in “Belvedere” haven, are riding!

V. B.



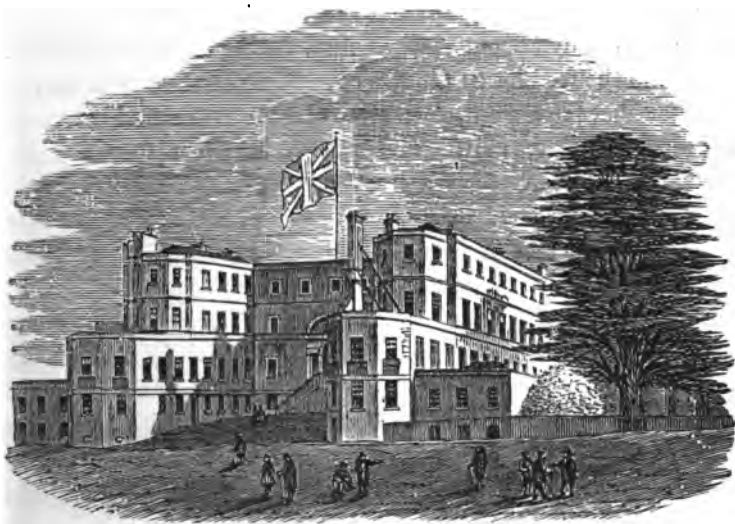
CLIMBED the steep hill that runs from the Belvedere Railway Station, pausing now and again for breath, and to glance at the summer beauty of the distant green land, through which the river coiled, like a stream of quicksilver sluggishly rolling, and presently, passing through a gateway, found myself in a fine park-like stretch of grounds, shaded by a multitude of tall far-branching trees, in the midst of which, and upon the highest point of the billowy soil, stood a spacious and exceedingly handsome mansion.

There were circular seats affixed to many of the trees, and upon them I noticed several bent and aged figures leaning their breasts upon stout walking sticks, and holding themselves in very quiet postures. Here and there, walking to and fro near the house, or upon the grass under the trees, were similar figures, all of them bowed by old age,

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\* From “*The Daily Telegraph*”—being the account of a visit to “THE ROYAL ALFRED AGED MERCHANT SEAMEN'S INSTITUTION,” Belvedere, Kent, founded (with the Object of giving a Home, or a Pension, to the Merchant Sailor when Old, Destitute, and Friendless) under the Auspices of “THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY,” and opened in 1867, having an Office, and Secretary, in London, at 58, Fenchurch-street, E.C.

though some of them paced the turf with a certain nimbleness of tread. They were dressed in pilot cloth trousers and sleeved waistcoats, with brass buttons ; and, ancient as these men were, yet it was wonderful to observe, even where decrepitude was at its height, how the old sea-swing and lurching gait of the sailor lived in their hobbling, and determined their calling, as though the word "seaman" had been branded upon every man's forehead. I stood looking at them, and at the house and at the great trees, beyond which the distant prospect was shining under the high sun, for many minutes before advancing. The sense of repose conveyed to me by the shadows of the trees, the restful



THE HOME.

shapes of cattle upon the slopes beyond the mansion, the motionless postures of the old men seated, and the movement of the few figures who were walking, cannot be expressed in words. I listened ; there was no note of human life in the air ; no sound broke the fragrant summer stillness but the piping of birds in the trees, the humming of bees and flies, the silken rustling of leaves. The landscape was like a painted picture, save where, here and there, upon the far-off shining silver of the river, a vessel slowly gliding broke the still scene with a fugitive interest. I walked to the house and entered the spacious hall, and as I did so, a single stroke on a bell to denote that it was half an hour after noon resounded through the building. . A number of

ancient men hung about this entrance, and I examined them curiously, for, of all the transformations which old age works in the human countenance, I never beheld stranger examples than were submitted by many of these venerable seamen. Let me own to a feeling of positive awe in my inspection, for there was no face but that Time had invested it with a kind of sanctity.

“How old are you, my man?” I said to one of them. He turned his lustreless eyes upon me, and bent his ear to my mouth. I repeated the question, and he answered that he was “Ninety-three.” Years had so honeycombed his face that such likeness of humanity as there was in it appealed to the eye rather as a fantasy than as a real thing. A sailor is usually an old man at fifty, thanks to exposure, to hardship, and to the food he has to live on. Many of these men had used the sea for above half a century; some of them were drawing near to a hundred years of age; little wonder, therefore, that they should be mere dim and feeble vestiges of creation, and that vitality in conformations so decayed should excite the awe and reverence of those who explore the vague and crumbling features, and behold the immortal spirit struggling amid lineaments which have the formlessness of the face of a statue dug from the sand which entombs an ancient city.

I turned my eyes from these old men to the hall in which I stood. Pretty columns painted in malachite supported the roof; woodwork and ceiling were lavishly decorated; marine hints, helpful to the prejudices of the decayed mariners, were not wanting in the shape of models of full-rigged ships—men-of-war and East Indiamen of the olden time; through the door I could see the green grass sloping away into a spacious lawn, and the warm air, full of sunshine, gushed in sweet with the smell of clover and wild-flowers. In a few minutes I was joined by the House-Governor, himself a skipper, and fresh from the command of a sailing ship—a genial, hearty gentleman, and the fittest person in the world for the command of such a quarter-deck as this.

“The old men will be going to dinner at one o’clock,” he said; “would you like to see them at their meal?”

I answered “Yes;” so we stood in the door of a long handsome room, fitted with tables and benches, and watched the aged seamen come in one by one, hobbling on their sticks, many of them talking to themselves.

“Have you any ship-masters among these men?” I inquired.

“Several,” answered the House-Governor; and he instantly called out a name.

An old man approached us slowly; he was bald, with a very finely shaped head, and a long grey beard, and stood deferentially before us, his hands clasped, waiting to be addressed.

“This man had command of vessels for many years,” said the House-Governor.



A SNUG ANCHORAGE.

I looked at the poor old creature, and received one of the gentlest, saddest smiles I ever saw on a man's face. I asked him how it was that he came to need the charity of this Institution in his old age.

“I was in the General Steam Navigation Company's service, sir, for many years, and had charge of vessels running to Boulogne. But my memory began to fail me; I was attacked with dizziness and had to give up. I had saved some money, and took a little hotel at Boulogne, on the quay. I could not make it answer, and being ruined and an old man, sir, I had to come here.”

He broke down at this, his eyes filled with tears, and he turned his back upon me. I waited a little, and then, taking his arm, I asked him if he was happy in this house.

"Yes," he said; "I am quite happy."

"You may talk to me without fear," I continued; "I am here to learn the truth and speak to it. Do they feed you well?"

"Very well, sir."

"Have you no complaints to make?"

"None, sir."

"You think this Institution a good and honest charity?"

"Goodness knows what we should do without it," he exclaimed, looking round at the old men who were taking their seats at the dinner tables.

Here the House-Governor brought up some other aged men, whom he introduced as ship-masters. One of them was a North Shields captain, eighty years of age; he supported himself on two sticks; was a little white-faced, ancient creature, with strange silver hair, and he spoke with a wistful expression of countenance. He had been seized with paralysis by "farling doon" the main hatch of his vessel. He told me, in his rich plaintive North-country-brogue, how the doctor had measured his leg and thigh with a tape—for some purpose I could not clearly understand—and how the accident had flung him upon the world, a beggar, and forced him to take refuge in this Institution.

"Was he happy?"

"Ay, it was a man's own fault if he wasn't happy here. He was grateful to God for the care taken of him. At eighty a man was 'na langer a laddie;' and with a bright old laugh he hobbled hungrily towards one of the dinner tables.

In a few moments two bells were struck, signifying one o'clock, and all hands being seated, I followed the House-Governor to the bottom of the room to have a look at the tables before the men fell to. The dinner consisted of salt fish, butter, potatoes, and plain suet pudding.

"This is Tuesday's fare," said the House-Governor; "on Sundays they get boiled beef, potatoes, and plum-pudding; on Mondays, vegetable soup, boiled mutton, and vegetables at discretion; on Tuesdays, what you see; on Wednesdays, soup, boiled beef, and potatoes; on

Thursdays, roast mutton, vegetables, and bread and cheese; on Fridays, salt pork, pea soup and calavances; and on Saturdays, soup and bouilli"—not soup and bullion, as Jack says, one onion to a gallon of water—but a very good preserved soup, with potatoes or rice, and bread and cheese.

"Taste this fish."

I did so, and found it excellent; so, likewise, was the suet pudding.



"WAS HE HAPPY?"

The potatoes were new. The beer was the only doubtful feature of the repast; it was thin, insipid, and flat. I made haste to taste and approve, for I could see that the old fellows were very hungry.

The Governor left me, and went to the top of the room, where, in a loud and impressive voice, he said grace, bidding the ancient mariners be thankful for what they were about to receive; they all half rose,

and in one feeble rustling old pipe, sang out "Amen," and then, like schoolboys, made snatches at the dishes, and in a minute were all eating with avidity. It warmed my heart to see them. It made me feel that there must yet be plenty of goodness left in this world, when, through the benevolence of strangers, and their large-hearted concern for poor Jack, ninety-three old, very old seamen, tottering on the verge of the grave—so poor and so destitute, so feeble and so friendless, that, but for the benevolence of those whom Providence had brought to their succour, they must have miserably starved and died—were clothed, and fed, and sheltered, and tenderly watched over. I know not that I have ever been so moved as I was in my passage through that dining-room. It was not only the pathos that lies in the helplessness of old age; I could not but think of the great compass of time these men's experiences embraced, of the changes they had witnessed, of the sorrows, and struggles, and hopes which made up the sum of their long lives, and how eighty and ninety years of privation, endurance, and such pleasures as sailors take, and such ambitions as sailors have, had ended in those bowed and toothless shapes, clutching at their plain repast with child-like selfishness, indifferent as death itself to the great machine of life that was whirring with its thousand interests outside the silent sphere of their present existence, and dependent for the bread their trembling hands raised to their poor old mouths upon the bounty of those who love the noble profession of the sea, and who will not let the old and bruised and worn-out seaman want for such help as they can send him. Here and there were men too infirm to feed themselves, and I took notice how thoughtfully their aged messmates prepared their meal for them. Some of those thus occupied were more aged than the men they assisted.

"Bless your honour, he's but a child to me," said one of them, in answer to my questions; "he's but three-and-seventy, and I shall be eighty-nine come next September."

One pitiful sight deeply affected me. It was an old man, stone deaf and stone blind. How is the helplessness in his face to be conveyed?

"He's losing his appetite fast," said a seaman of about eighty, who sat near him. "His senses is all locked up. You [never hear him speak."

There were sadder sights even than this; but I dare not trust myself to write of them.

I followed the House-Governor out of the dining-rooms into a large apartment, well stored with books, magazines, &c., the gifts of friends of the charity. This I was told was the reading-room. It looked on to the green grounds, and was a most cheerful and delightful chamber. Further on was another room, furnished with bagatelle boards and side tables for cribbage, &c. There was a particular cleanness and neatness everywhere visible, and I asked who did the work of the house.

“The inmates,” the House-Governor answered. “The more active among them are put to washing down and dusting at ten o’clock, and they finish at twelve. This is all the work required of them. Throughout the rest of the day they have nothing to do but to lounge about the grounds and amuse themselves as they please in the bagatelle or reading rooms, or in the smoking-room, which is a large apartment in the basement.”

Mounting the wide stone staircase, and admiring as I went the singularly handsome and lavishly-embellished interior of the very fine building, I found myself on a floor devoted to the sleeping rooms. These consist of rows of bulkheads partitioning off little cabins, each with a door and a number, and furnished with a comfortable bed, and some of them were movingly decorated by photographs of a mother, a sister, a child, with humble memorials saved from the wreck of the past; such relics of the old home as a few china chimney-piece ornaments, a coloured picture, and the like, with here and there a sea chest, though, as a rule, these little cabins, as they are called, were conspicuously empty of all suggestions of the marine life. Now and again the opening of a door would disclose an old man seated on his bed darning a sock or mending a shirt. It might have been that they were used to the visits of strangers; but I could not help observing in all these old seamen an utter indifference to our presence and inspection, a look of deep abstraction, as if their minds were leagues astern of them or far ahead, and existence were an obligation with which they had no sympathy, and of which they never took notice unless their attention was compelled to it.

“Here,” said the Governor, taking me into a room in which three or four old men were assembled—for dinner had been finished some time, and the seamen had quitted the tables—“is a veteran who has taught himself how to write.”



"Show us your copy-book, my man," said he, giving him his name.

The old fellow produced his book with a great air of pride, and I was struck by the excellence of the writing.

"Is this all your doing?" I asked.

"Ay, sir, every stroke. It's been a bit of a job, for you see when a man's nearing eighty ye can't say that his brain's like a young 'un's."



AN ANCIENT HERO.

"This would shame many a youngster, nevertheless," said I.

"I'd be prouder if I could read it, though," he exclaimed with the anxious and yet gentle expression that seemed a characteristic of the faces in this Institution.

"Ah, I see," said I; "you can copy, but cannot read what you copy. Never mind, that will come, too, presently."

"I'm afeard not," said he, shaking his head. "Writin's one thing, readin's another. I have larned to write, but dunno as ever I shall be able to read it."

The Governor, with an encouraging smile, told him to persevere, and then led the way to one of the sick wards, where I found a very aged man in bed and two others seated at a table.

"That poor old fellow," said he, pointing to the bed, "begged to be



IN THE SICK WARDS.

allowed to attend the funeral of a man who died in the Institution a short time since. He was so much affected that he was struck with paralysis, and had to be carried back here. He was for years a ship-master, had command of several fine ships, and is a man of excellent education. He has been in this Institution some years."

"Well, and how do you feel yourself now?" said the Governor, addressing him.

"Mending, sir, mending," answered the old man. "It's death to me to be lying here. Why, for seventy-nine years I never had a day's illness, never took a ha'porth of physic!"

"You must have patience," said the Governor; "you'll be up and doing presently."

"Ay, the power of forereaching is not taken out of me yet," he answered, breaking into a laugh, the heartiness of which somehow pained me more to hear than had he burst into sobs.

There were more "cabins" upstairs, and in one of them we found an old Irishman standing, lost in thought, looking out of the window. I addressed him, and he answered me in a rich brogue. I never remember meeting a more winning old face, nor being won by a voice more cordial and pleasant to hear. He told me that he had been in the *Kent*, East Indiaman, when she was burnt. This was so long ago as 1825, and he was then a hearty, able-bodied man. It was like turning back the pages of the history of England to hear him talk of that famous and dreadful disaster. . . .

"There is misery enough in every corner of the world as well as within our convent," Sterne's monk is made to imply by his cordial wave of the hand. But I do claim for this Home the possession of a peculiar element of pathos, such as no man, who has not beheld the aged, the stricken, the helpless, the broken-down men congregated within its walls, can form any idea of. As you survey them their past arises; you think of the black and stormy night, the frost and snow, the famine and shipwreck—all the perils which sailors encounter in their quest or carriage of that which makes us great and prosperous as a nation; and then reflections, on the dire ending which must have befallen these tempest-beaten, time-laden men but for the charity that provides them with a refuge, break in upon you, and you feel that no words of praise can be too high for such an Institution."





## THE SEA AND ITS PERILS.



“Oh, many a bark, to that breast grappled fast,  
Has gone down to the fearful and fathomless grave;  
Again, crash'd together the keel and the mast,  
To be seen tost aloft in the glee of the wave!”

SCHILLER.



### PROTRACTED VOYAGE OF THE S.S. “QUEBEC.”



HE steamship *Quebec*, of the Dominion and Mississippi Line of Transatlantic steamers, arrived in the Mersey late on Monday night, the 19th February, after a long passage of about fifty days, from Portland, State of Maine—five weeks past her time.

The *Quebec*, under the command of Captain Mark H. Gibson, sailed for Portland on New Year's Day, with a crew of 45 hands, 11 cattle men, a general produce cargo, 176 head of cattle, and 568 sheep, the vessel being of 2,700 tons register. She broke down on the 9th of January, on which date her rudder split in two, near the water-mark, and subsequent attempts to rig a temporary rudder having failed, the long and difficult passage may be understood. She was beating about in tempestuous weather, attempting to reach her destination, from that time until Sunday morning, the 18th February, when she was fallen in with by the steam-tender *Game Cock*, specially despatched to look after her, and which steered her to Liverpool.

From the time her rudder broke until the tender found her, the *Quebec* had made about twenty-eight miles a day, under sail, and the occasional use of steam. While buffeted about by the Atlantic waves, the live stock on board suffered a good deal, but 49 cattle and 100 sheep were taken safely to Liverpool. There were no passengers on

board besides the men in charge of the cattle, and these men, as well as the crew, were all in good health. Only three of the sheep had to be killed to keep up the supply of fresh meat on board.

On arrival in the Mersey, the *Quebec* was taken into dock, and after her cargo was discharged, put into a dry dock, when, her rudder being renewed, she resumed her place in the line of steamers the next week.

Captain Gibson, the commander of the *Quebec*, gave the following account of his long voyage:—

“On the evening of New Year’s Day we left Portland, and encountered strong winds up to the 9th January. On that day, when in latitude 45 N., longitude 32 W., and 1,800 miles from Liverpool, with moderate and squally weather, we suddenly found that the ship would not answer her helm. On an inspection, I discovered that the rudder had broken at the water’s edge. I then tried to construct a temporary rudder by means of chains, but as the weather was getting worse we could not use it. After this we encountered fresh gales and heavy seas. We used our engines every day, more or less, but I economised coal for the Channel, and used the sails whenever it was possible. We made progress at the rate of twenty-eight miles a day.

“On the 12th January we sighted a Norwegian barque, steering east, and signalled her to report us at Lloyd’s with loss of rudder. She answered the signals, but we did not get her name. At that time it was blowing a terrific gale and the sea was running very high, and the ship was drifting with the wind. We tried to get up temporary steering gear, by means of hawsers and spars rigged over the stern, but the violence of the gale prevented its being effective. We lost three bullocks on that day—the 12th January. The ship rolled heavily, and they died through exhaustion.

“On the 30th January we signalled Lamport and Holt’s steamer *Memnon*, which was bound east. We requested her to report us to the owners, and gave the captain all information respecting our breakdown. I added that we were doing well, and wanted no help.

“On the 10th February we spoke the steamer *Avlona*, when ninety-three miles west of the Fastnet, and asked the master to report us to the owners and send a tug to our assistance.

“During the storms we shipped some big seas, some of which swept several sheep pens from the deck with their living occupants. The cattle got into the motion of the rolling steamer, and it was amusing to witness the careful and regular manner in which they adjusted themselves to the oscillation of the vessel. I may say that, out of the 176 bullocks we had on board, we lost 127, and have just landed 39, while of the 568 sheep we have brought alive into this port 100.

“At 9.30 on Sunday morning, the 18th February, we fell in with the

*Game Cock*, which came alongside. She at first tried to tow us, but that would not answer, and she then made fast behind and steered us. When she reached us we were sixteen miles from the Smalls, and our position was east by south. We got on very well with the tug, and made eight knots an hour. We arrived at the bar, off Liverpool, by 6 o'clock on Monday evening, the 19th February, and in the Mersey about half-past nine.


"The cattle which survived had been fifteen days without fodder. None of the crew suffered in the least, and the health of all has been very good. Our vessel did not sustain any damage, and none of our boats were injured. Our provisions were amply sufficient to meet our wants, and we had only to trench on the cargo to the extent of killing three sheep, in order to supply the men with fresh meat. Everything, on arrival in port, was almost as snug as when we started.

"The *Quebec* had been fifty days from Portland, and she usually accomplishes the voyage in twelve or thirteen days."

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#### THE "EIRA" AT FRANZ-JOSEF LAND.

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T an ordinary meeting of the Royal Geographical Society, held on February 12, in the theatre of the London University, (Lord Aberdare, President of the Society, in the chair), a paper on the second voyage of the *Eira* to Franz-Josef Land was, in the absence of Mr. Leigh Smith through indisposition, read by Mr. Neale, the doctor with the expedition, several distinguished Arctic explorers being present.

Mr. Leigh Smith's paper, as read by Dr. Neale, was to the following purport:—

"Leaving Peterhead on the 14th of June, 1881, with a company of twenty-five explorers, officers and men, with the object of extending and completing the knowledge of the coasts of Franz-Josef Land acquired during the previous season of 1880, the *Eira* met the ice on the 22nd of June, in 72 deg. 45 min. N. and long. 17 deg. 20 min. E., and the edge was followed until the 30th, when *Novaya Zemlya* was sighted. As no opening was found in the ice, an attempt was made to enter the Kara Sea, which failed. On the 18th of July an opening was found in the ice, and the *Eira* steamed northward through large water-holes, the ice being, for the most part, very much decayed. But as they advanced northwards it became much closer and thicker, and many large floes were passed. One was at least fifteen miles long. Several necks of ice had to be charged and broken through, and twice the *Eira* was caught between large floes, but she received no damage. After ten days of ice navigation the goal was reached. Franz-Josef Land was sighted on the 23rd

of July, the *Eira* steaming towards Cape Ludlow, and reaching a point further west than she had got in 1880.

"Having experienced some thick weather, and finding little chance of penetrating further north, the *Eira* steamed inshore; and, passing between icebergs and overhanging glaciers, entered Gray Bay, where it was quite calm, and the sun was shining brightly. Many walrus were basking on patches of ice, and seventeen were shot. Near the ship was an old sea beach 90 ft. above the level of the sea, and cliffs of columnar basalt about 800 ft. high. Many flowers were in bloom, among them a potentilla, which had not been found before on Franz-Josef Land. Having made some short trips, the explorers returned to Bell Island, and built a storehouse with materials brought out for the purpose. This house was christened "*Eira Lodge*," and in its honour a dinner was given on board the steamer, and a concert and ball afterwards in the lodge. Mr. Smith was prevented by ice from proceeding in search of the *Jeannette*.

"On Sunday morning, the 21st of August, the sun was shining brightly, and it was nearly calm. There was nothing to warn the explorers of the approach of a disaster that was near at hand. The pack ice came in with the tide, and the *Eira* was caught between it and the land floe. She was protected by a grounded berg, and for some time no serious injury was done to her, although she received several severe nips. Suddenly, when the worst seemed to be over, the berg gave way, and shortly afterwards the *Eira* heeled over to port away from the land floe, and it is supposed that a tongue of ice went through her side. All hands were at once employed in passing provisions out, and in saving all that could be got at. As the good ship went down the ice caught her jib-boom and broke it short off. Then the lower yards held her for a few seconds and righted her. But they soon broke in the slings with a loud crash, the yard arms turning up as she settled down. 'She's awa', the men exclaimed sorrowfully, 'she was our home; she was a bonny ship.' When she reached the bottom, in 11 fathoms, the main and fore topmasts were still above water. Looking down from the ice they could see her quite distinctly, and did not perceive any injury done to her hull. A tent was rigged up on the ice, made of spars and sails rescued from the ship, a fire was lighted and tea made. Then, after a good supper, no one having eaten anything since breakfast, all turned in except the watch. Early next morning they began to take the stores that had been saved to Cape Flora in the boats, and when everything had been landed, a tent was pitched on an old sea beach covered with turf and flowers, about 20 ft. above the level of the sea.

"Thus were twenty-five men left shelterless on those icy shores to face the rigours of an Arctic winter, and they at once set to work with pluck and resolution, confident in themselves and firmly trusting in their leader. They at first intended to make for the storehouse erected a few days before at Bell Island. But there was so much ice in the channel, that it was impossible to get across, so they set to work collecting driftwood, and preparing to winter on Cape Flora. On August 26 they began to build a hut of turf and stones; the cold in the tent was so intense that the men could not sleep; the wind blew it down and the rain came through everything. The rest of the month

was spent in shooting looms, walrus, and bears. Their very existence depended on their success in obtaining fresh animal food, and it was most providential that, in this part of the Arctic regions, it was possible to live on the resources of the country throughout the winter. "Eira" Harbour was visited on September 1, the boat crossing Gunther Channel to the storehouse on Bell Island, a distance of twelve miles. Poles for roofing the hut, some salt, and six bags of coal were brought back. . . . During the autumn 21 bears, 18 walrus, and about 1,200 looms were shot. By the end of October the birds had all departed.

"Besides the twenty-five human beings three other shipmates were landed at Cape Flora. One was a black retriever 'Bob,' a most useful companion, who often found bears and walrus, and gave timely warning to his human friends. The other shipmates were a kitten, and a poor little canary bird which survived until New Year's Eve.

"The provisions landed from the ship consisted of 1,500 lb. of flour, 400 lb. of bread, a barrel of salt meat, 1,000 lb. of preserved meat, and 800 lb. of soups; tobacco enough to give each man 2 oz. a week, 60 gallons of rum, a few cases of brandy and whiskey, some sherry, six dozen of champagne, plenty of preserved vegetables, and some small stores. All the coal was used by January 8, and from that time the only fuel was blubber. The preserved meats and soups were kept for the boat voyage, and were not used during the winters. They had no lime juice. Breakfast for all hands consisted of about 10 lb. of bear and walrus meat, cut up small, and made into soup with some vegetables. Each man had also a pint of tea with sugar and milk. This meal was served at 8 a.m. For dinner at 12.30 they had sconce, made with 15 lb. of bear or walrus boiled with vegetables, each man also having a dough-boy made with  $\frac{1}{2}$  lb. of flour and boiled in the soup. Five o'clock tea consisted of 10 lb. of meat, made into soup with vegetables, and a pint of tea. A glass of rum was served out at 6 p.m. On Saturdays there was a larger allowance of rum. The ship's cook, named Masson, a hard-working, cheerful fellow, did all the cooking, except of the dough-boys, which were made by Captain Loffley while the flour lasted. It came to an end on the 30th of April. The cook was at work from 6 a.m. to 6 p.m., and often it was very trying and disagreeable work; while his mate, a lad of sixteen, cut up the blubber and wood, and helped in other ways. Dr. Neale undertook the duty of weighing out the provisions, and serving out the meals in twenty-five cans made of old provision tins. These were handed to the men, who sat up in bed and ate their food like so many blackbirds in a nest. On Sunday morning, at 9.30, the ship's bell rang for prayers, and Dr. Neale performed Divine service. There were festivities, consisting of a grand dinner, followed by a concert, on Christmas Eve and New Year's Eve.

"During the winter the men employed themselves in making and mending clothes and boots and in darning and stitching stockings. Several musical instruments had been saved, and the men amused themselves by playing and singing. They also had several packs of cards, and often played euchre and other games. There was not much total darkness; even on the 21st of December there was about four hours' twilight. The moon was only away ten days each month, when she would have been of little



use, and remained always above the horizon for some days before and after full moon. The auroras were not frequent or brilliant; they resembled thin gossamer clouds lighted by the moon.

"The most important work during the winter was the capture of bears and walrus, and in this the retriever 'Bob' was a most efficient auxiliary. On one occasion his zeal led to his receiving a hug from a bear before it died. By diligent watchfulness, by being always on the alert, and aided greatly by 'Bob's' sagacity, sufficient fresh meat was obtained to last throughout the winter. In May the men were busy making sails for the boats, and preparing for the attempt to escape southward as soon as navigation was possible. The weight of the boats made it impracticable to drag them for any distance over the ice. There were no means of undertaking sledging expeditions, but the state of the ice up the fiords showed that much exploring work might easily be done by sledges, and that a considerable extent of coast line could have been examined by travelling parties.

"On the 21st of June the party took their last meal in the hut, and, leaving six bottles of champagne in it for anyone who might call, launched their boats and made sail for the south."

The circumstances attending the meeting of the *Eira* party with the relief expedition, specially despatched in search, have been fully detailed in the public press.

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### THE STORMS OF THE PAST QUARTER.

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**I**N presenting to the reader a review of the storms which have occurred on the coasts of the British Islands during the past three months, a few introductory remarks as to the general causes of our winter gales may not be without interest.

Less than a generation back the prevalent notion concerning the weather was that it depended upon the actual height of the barometer, and hence we find that on the old weather glasses the words "set fair," "stormy," and "much rain" were placed against certain portions of the mercurial column. About twenty years ago a new order of thinking arose. The weather-wise, who up to that time had been content to study the indications of the barometer set in one place, began to see that our weather changes are due not so much to small and comparatively local movements in the atmosphere as to much vaster and extensive fluctuations, and the conclusion was soon drawn that if we are to understand what is actually going on we must compare weather observations taken over a large area of country. These ideas resulted in the establishment of a system of weather telegraphy,

by means of which meteorological observations, taken at a number of stations scattered over a considerable portion of the earth's surface, were compared among themselves. Since this plan was first started it has been greatly extended and improved, and amongst those who are best qualified to speak on the subject, the cry is still for a further enlargement of the system. In the brief limits of this article there is no room to speak, in detail, of the numerous discoveries which have been made within recent years, and we must therefore confine ourselves to those which more immediately affect the subject of storms.

Here, at the outset, we may say that the force of the wind does not depend upon the actual height of the barometer at all. Bad weather is, of course, more likely to occur when the glass is low than when it is high; but to cause a storm of wind it is necessary that there should be great differences in pressure, or, in other words, that the barometer in one place should read much higher or lower than that at a neighbouring station. These differences in pressure are caused by the relative positions and movements of what are known as cyclones (or depressions) and anti-cyclones. Every sailor knows that a cyclone is an area of low barometer readings, around which the air whirls in one unvarying direction. To the southward of the lowest barometer the wind is always westerly, to the eastward it is southerly, to the northward easterly, and the westward northerly. An anti-cyclone is, on the other hand, an area of high barometer readings, round which the wind also revolves, but in a precisely opposite direction to that of the cyclone. To the southward of the highest barometer in the centre of one of these systems the wind is invariably easterly, to the eastward it is northerly, to the northward westerly, and to the westward southerly. As long as the cyclone keeps well away from the anti-cyclone, and the barometer in the former is not materially lower than that in the latter, the wind remains light in force; but as soon as the two systems with greatly varying pressures begin to approach, the wind rises, and a gale is produced. The motion of the cyclone is affected by the position of the anti-cyclone, which it always keeps to the right of its path; and as high barometer readings are found much more frequently to the eastward or southward of our Islands than in any other direction, it will be seen at once that the cyclones are more likely to approach us from the westward or southward than from any other point, hence the frequency with which storms arrive on the Atlantic coasts of Ireland and Scotland, and the growing desire that there is for a fuller knowledge of the changes which are taking place between our own and the American shores.

With these prefatory remarks, which are essential to a comprehension of some of the terms we shall have occasion to use, we may at once

enter upon the subject proper of our article, by remarking that for the first three weeks of the year no very serious gales occurred on our coasts. Between the 1st and the 4th of January, when the barometer was relatively high over Central Europe, three gales were experienced. The first, which passed over on the night of the 1st, or morning of the 2nd, was caused by a depression which travelled in a north-easterly direction outside the Irish and Scotch coasts. As this disturbance came on, lightning was observed in the north of Ireland, and, when the centre of the system advanced still nearer, fresh south-westerly or westerly gales blew on our south-western and southern coasts. During the after part of the 2nd, another depression advanced in a very similar direction, and strong south-westerly gales were experienced over England and Ireland generally. The arrival of a third disturbance on the 4th was attended by a slight south-easterly gale in Ireland and the south-west of England, and a fresh southerly gale in the north and east of Scotland.

On the 7th January the barometer began to rise quickly on our northern coasts, and, in a short time, easterly winds set in over the whole country. These were at first of very little strength, but after the 8th some depression systems began to show themselves off our south-west coasts, and the wind consequently rose to a strong gale from east, over England and Ireland on the 9th and 10th, while on the 11th a south-east gale blew in Scotland. On the 13th another storm from south east was felt on almost all our coasts, while on the 14th a third gale from south-east blew in the north. In the western parts of the country these gales passed away without occasioning any disastrous effects; but in the eastern and northern coasts a few casualties occurred to the fishing fleets and smaller coasting craft. No serious loss of life was, however, reported.

Between the 16th and 24th, with the barometer again highest over Central or Southern Europe, a short series of southerly gales was experienced. The first of these occurred in Scotland, on the night of the 16th, and the second, which was rather more severe, prevailed in all the most northern parts of the Kingdom on the night of the 19th. On the 22nd a third blew in Scotland only, while, in the course of the 23rd and 24th, a fourth extended over the entire country. With the exception of the gale of the 19th, these storms were occasioned by depressions, which skirted our north-west coasts with medium rapidity, and passed away in a north-easterly direction. In the case of the second of the series, the centre of the storm advanced nearer to our coasts, and travelled at an unusually quick rate in a more easterly course. On the morning of the 20th, in the rear of this system, a violent north-westerly gale was felt in the extreme north of Scotland.

The gales experienced up to this time had not been remarkable for destructive violence, but between the 24th and 29th, a series of more important depressions advanced directly over the United Kingdom, and occasioned very severe storms, especially on the English and Irish coasts. The first of these passed across us on the night of the 25th and early part of the 26th, commencing from the south-westward, and afterwards veering to north-west. The second arrived in the course of the 27th, and was principally from west, while the third advanced over us on the night of the 28th, and was chiefly south-westerly. Each storm was attended by serious disasters at sea, the most lamentable case of all being that of the steamer *Agnes Jack* of Liverpool, which was wrecked on the Gower coast, with a loss of the entire crew, seventeen in number. In most other instances the crews of the vessels were rescued by the gallant lifeboats' men, in which noble service we regret to have to record the loss of four men, who perished off the Mumbles Head, while endeavouring to rescue the crew of the *Admiral Prinz Adalbert*.

After a brief interval of quiet weather at the end of January, the opening of the next month was accompanied by further storms. On the night of the 1st February, a serious depression passed over the south of England in an east north-easterly direction, causing heavy gales, first from the south-eastward, and then from the westward and north-westward. It was during the progress of these that the ill-fated *Kenmare Castle* foundered in the Bay of Biscay. The terrible sufferings undergone by the little band of men and women who endured several hours' exposure in an open boat, are doubtless fresh in the memories of all.

With the disappearance of this storm a change in the distribution of pressure took place, and an unusually long series of southerly gales occurred. These were caused by numerous depressions passing in a northerly direction outside our western coasts, and one or two of the storms were of considerable violence, the most important of all being experienced in Scotland on the 6th. No serious casualties were, however, reported from sea, the destructive effects of a southerly gale being, as a rule, smaller than those arising from any other quarter.

The latter part of February and the first few days of March were fairly quiet, but on the 5th of the latter month an anti-cyclone, which had previously existed over England, moved away to the westward of Ireland, and depressions began to appear on our northern coasts. A spell of cold northerly wind now set in, with frequent snow, and on the 6th, a rather severe gale was experienced in all parts of the kingdom. Several vessels went ashore on our east and north-east coasts, and during the height of the storm the steamer *Navarre*, bound

from Norway to Leith, foundered in the North Sea, with considerable sacrifice of life; whilst the havoc wrought amongst the fishing fleets of the Humber and other ports is recorded as unprecedented, smack after smack having gone down bodily, with all hands, involving an estimated total loss of upwards of 300 men and boys, with a consequent number of bereaved widows and orphans, and an amount of deplorable distress, said to be without a parallel in the local annals.

After the 10th the weather once more became quiet, and remained so until the 16th. On that day, however, a storm centre arrived off our north-east coasts from the eastward, and on the 17th, when the disturbance increased in intensity, the wind rose to a violent gale from the eastward, in the north and east of Scotland, with very heavy snow and a terrific sea. During the progress of this storm the Liverpool ship *Dunstaffnage*, which was being towed from Dundee, had her towing hawser carried away and was driven upon the rocks near Aberdeen, with a total loss of life.

From this time onward till the 21st no gale of any importance occurred, but on the 22nd the wind increased from the eastward, and blew very strongly on the English and Irish coasts. Some minor casualties took place about this time on the east coast of England, but nothing of importance was recorded.

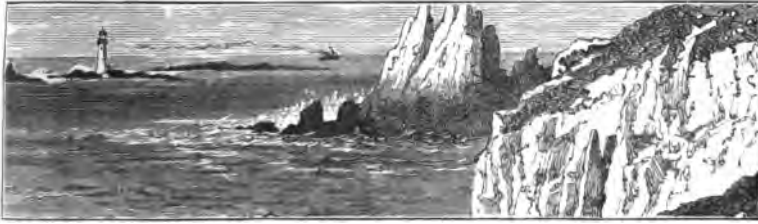
The next and last gale of the quarter swept over our western and northern coasts on the night of the 29th of March, when a serious depression skirted Ireland and Scotland in a northerly direction. Under these circumstances the gale was from the southward, and in the northern parts of the country it blew with more than ordinary violence. Up to the present time, however, we have not heard of any fatal shipwrecks arising from the storm.

It is to be hoped that with the close of the winter season we have seen the last of the severe gales, but, without indulging in gloomy forebodings, it is only fair to observe that April seldom passes over without some visitation of the kind. The destructive storm of the 29th of last April, which so seriously affected the young spring foliage, is doubtless fresh in the memory of the reader.

F. J. B.

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\* \* \* The timely aid and relief to the shipwrecked sufferers themselves, or the suddenly bereaved and distressed dependents, directly or indirectly afforded, almost without exception, by THE SHIPWRECKED MARINER'S SOCIETY in London, and its 1,200 local Honorary Representatives and Agents at Home, Abroad, and in the Colonies, will be found included in the General Statistics of the Society's Work, as given, under the Society's Heading, at the end of each Number of this Magazine.

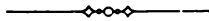


## MARITIME NOTES.



“The Sea! the Sea! the open Sea!  
The blue, the fresh, the ever free!”

PROCTER.



“Thou glorious mirror, where the Almighty’s form  
Glasses itself in tempests!”

BYRON.



## THE SUEZ CANAL TRAFFIC.\*



It is frequently assumed, as if the matter were one upon which there can be no possible doubt, that the existence of the Suez Canal is a commercial advantage to this country. A Return, just issued by the Board of Trade, adduces reasons for reconsidering this opinion, and gives figures intended to show that it is possible to exaggerate the present importance of the Canal to the commerce of Great Britain.

The Return shows what proportion of the trade of the United Kingdom with the East goes through the Suez Canal, and what proportion round the Cape, as well as the proportion of the trade through the Canal to our whole foreign trade. The figures of 1880 are taken as the basis, being the latest that can be obtained sufficiently complete. In that year, the total entries of shipping, at ports in the United Kingdom, in the trade with the East, including Australia, amounted to 1,997,000 tons, of which 842,000 tons, or 42 per cent., passed through the Canal. The clearances of shipping, for the East, amounted to 2,805,000 tons, of which 1,063,000 tons, or 38 per cent.,

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\* From “*The Times*.”

passed through the Canal. The imports of the Eastern trade amounted to £80,977,000 and the exports to £70,694,000. Applying the percentage figures obtained from the shipping, we get £33,758,000, and £26,864,000, as the values of the Canal home imports and exports, respectively.

Comparing these amounts with the totals of our imports and exports for 1880, we arrive at the conclusion that, of our total imports, about 8 per cent. come through the Canal, and of our total exports about  $9\frac{1}{2}$  per cent. are passed through the same channel. Various corrections have to be made upon these figures. Assuming that the goods passing through the Canal are of a higher average value than our general traffic, about one per cent. would have to be added to the Canal percentage. If we include gold from Australia, and silver to India, a slight further addition will have to be made. There is reason to believe that the proportion of our Canal trade to the total is increasing, and on that assumption the figures must be yet further enhanced to represent the actual condition of affairs. When these various corrections are made, the percentage of imports and exports would appear to be 11 or 12 per cent. The Liverpool Chamber of Commerce, working out the problem upon independent lines, has reached the conclusion that the total Canal traffic amounts to 13 per cent. of the gross imports and exports of the country. Taking the mean of these results, it is probably not very far from the truth to say that  $12\frac{1}{2}$  per cent., or one-eighth of the total trade of the United Kingdom, passes through the Suez Canal. Even if this estimate err slightly on the side of liberality, the admitted growth of the Canal traffic tends to bring it every day nearer the exact figure.

One-eighth is a large and important fraction of our trade, but we have as yet only got so far as to see what part the Canal actually plays in British commerce. The Return, however, goes on to inquire how far it is good for British commerce that the Canal exists at all. The mere fact that one-eighth of our total trade passes through it conclusively proves that it is advantageous to certain portions of our commerce to use it; but it is conceivable, as is pointed out in the Return, that our trade as a whole may, nevertheless, have suffered by the Canal. It is not denied that the world at large is a gainer by the shorter route, nor that we share in the general benefit in so far as the consumer, for example, of Chinese tea is concerned. But it is pointed out that, as a nation of carriers and capitalists, we have large interests which may suffer by the general gain.

The Canal obviously places on the direct route to the East all the Mediterranean ports, which were formerly at a disadvantage as compared with ourselves. It is, therefore, not impossible that some diminu-

tion of our *entrepôt* trade has resulted, since it may no longer be cheaper for Italians to buy cotton or coffee in London than to get it direct from the East.

Several tables are given to show that Oriental produce, such as raw silk and raw cotton, are either re-exported from the United Kingdom to a smaller extent than formerly, or are not re-exported to such an increased extent as the growth in other branches of trade might lead us to expect. These tables are far from conclusive, except in the case of raw silk, which comes to us exclusively from the East, and in the re-export of which there is a large falling-off. Even in this case sufficient care has not been taken to distinguish between *post* and *propter*. Raw cotton comes mainly from non-Eastern countries, and a falling off in the re-export to the Continent proves absolutely nothing as regards the Canal. Indeed, the fact that the direct imports to the Continent from the West have increased no less than from the East goes to show that a genuine falling off in our *entrepôt* trade may be wholly unconnected with the Canal. Tea, which comes chiefly through the Canal, is re-exported from this country to the Continent more largely than before; and although it may be true, as argued in the Return, that an absolute increase co-exists with a relative falling off, it would seem more probable that, had the Canal really deprived us of our advantages as an *entrepôt*, absolute and relative decrease would go together.

The argument of the Return is at least far-fetched. The direct trade between the Mediterranean and the East has increased since the opening of the Canal, but the amounts are still very small. It might be found, perhaps, that a good deal of that trade is carried in British ships. There is an absence of precise correspondence between the statistics of British shipping clearing to, and entering from, the East, and those of British shipping passing through the Canal. The first are taken from our own shipping returns, the second from the books of the Suez Canal Company, which, probably, do not show the precise origin or destination of every ton of British shipping they register. The Return points out that less capital is required both for ships and for goods in transit since the shortening of the voyage by the Canal. It estimates that £4,000,000 less is required for ships and £7,500,000 less for goods in transit, making nearly twelve millions of English capital thrown out of employment by the fact that voyages can be made in two months instead of three. But saving in the cost of machinery is not usually reckoned a disadvantage, and it is not quite clear why it should be adduced as a drawback to any benefits we may gain from the Canal.

The conclusion of this remarkably argumentative Return is that,



owing to a loss of *entrepôt* trade, together with ten per cent. upon this twelve millions, the Canal cannot be regarded as of any great advantage to English trade. But nothing deserving the name of proof has been adduced to show that we have lost any *entrepôt* trade whatever, in consequence of the opening of the Canal. As for the argument based upon the loss of employment for capital, it might deserve attention if the Eastern trade had been the very last remunerative occupation left for English money; but, as things are, it is too flimsy to call for serious treatment. It is the kind of argument which men put forth to support a foregone conclusion, rather than to arrive at new results. And, while, even on purely commercial grounds, the Return takes an unduly gloomy view of things, there are considerations to be taken into account which lie beyond its scope altogether.

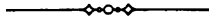
Its whole argument is academical. The Canal exists, and will be kept open for the rest of the world, whether we use it or not. The practical question for this country is, not what would have happened had it never been made, but how we ought to conduct ourselves in view of the fact of its existence. Suppose it has done all the mischief the Board of Trade alleges, what follows? Surely not that we are to sulk at the new passage or relinquish our control over it, but that we are to redouble our exertions to extract from it every possible advantage. If it injures us now, it would injure us ten times more were we to let it pass under the control of our commercial rivals.

Unless the shortening of the time required to communicate with the East be reckoned an important advantage, the whole tendency of modern changes must be wrong. Almost every commercial and mechanical advance, at the present day, is in the direction of annihilating time and space. It is needless to dwell upon the advantage, from a military point of view, of shortening by one-half the time required to reach our Indian Empire. Circumstances are at least conceivable in which the difference would be vital. Assuming only that we maintain our position as a great maritime and manufacturing people, the existence of the Suez Canal must always be for us a boon of the same kind as the substitution of railways for roads, or of steam for sailing vessels. It is in the East that we must look for the markets of the future. In Europe every nation is striving with all its might to become independent of our manufactures, and when the Americans have in some measure finished their great work of possessing the land, their inventiveness and energy will leave us few openings. In the East are vast populations as yet very imperfectly thrown open to our commerce. The population of China can only be guessed at, but the lowest estimates make it equal to that of Europe. In India we have some two hundred and forty millions more, and on the shores of the Indian

Ocean, or the islands that dot the Pacific, are populations whose development is likely to be the work of our posterity. In Australia and New Zealand we have ever-increasing masses of men of kindred blood, with whom it is reasonable to suppose we shall cultivate mercantile relations of the most various kinds.

The direct route to all these teeming regions is through the Suez Canal, which links together the massed populations of the East and the West, divided as they are, north and south of it, by a huge expanse of undeveloped and sparsely peopled territory.

The Canal is thus, so far as can be seen, the pivot of the larger relations of the future, and whatever may now be said of its narrower commercial aspects, it can never lose its paramount importance for England until she abdicates her commanding maritime and mercantile position.



“**C**AN YOU SWIM?”—A good and wise and witty man used to tell this story over and over:—A philosopher came to a ferry and got into the boat which was to take him across a Highland lake. The talk between them was pleasant at first, in the calm, but as the boat went further the wind increased, and the waves splashed, yet the philosopher heeded not. Nay, worse, he said, “Boatman, do you know ontology?” and the answer was, “No!” “Well,” said the wiseacre, “you have lost half your existence.” And the wind blew stronger, and the waves splashed wetter, and the boat tossed higher, until the boatman said to the wiseacre, “Will you let me ask you one question: ‘Can you swim?’” “No,” said the philosopher. “Then,” the boatman cried, “you have lost the whole of your existence, for this boat is going to sink in five minutes.” All animals, from elephants down to microscopic *infusoria*, except human beings and some birds, can swim without teaching; so every boy and girl should be taught how to swim, and once he has

learned this cleanly, healthy, life-saving art, he will never forget it. Of all countries in the world, England has most to do with “the waters”—the sea around our island home, the rivers, lakes, and ponds within it, the countless sailors on rivers, canals, lakes and oceans in our own territories, and in other countries all over the globe. In fog, and snow, and tempest, such as we have lately had in our weather, the dangers of drowning are specially important, and winter time is quite suitable for swimming lessons, when we can use a large bath for the purpose. If you wish to enjoy your summer gambols in the wide sea, get your “sea legs” even in winter, by a few lessons in this noble, manly, healthy, pleasant art. More especially parents and friends of the young might do well to encourage the next generation to acquire, with “the three R’s” of ordinary education, the one S, which must promote cleanliness, strengthen the health of body and mind, and which may save life.—*John MacGregor, M.A. (Rob Roy).*

**DIET AT SEA.**—The following instructions, to superintendents, have recently been issued by the Marine Department of the Board of Trade:—"Dietary Scales.—The attention of the Board of Trade having been drawn to the increase of scurvy on board British ships since 1873, a report on the whole subject—'Sea scurvy, food scales, anti-scorbutics'—has been recently prepared and forwarded to the local Marine Boards for their observations. The conclusions arrived at in this report were as follows:—1. That scurvy has been on the increase in British ships since 1873. 2. That lime juice, of itself, will not prevent scurvy, and that too much reliance is placed on it, to the neglect of varied food scales. 3. That lime juice, in connection with fresh or preserved meat and vegetables, may prevent scurvy. 4. That the dietary scale of ships should, therefore, include a fair proportion of fresh and preserved meats, as distinguished from salted meats. 5. That more fresh vegetables should be carried, notably raw potatoes. No satisfactory reason is given why fresh potatoes cannot be carried on board British ships. The allegation that they will not keep good on board ship is clearly disproved by the fact that they do keep on board United States ships, and will keep for a fair time anywhere else. 6. That it is not at present desirable to insert a statutory scale of diet in the articles of agreement with crews serving on long voyages, though it may possibly be necessary hereafter, unless the shipowners themselves move in the matter. The replies received from the local Marine Boards have confirmed these views, especially as regards the articles of diet referred to therein, and superin-

tendants are therefore requested to take every opportunity of urging upon owners of vessels sailing on long voyages the necessity of supplying their crews with fresh potatoes, molasses, &c., and a larger supply of fresh or preserved meats, in lieu of salt beef and pork."

**METEORS AT SEA.**—A short time ago we reported the narrow escape of the Pacific Steam Navigation Company's steamship *Lima* from destruction by a meteor, which fell into the sea in her close vicinity. The United States man-of-war *Alaska* has recently met with similar good fortune. Captain Belknap, in a report to the department, states that on December 12, a few minutes after sunset, a loud rushing noise was heard, like that of a large rocket descending from the zenith with immense force and velocity. It was a meteor, and when within some 10 deg. of the horizon it exploded with great noise and flame, the glowing fragments streaming down into the sea like huge sparks and sprays of fire. Then came the most wonderful part of the phenomena, for at the point in the heavens where the meteor burst there appeared a figure, like the shape of an immense distaff, all aglow with a bluish-white light of the most intense brilliancy. It kept that form for perhaps two minutes, when it began to lengthen upward and grow wavy and zigzag in outline from the action of the wind, and, gradually diminishing in breadth until it became a fine, faint spiral line at its upper end, dissolved into the fast gathering clouds the meteor seemed to have evoked. These strange phenomena inspired every one on board with terror, for had the meteor

struck the ship it would have been the last of the *Alaska*, and no one would have been left to tell the tale of her loss. This curious manifestation of the forces of the universe again suggests a perhaps unthought-of cause of many disasters at sea.—*Panama Star and Herald*.

FISHERMEN AND THEIR CUSTOMS.—  
Mr. F. E. Sawyer, F.M.S., of Brighton, writes in "*The Leisure Hour*":—"The custom of 'bending-in' observed at Brighton, has no doubt come down from ancient times, and is a corruption of the word 'benediction.' From a Book of Ancient Customs of Brighton, in 1590, we find the vicar had a quarter share in the profits of all the fishing-boats. I surmise, therefore, that the Church (and probably the rich Priory of St. Pancras at Lewes, to which Brighton Church belonged) advanced money to the fishermen to purchase nets and other appliances, and so prudently and far-sightedly bestowed a benediction on the men before commencing their labours. No doubt, also, before the Reformation, the Communion was administered, and this degenerated into the present meal of bread and cheese. When launching the nets at the commencement of mackerel fishery, the Brighton fishermen stand with their hats off, the master standing aft, and say:

'There they goes then; God Almighty,  
Send us a blessing, it is to be hopes.'

When the first *barrel*, or about twenty nets out of 110, is overboard they say:

'Watch, barrel, watch! Mackerel for to catch,

White may they be, like a blossom on a tree.

God send thousands, one, two, and three,

Some by their heads, some by their tails,

God send thousands and never fails.'

And, when the last net is overboard, the master says, 'Seize! haul!' and lowers the fore-mast, and lays to the wind."

SEA WAVES.—The majority of seamen have doubtless noticed that the greatest mischief is generally accomplished when the wind commences to lull—when the sea falls with a dull, heavy thud in lieu of the sharp, crisp shock it previously conveyed to the ear. At night these thuds sound ominously as the white crests roll over and fill the hollows with flecks of foam. The explanation of this phenomenon is simple. The strength of the wind propels the mass of wave forward, in a horizontal direction, with a certain force and velocity until it breaks, and when this occurs it still maintains its onward course in broken water and spoon-drift. Reduce the force of the wind, and gravity immediately seizes what under other circumstances would be borne over a large area. It is probable that an examination of the log-books of ships, on board of which damage has been sustained during extraordinary gales, would confirm the correctness of this assumption. The danger is not unfrequently aggravated by the attempts of zealous officers to keep their ship on her course before the subsiding of the sea warrants them in adopting such a proceeding.—*Nautical Magazine*.

**M**ISSIONARY STEAMER.—The Baptist Missionary Society, in pursuance of their labours in Central Africa, have met with almost insuperable difficulties in the way of penetrating to the vast tract of country bordering the upper reaches of the Congo, the great natural waterway into the heart of Africa. The main difficulty seems likely to be solved by the construction of the steam-launch *Peace*, so made as to be taken asunder, for shipping to the mouth of the Congo, whence it would be carried piecemeal to Stanley Pool, and, after reconstruction, launched upon the broad waters of the Congo, to carry out the work for which it has been thoughtfully designed and skilfully built. The vessel, though not much to look at, is admirably adapted for the work she will have to do—namely, that of conveying missionaries and the stores necessary at mission-stations from place to place on the banks of the Congo itself, and of its many tributary streams, where occasionally the water is shallow, the rapids frequent, and the stream at the best somewhat difficult of navigation by reason of floating timber and other obstructions. The boat is 70 feet in length, or about 80 feet longer than that in which Mr. Stanley made his way to the lake which bears his name. It is propelled by twin screws, experience having shown that screws are preferable to paddles in waters where drift wood is likely to be met with. The propelling screws are of a type which will diminish the draught of water of the craft; and they have this additional advantage—that by means of an ingenious detail in construction one screw can continue working while the other is being cleaned, in the event of its having

become choked with weeds. With a vessel which has to be built and then taken to pieces and reconstructed, it is, of course, important that the component parts should be of handy weight. This has been so far successfully accomplished that, with the exception of the boiler, there are only one or two pieces which exceed the weight a man may conveniently carry. The engines have shown themselves satisfactory, having been put to the test over a measured mile in the presence of high authorities, and no doubt is felt of their ability to force the little craft through the more than 2,000 miles of the Congo river and its many tributaries which yet remain to be explored. Those who are engaged in the Congo mission look upon the *Peace* as being likely to effect great results in introducing and propagating religion in the heart of Africa, and also in opening new markets and extending trade, to the great advantage of England.



**F**ULL-RIGGED SHIP.—A full-rigged ship will always be the noblest example of man's handicraft. She is a real creation, a living thing, full of instinct, owing her life to the same breath of heaven by which we exist. All else is more or less mechanical—of the earth, earthy—and illustrates its perishableness by the very qualities which keep it flourishing. The grinding of a steam-engine makes us feel how small a flaw will stop it, and we think of coal, and gauges, and rivets. A grand building is stationary; it is wonderful, but it is dead. But a sailing ship! Look at the beautiful vessel! Is she not sentient? She might have been born

of the very element she rides—her hull of the deep sea rock, and her sails of the storm-driven foam.—  
*Skipmasters' Journal.*

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**STEAM SHIPPING TRADE.**—Nearly another million tons of steam shipping has been constructed during the past year, and thus comes up to the estimated amount of the beginning of the year. According to the returns from the various ship-building establishments in the United Kingdom, the exact number of ships amounts to 647, measuring 982,961 tons, which, compared with 1881, shows an excess in number of 44 ships and 57,961 tons. Foremost comes the Clyde with 225 steamers, measuring 231,941 tons, followed by the Tyne with 132 ships of 208,406 tons, then the Wear with 112 steamers of 200,640 tons. The remainder is made up by ships built in 16 other ports, Hartlepool and Middlesborough figuring conspicuously with 39 ships of 67,867 tons, and 37 of 64,203 tons, respectively. In spite of that enormous amount of tonnage turned out during the last two years, there appear to be orders on hand sufficient to keep all the principal yards employed during this year. That the prices under such circumstances have been fully maintained is but natural, and at the present moment there is no appearance of any reduction. Even good second-hand ships are in request, more particularly of a size varying from 1,000

to 1,500 tons, of which only a few have been built. Much, however, will depend upon the future state of the freight market, and whether there will be sufficient remunerative employment for the large amount of tonnage launched and still in the course of construction. The losses, on the other hand, have been extremely heavy, and there is much diversity of opinion whether the mode of construction is yet such as will ensure stability and safety with cargoes of a precarious nature, such as iron, ore, grain, cattle, &c. Great losses have also been caused by collisions, which have become of daily occurrence on the coast and in the rivers, and which must necessitate a better system of lights by electricity or other mechanical contrivances.

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**DEEP SEA SOUNDINGS.**—It is stated that the distinction of making the deepest sounding in the Atlantic ever yet recorded has been achieved by the officers of the Coast and Geodetic Survey steamer *Blake*, recently returned to New York from a two months' survey. The deepest sounding ever before reported was 3,862 fathoms, which was made by the *Challenger*, sent out by the Royal Society of Great Britain. The depth reached by the *Blake* was 4,561 fathoms. The place of sounding was 75 miles north of San Juan, Porto Rico, and not far from the point at which the *Challenger* sunk her deepest lead.





## MISCELLANEOUS JOTTINGS.



“Here a little, there a little.”



“O Reader! had you in your mind  
Such stores as silent thought can bring,  
O gentle Reader! you would find  
A tale in everything.”

WORDSWORTH.



## MODERN USES OF PERIODICAL LITERATURE.\*



WITHIN the recollection of the present generation the issue of periodical publications has developed to an extent that would have surprised Thackeray and Leigh Hunt, and alarmed Addison and Steele. A glance at one of the Press Directories for the present year is enough to make one wonder how so vast a multitude of publications can subsist from year to year. A fair percentage of the number, it is true, disappear after a very short existence; but their place is more than supplied by an endless succession of new ventures, all more or less clamorously bidding for public support, but, with a few exceptions, living only long enough to supply an ephemeral profit to the printer and the paper-maker. It has been computed that the money lost, year by year, on fruitless attempts to establish new periodical publications, would be sufficient to provide a handsome endowment for a large English University.

One of the principal causes of failure consists in the comparative

\* Special Paper read before “THE ATHENÆUM SOCIETY.” By the Rev. H. G. Bonavia Hunt, Mus.B., F.R.A.S., F.L.S. London: Athenæum Society’s Rooms, 13, Mandeville Place, Manchester Square, W.

rarity of efficient editorship. The writer has known of many a defunct periodical the non-success of which has been clearly attributable to this cause. The leading idea has been good, the staff of contributors unexceptionable, and the initial programme well calculated, under proper management, to hit the public taste. The publisher and the booksellers have well performed their respective parts, and, for a time, all has gone well with the scheme. But, by and by, the Editor finds himself face to face with difficulties which, from a want of previous training and a due conception of his peculiar functions, he is unable to overcome, and the result has been the inevitable sign of weakness in his paper or magazine, and the consequent decline in the circulation, ending at last in total collapse. It is not proposed in this short paper to dwell on the qualifications of an Editor, but only to observe, *en passant*, that it is a great mistake to suppose that literary ability alone, however brilliant, will suffice. Many successful writers, who have made a solid reputation by their works, have taken up the duties of editorship with this idea, and have failed utterly. Even that great novelist and contributor to magazine literature, Thackeray, found himself at length unequal to the editorship of the *Cornhill*, and his place was taken by a less successful author, but a more competent Editor. Just as some of our greatest musicians have failed as Conductors, so has many a distinguished author discovered, from painful experience, that it requires special training and peculiar tact to fulfil the varied duties of editorship, and that he must manage his contributors much in the same way as the musical Conductor directs his chorus or his orchestra, in order that his literary concert may work well and all together, to the satisfaction of his varied and somewhat captious audience.

One of the results of the present development of periodical literature has been the decline and practical extinction of the pamphleteering age. In former years, and up to a very recent period, any new event or current question gave birth to floods of pamphlets, penned, for the most part, by writers either strongly moved by their subject or eager for a chance of publicity. These controversial *brochures* now generally appear in the pages of such magazines as the *Nineteenth Century* and the *Contemporary Review*; that is, those which are thought by Editors to be worthy of perusal—in fact, a very small proportion. The *genus* pamphleteer, once so numerous, is practically extinct; the Colenso controversy was, it is believed, its last climax. The famous "Tracts for the Times" belonged to this form of literature; there is little doubt that had the occasion for them existed in the present day they would have appeared as articles in one or other of the monthlies just mentioned. One of the modern uses of our magazines and reviews, therefore, has



been to collect together the numerous free lances and skirmishers in the field of literature, to pick out the most able and efficient among the volunteers, and to abandon the worthless to their deserved fate of eternal silence and oblivion.

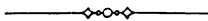
Another distinguishing and very important feature of modern periodical literature is the issue, by short instalments, of a chapter or so at a time, of works which, in earlier days, would have seen the light only in expensive volume form, and so have been within the reach of but a small proportion of the reading public. Many a modern standard novel (for instance, "The Caxtons" by Lord Lytton, the "Romola" of George Eliot, and "The Adventures of Philip" by Thackeray) has run through the pages of a magazine before its appearance in the traditional three-volume form which now principally survives for the benefit of the lending libraries. But other works of a more serious and practical character have similarly attracted the public by their first appearance in magazine pages, and have thus commanded a far wider range of readers than would have been the case had they been issued only in volume form.

One of the latest developments of the magazine literature of the day has been the introduction of musical compositions as a regular feature of some of the more popular publications. When, some years ago, the editorship of one of these monthlies was entrusted to the writer, there was not one periodical of the kind, amongst the numbers then existing, which admitted music to its pages. He ventured upon the bold step, amidst the frequently expressed misgivings of those most concerned, of publishing music in every issue of that magazine, and is happy to place it on record that the result has in every way justified this step. Since then, the feature has been adopted in many similar magazines, and it has been a source of great satisfaction and thankfulness to him that Music, as one of the immortal sisterhood of the Arts, has now obtained a recognised place in the arena of modern periodical literature.

The better class illustrated magazines and newspapers are now thoroughly recognised as an indispensable agency for the education of the public in pictorial art. Amongst newspapers, the *Graphic* and the *Illustrated London News*, and amongst magazines the *Art Journal*, the *Magazine of Art*, and *Cassell's Magazine*, may be singled out as having more particularly distinguished themselves in this province; but in this connection we must not forget to acknowledge our indebtedness to American enterprise—especially evinced in such magazines as *Scribner's* and *Harper's* "monthlies"—for having guided our own artists and engravers out of the grim conventionalities of a former day, when the kind of perfection aimed at was the production of a species of engine-

turning on wood. Now, however, it is rightly held that the highest form of reproductive art consists in a faithful imitation of the grace and freedom of the pencil and brush of the artist, who is no longer required to draw upon the wood in accordance with the traditions of the wood engraver, but may safely follow his own superior instincts in favour of softness of outline and breadth of effect. The influences on the public taste of this reform in art-production, in our illustrated periodicals, cannot be over estimated, and we may be confident that in later times it will be looked back upon as the commencement of a new and brighter era in the History of Art.

But still greater service—if possible—has been rendered by modern periodicals in the domain of Science. They have done far more than the learned societies, or desultory courses of lectures, to bring home to the people at large the great elementary truths of nature, both animate and inanimate. The majority of people very excusably shun the perusal of dry books of science, but many ordinary readers have been gradually beguiled into a more or less systematic study of some branch of science by means of short familiar expositions in magazines and reviews. Great naturalists and physicists have not disdained to put pen to paper with this object, and whatever opinion may be held on this subject in some quarters, the cause of science must be held everlastingly indebted to such men as Dr. Carpenter, Dr. Richardson, Mr. Richard Proctor, Dr. Andrew Wilson, and the writer's lamented friend, the late William Kingdom Clifford, for their popular and lucid expositions of great scientific principles and facts. It is true that many magazine articles we see are absolutely worthless and unreliable, from having been concocted by persons who obtain information second-hand and misuse it; but that only furnishes a stronger argument in favour of the contention that, where so wide an audience is concerned, our greatest men of science should feel it a duty to stoop now and then to a familiar chatty magazine article, and thus address a far wider audience than can be brought together in the Royal Institution, or even in the Albert Hall. And, further, an important public service would be rendered by such a society as the ATHENÆUM SOCIETY, for instance, if its members made it a part of their duty to examine the scientific articles which appear in the more popular periodicals of the day, with a view to calling attention to positive errors or misleading statements by means of a report to the Society; it being certain that the majority of Editors, who cannot assume to know everything under the sun, would be grateful for such criticisms, if tendered with a due sympathy for the many difficulties with which they have to contend.



"THE SHIP OF THE DESERT."

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HE familiar camel—*gimel*, *djimat*, *gamel*—"the ship of the desert," was no doubt one of the earliest of four-footed means of conveyance. There is a very common popular mistake to the effect that the camel has two humps and the dromedary one, whereas either may have two or one, as the case may be. The term dromedary is applied to the finer variety kept for riding purposes, as distinguished from beasts of burden.

Although this valuable animal—invaluable in the desert—*can*, under very favourable circumstances, make ninety miles a day, it is more remarkable for unflagging continuance of steady pace and endurance than for speed. The dromedary starts leisurely, until he has, with practised instinct, fairly fitted his pace to the measure of his burden; then, with the regularity of a pendulum, he swings along, and any one mile, if timed, will be found performed in just so many minutes. He may quicken his pace as he approaches some well-known bivouac or watering-place; even then he is comparatively deliberate. At the rate of fifty miles a day (the actual rate of speed attained by the caravans is not more than eighteen or twenty miles a day) he goes for twenty or more days on a draught of water once in three days in summer. In winter he can last out six or more days, his repast consisting of a slender supply of paste made from the flour of the dourha grain mixed with a little water; a few beans, broken wheat, or dates constitute a feast.

Apart from merchandise, of which in the caravans they will commonly carry 600 or 700 pounds, and have been known to carry over 1,200, they are often employed to convey a kind of litter, in which the women of the party ride, and the motion of which is said to be comparable to that of a ship in bad weather. Precisely the same is said of elephant-riding. The author of "Rural Life in Bengal" tells us that their pace is a rapid walk, partaking much of the roughness of a horse-trot without its regularity. It is a succession of uneven jerks, to which it requires some little time to become accustomed. Much depends, however, on the character of the seat. "The howdah, although it enables the rider to sit with the face forward, and thus to bear the action in the most familiar direction, by its great elevation increases, of course, the extent of motion, whereas the padded seat, called a *charjumma*, by fitting closely to the body of the animal, has less violence in its action."

The Arabs train their camels with as much care as they do their horses, and a numerous file will respond as one to the command of an experienced driver.—*The Leisure Hour*.

**T**HE TURTLE.—From facts just published, it appears that New York furnishes the chief market for that aldermanic luxury, the turtle. The city receives every year from 150,000 to 180,000 lb. Philadelphia and Baltimore consume together some 50,000 lb. annually; but the most remarkable statement in the statistics is that the consumption of the turtle in the city of Boston only amounts to 2,000 lb. weight per year. Turtles are most plentiful during the summer, and when the supply at New York is larger than the demand, the turtles are kept afloat, and given cabbages, lettuce, celery tops, and water-melon rinds, the last-named article of diet being the most highly prized. A temperature below 40 degrees kills them. They vary in size from a few pounds to over a quarter of a ton, the largest ever brought to New York having weighed 560 lb. The customers are almost invariably hotel and restaurant keepers. In Philadelphia, however, there is a considerable demand for small turtles for family use, the price varying from 20c. in winter to as low as 10c. in summer. The chief source of supply is Key West; but turtles are also brought from the Bahama Islands, and the largest specimens are found in the Spanish Main, but the flesh of these is apt to be coarse. It will be seen by the above figures that there is a considerable consumption in the New World of an article of diet which finds great favour in the Old.



**P**RIMEVAL CELTIC MAP STONES.—In many parts of Switzerland are often found smooth flat stones, evidently hand polished, and covered with dots, lines, circles, and half

circles. The origin and use of these stones, known among country people as *Schalensteine*, has long been a moot point among the learned. Some have thought they were charms, others that they were meant to commemorate the dead, or that the signs on them were undecipherable hieroglyphics; but it has been reserved for Herr Rödiger, of Bellach, in Solothurn, to throw a new light on these mysterious relics of the past, and suggest a theory concerning them which seems to meet all the necessities of the case. The *Schalensteine*, he says, are neither more nor less than topographical charts, as a comparison of them with any modern map of the districts in which they are found will show. The engraved dots correspond with existing towns and villages, the lines with roads. Even the fords and mountain passes are indicated. Herr Rödiger has examined many of these stones from various parts of the country, and he possesses a collection, picked up in Solothurn, which form together a map of the entire canton. Another significant circumstance is that the *Schalensteine* are mostly found at intervals of about two hours (say, six miles) from each other, and at spots where several roads meet. The former Herr Rödiger calls "head-stones" (*Hauptsteine*), the latter he denominates "by-stones" (*Nebensteine*). If he be right in his hypothesis, the places where these stones are met with possessed considerable populations long before the dawn of history; even the villages shown on the *Schalensteine* must be far older than the Christian era. Herr Rödiger considers the Swiss map stones to be of the same origin as the similar stones which are found in Germany, Scandinavia, India, and Further Asia;

and he sees in them another proof of the high antiquity and common origin of the Indo-Germanic races, and the existence among the latter, in an indefinitely remote age, of civilised habits, organised trade, and more culture than is generally supposed.



**HISTORY OF LIGHTING.**—Mr. Leopold Field, F.C.S., A.S.T.E., opened the second course of Cantor Lectures, in January last, at the Society of Arts, his subject being "Solid and Liquid Illuminating Agents." There was a large display of exhibits and illustrative diagrams, the lecture being accompanied throughout with experiments. The lecturer began by saying that the electric and gas lights, brilliant though they were, left something to be desired. The one was unsteady, the other injurious to pictures and books. The candle and oil lamp to a great measure supplied the deficiencies of the larger lights, and these would form the subject of the lectures. Mr. Field then proceeded to give a slight outline, illustrated by elaborate tabular views, of the scheme of the hydrocarbons, and their derivative alcohols and acids—marstigas represented the paraffines; ethylene the olefines; and acidylene might be called the taproot of the whole, as it might be formed by the direct union of carbon and hydrogen, and again reunite directly with hydrogen to form olefiant gas, from which again the paraffines and alcohols could be got by simple action. All the above were shown and descanted upon. The fatty acids were the most important series at present, as nearly every animal and vegetable combustible contained one or more of them, free, or combined as an ethereal

salt or glyceride. The lecturer then proceeded to give a rapid sketch of the history of lighting. The fire had always been associated with divinity, and the custom of celebrating great festivals with lights was handed down from the remotest ages, as in the old Roman Lupercalia, changed by Pope Gelasius into Candlemas. The earliest light was probably the torch, which led to the candle. Various torches were exhibited, one nearly 80 years old, disinterred from the cellars at Lambeth. These would, by degrees, grow smaller and at last assume a suitable size for domestic purposes, in which state they were used by many nations, who surrounded a simple strip of tow, cotton, rush, or wood, with bitumen, ozokerit, pela, wax, or tallow, as the case might be; some even drew a wick through the body of the gannet. But though, from a passage in "Apuleius," it is evident that candles both in wax and tallow formed part of the domestic light of the Romans, these were confined entirely to the lower classes. Strips of pine formed the street lights, and lamps illuminated the house. These gave scope for every variety of ornamental design, and were sometimes marvellously beautiful, as in the great golden lamp of the Erechtheum, which burnt for a whole year, and that of Cortona, which had sixteen nozzles most exquisitely carved. Mr. Field quoted several authorities to show that candles were regarded as out of date and vulgar by the Romans, and gave it as his opinion that, wherever candlesticks and candles are mentioned in Holy Writ and elsewhere, oil lamps are to be understood. The substance burnt, and the wick, varied. The former was generally olive oil, the latter a kind of cotton, though in many coun-

tries doubtless other vegetable and animal oils, and in some, as Egypt, naphtha and bitumen, fed the flames. There was, however, no appliance, even among the wealthy and refined Romans, for checking the smoke, not even a chimney; nor was the wick supplied constantly, having to trust entirely to its capillary attraction. In fact, with the exception of a few slow improvements in candle-making, such as that of mould candles by the Sieur de Brog, drawn tapers by Pierre Blaisnier, and a few modifications in the process of dipping, the art of lighting might be said to have stood still till the inventions of Argand, in lamps, and Chevreul, in candles, gave it an impulse which had steadily increased.

**E**CENTRIC MUSIC.—Haydn once challenged Mozart to compose a piece of music which the former could not play at sight. Mozart accepted the task, with supper and champagne as the forfeit. In five minutes a piece of music was produced, and passed to Haydn, with a bantering boast from Mozart: "There, sir, is a composition which you cannot play, and I can." Haydn sat down to the piano, surprised at the simplicity of the music which was to puzzle him; but when he got halfway through he suddenly stopped, saying, "How's this, Mozart—how's this? You've got my hands stretched out to the ends of the piano, and yet there's a middle key to be touched. Nobody can play such music as this!" Mozart, laughing at Haydn's perplexity and anger, took the vacant seat, and began to run through the easy passages. He came to the difficulty which his friend found insurmountable, and, bobbing his head, struck the key with his long nose, and

was at the end of the composition in a trice. Haydn, with whom such a feat was a physical impossibility, burst into a roar of laughter, and confessed that Nature had endowed Mozart with a capacity for music which he (Haydn) had never discovered, and to which he could lay no claim. The forfeit was cheerfully paid.

**P**HYSIOLOGICAL EFFECTS OF TOBACCO.—Abstinence from the use of tobacco is one of the forms of abstaining which are being pressed on the public, with the energy of an active and full-blown fanaticism. We do not share the strong prejudice which finds its expression in this counterblast. We have condemned, and shall continue to denounce, the abuse of tobacco, by its excessive, untimely, or inappropriate use. Many smokers smoke too much, and take in too much of the smoke they make; others abuse tobacco by using it at wrong times and seasons; while, to a third class, comprising the young, and persons with special susceptibilities, tobacco is injurious in any form or quantity, and at all times, because, owing to the stage of development or some idiosyncrasy of the organism, the nicotine—which it is impossible to prevent passing off with the smoke—is in all doses hurtful and even poisonous. We cannot, however, join in the outcry against tobacco in its moderate and appropriate use. Our reason for maintaining this position in a controversy, which would seem to be recurrent, will be most readily made evident by a short review of the physiological effects of tobacco, as that commodity is known to the smoker. There is very little, if anything, to be said against the moderate use of tobacco, in an average state of the organism. Those

who are unfavourably affected by it should abstain, and it is wholly inadmissible in youth. We would go so far as to say that no young man should smoke before he has attained his majority, and it would be well if he deferred the use of tobacco altogether, and in every form, until the extreme limit of development, which may be placed at the age of twenty-six. It is impossible to give any precept as to the time and mode of smoking. Personal sensibilities differ so widely that no common premise can be laid down. Speaking generally, the points of caution should be to avoid—irritation of the mucous membrane of the mouth and fauces, loss of the salivary secretion, and super-excitement of the nerves and nerve-centres. Cigars are better than pipes, and far better than cigarettes; but no cigar should be smoked for more than three-fourths of its length, even with a mouth-piece. The smoke should be taken into the front of the mouth, and ejected as rapidly as possible. Properly and moderately employed, tobacco smoking is not a baneful habit, but one that may be reasonably enjoyed.—*The Lancet.*

**N**ATURAL HISTORY PUZZLE.—It may be doubted whether any zoological discovery ever exceeded in interest the discovery in Australia of those two animals, the duck-billed platypus (or ornithorhynchus) and the echidna, or spiny Australian ant-eater. Long as these creatures have now been known, and carefully as they have been studied by Meckel, Owen, and other distinguished anatomists, they still continue, and will long continue, to offer fresh fields of research to the zealous biologist. Many other beasts are divergent enough; between

the bat and the sloth, or between the whale and the antelope, not a few differences may be found; but all these added together are simply nothing to the differences which exist between the platypus and echidna on the one hand, and all other beasts taken together upon the other. By their bony breasts, their brains, small ear-bones, and many other characters, these two forms, which are together spoken of as monotremes, stand alone in their class; but to the interest which such peculiarities naturally excite is now added the interest to be derived from their contemplation in the light of the theory of evolution. The question now arises, how has it been that these two isolated forms have come to exist in a remote part of the world, not only quite without any existing ally (for we count the New Guinea species as an echidna), but without a trace having been found of any fossil relative? Are these monotremes to be regarded as the last survivors of a once very numerous and generally diffused kind of animal life, or as specimens of a small and comparatively modern local offshoot—a sport? Their peculiarities differ from the structure of all ordinary beasts in such a way as to approximate towards that found among different birds and reptiles; but to which of these do they approach the nearer? Investigations recently made by Professor Lankester seem decidedly to indicate their greater affinity to birds in at least one point of their structure. In a very interesting paper read quite lately at the Zoological Society the Professor pointed out, as the result of a number of careful dissections, that the structure of the heart, and especially that of the valve of its right side, is (as Professor Owen sagaciously divined) bird-like, rather

than (as Professors Huxley and Gegenbaur suspected) formed like that of crocodiles. The anatomical details on which this judgment rests are too technical for reproduction here, but it may interest some of our readers to know that while the structure of the heart of the platypus is very bird-like, that of the echidna is less so; so that if in the later a few perforations in a piece of membrane were to appear, so as to reduce the fibrous membrane into fibrous cords, it would thereby clearly approximate to the form of the heart found in all other beasts. Thus, the platypus, by its innermost structure, only makes more and more plain that bird-like nature which its duck's bill caused its first observers to suspect.

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**VENERABLE FIRE ENGINE.**—It is stated that the oldest hand fire engine in the United States is at Bethlehem, Pennsylvania. It was built by Brooks, of London, in 1698, and imported by the Moravians of Bethlehem the same year. In the year 1848, after 150 years of useful service, it was deposited in the museum of the Young Men's Missionary Society, where it still remains, and is yet in working order. The maker's original bill and the shipping papers exist to attest these facts.

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**PICTURESQUE ELECTRIC ILLUMINATION.**—The electric light has been applied of late in various cases where the effect has been singularly picturesque. Thus, during a congress of Greek medical men at Athens last year, several electric lamps were placed at elevated points about the Acropolis, and the aspect of the ruins so lit up is said to have been very striking. The Company of Steam


Navigation on the Rhine and the Lake of Constance started, last year, a night service of steamers, supplied with Bürgin electric lamps to illuminate the beautiful banks of the river. The steamer left Schaffhausen at fall of night and sailed to Biesingen, and passengers were enabled to enjoy the scenery in those novel circumstances. Further, the falls of the Rhine have been illuminated at night by a powerful electric light placed on the right bank. To appreciate fully the remarkable appearance of the foaming torrent, so lit up, it is necessary to reach the principal rock, on which is a small pavilion, and where the stream divides into two large parts. Again, there is a regular night service instituted between Cannes and the Lerin Islands, the vessel being the steam yacht *Cannois*, which has a powerful Mangin lamp, also 84 Swan lamps, arranged between the masts and elsewhere. The electric light guides the course in the difficult navigation which often occurs in these trips, and furnishes many lovely views of scenery.

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**DISESTABLISHMENT OF BELLS.**—The law has, in the matter of bells, less disregard for the nerves than regard for the privileges of religion. Secular bells of all kinds have one by one been disestablished in the Metropolis. The muffin bell, together with all other noisy modes of advertising wares, has been in theory at least silenced. The call bell for ringing workmen up to time is prohibited like steam whistles and horns, used for the same purpose without the sanction of the sanitary authority. Musical hand-bells are liable to the same suppression as the street organ, the common enemy of



all mankind who live above the basement floor. Church bells alone, except at one time the unorthodox bells of Roman Catholics, have been subjected to no statutory repression. Bells in their purely musical function may, if they pass the bounds of the definition of nuisance, be restrained by injunction, as happened in the well-known case of the Roman Catholic chapel at Clapham; but the passing bell, the funeral bell, and the bell for service, are not only allowed, but enjoined by the Canons. Some repression on these most disturbing forms of ringing may fairly be asked. Passing bells may well be dispensed with altogether in towns; and funeral bells in the near neighbourhood of houses might, without impropriety, be required to be closely muffled. Better reminders of mortality are found nowadays in the first column of the daily newspaper than in the church steeple.—*Law Journal*.

 ANCIENT TRAVELLING.—Professor Mahaffy, of Trinity College, Dublin, recently delivered a lecture, in the theatre of the London Institution, on "Tourists and Travelling in the Early Days of the Roman Empire." In ancient days, as now also, men travelled not simply as explorers or merchants, but for the sake of travel. The necessary conditions for travel were general peace and good thoroughfares. Rome, from the Augustan age, provided general peace and good thoroughfares. The *Pax Romana* ensured immunity from brigands by land and from pirates by sea. It gave unity of taxation and freedom of trade from the nuisance of fiscal frontiers. It blessed men with a common coinage, the Roman money being as eagerly coveted by the bar-

barians as the British sovereign is by the rudest tribes in our own days. What a wonderful network of roads overspread the Roman Empire was indicated by their splendid remains. The lecturer sketched the five great arterial routes, one of which crossed the Alps over one or other of the four passes to three centres, Augsburg, Rheims, and Orleans. The branch from Rheims made for Boulogne, crossed the Channel to Richborough, and took our own Watling-street from London to York, and even to the Pictish Wall. Of course the Roman ships could not vie with our ocean steamers, but they rivalled for speed our sailing packets of 60 years ago, as was proved by many curious instances recorded. St. Paul came from Reggio to Puteoli in a single day, a passage which takes even a fast steamer from 12 to 14 hours now. From numerous cases it could be inferred that the Romans went in good sailers from six to eight miles an hour. Apart from the State system of posting for Imperial functionaries and despatches, of which a full account was given, there was no lack either of commodious and swift vehicles or of cheap and comfortable inns. These last had their signboards, such as the Cock, the Great and the Little Eagle, the Snakes, the Crane, &c. The landlord of the Mercury and Apollo at Marseilles thus advertised his commercial house: "Here Mercury promises gain, Apollo health, Spartianus the host guarantees board and lodging. He who now turns in here will be the better for it. Stranger, consider where you will put up." This signboard reminded us that many then, as now, travelled for health to the seaside resorts, to seek a southern climate, mineral waters, &c. Others travelled for study

to such Universities as those of Rhodes, Alexandria, or Athens. But there were also crowds of mere tourists, who travelled to see the world, and more in those days for what man had made it, than, as now, to see nature in all her wildness.

**D**RESS OF THE PERIOD.—A lecture on this subject was lately delivered to promote the objects of the National Health Society, by Mr. Frederick Treves, F.R.C.S. (of the London Hospital), in the Town Hall, High-street, Kensington. The large hall was crowded with an audience composed almost wholly of ladies. Enlarged diagrams, from works on physiology and fashion plates, a life-sized cast of Thorwaldsen's Venus, a skeleton, a "costume" *à la mode*, lent by a firm of fashionable drapers, and a lay figure on which an adaptation of a Greek dress was shown as a suggested improvement on the present style of evening dress, served to illustrate the lecturer's observations. Professor Flower, who took the chair, in the unavoidable absence of Dr. Andrew Clark, read a letter, in which, after speaking highly of the ability of Mr. Treves, Dr. Clark said: "It is rumoured that the lecture will be a raid against dress. It is, perhaps, unnecessary to reply that this is an error. Neither the Society nor Mr. Treves will object to proper dressing, which is at once a privilege and a duty, and no unworthy means of educating the taste, exercising the judgment, encouraging the Arts, and giving pleasure to others. So long as dressing does not violate the principles of beauty or the laws of health, so long as it is made conformable to position, use, and circumstances, so long is it to be

encouraged, not only as a source of enjoyment, but as the fulfilment of a serious duty—for the love of dress, which is to the body what language is to thought, is as true an instinct as is the love of what is beautiful or good." After touching upon some of the eccentricities of fashion in the present day, Mr. Treves, assuming that the primary objects of dressing were to cover the body and maintain an equable temperature, pointed out that in a low evening dress these objects appeared to have received little or no attention. The neck and arms, and the upper part of the chest and back were left bare, while about the lower extremities was accumulated a mass of raiment that would clothe a dozen children. In the ordinary dress of women, little regard was had for maintaining an equable temperature. The covering of the upper part of the chest above the line of the corset was very thin, perhaps that of the dress only. The region of the corset was reasonably covered, while about the hips many layers of clothing were massed. Thus, the body might be divided geographically into a frigid, a temperate, and a torrid zone. Dealing in the next place with tight-lacing, first as a matter of beauty, secondly as a matter of sense, and thirdly as a matter of health, the lecturer maintained that if the most beautiful female outline was that of a young, normal, well-developed woman, then a narrow waist was hideous. Children had normally no waist, and if a mother gave her thought to the matter for a week, she could devise nothing more fatal to health than to make her daughter wear stays "to improve her figure." The normal waist of a woman, which was oval in section, had a circumference of 28 in. to

29 in.; the "elegant" waist, which was in section circular, a circumference of 20 in., while the measurement of dressmakers' lay figures now varied from 21 in. to 24 in. The deformed foot of the Chinese lady, the flattened heads, perforated nostrils, and distended lips of savage tribes were less senseless freaks of fashion, for they injured but one part of the body, and that not a vital part. Coming to the question of health, he showed how, by the compression of the lower ribs, the stomach, liver, and lungs were displaced and their free and necessary action prevented, quoting medical evidence of the serious, often fatal, consequences.

THE "SPECIAL" ARTIST.—There are Specials and Specials. There is, for instance, the gentleman who, having gone with an expedition, say to Madagascar, and there met a duke and marquis in disguise, has returned to England with an increased sense of his own importance, and a curious delusion that he has somehow become related to the aristocracy. His girth is greater, and he is affably distant in his manner to his old friends. His hotel expenses, I believe, are heavy, and his sketches scarcely as good as they used to be. There is, too, the voluble and fantastic being from the North—a man of energy and resource, good at sudden deaths of great personages and colliery explosions. He has a fancy for climbing to inaccessible coigns of vantage from which to sketch. He goes in for "novel aspects," and prefers views from the corner of a parapet or the summit of a tower to straightforward work on

the solid ground. By way of change he sometimes sketches in the heart of a seething mob, and he can even execute clever portrait outlines in a railway carriage travelling at fifty miles an hour. He will sketch a whole street, with accurate architectural details, in thirty minutes, and the movements of his person are quite as rapid and almost as picturesque as those of his pencil. Then there is the War Special, the man of great campaigns. With the interiors of military prisons he is not unacquainted. His work is always individual, and often imaginative in the highest degree. He does things in his own way, but that way is a good one. Again, there are the younger men, who think nothing of calmly walking down a mile and a half of open road peppered by the enemy's bullets, and who have even been known on occasions to punch dictatorial colonels who have been guilty of mistaken interferences. Finally, there is the variety which puts up at the best hotel in a big city at least a hundred miles from the seat of war, and there concocts sketches under the influence of champagne and one-and-ninepenny cigars. I should add that this last variety is uncommon. It may be accepted for fact that the Special Artist, as a rule, is thoroughly conscientious, and is often as brave and daring as he is faithful. Mistakes occur now and then; an occasional error is inseparable from the conditions under which he works; but, on the whole, his productions are remarkably accurate, and the wonder is, not that blunders are so many, but that they are so few.—*Mr. Harry V. Barnett*, in "*The Magazine of Art*."





## QUIET THOUGHTS FOR QUIET HOURS.



“Pii orant tacite.”



“The turf shall be my fragrant shrine ;  
My temple, Lord ! that Arch of Thine ;  
My censer's breath the mountain airs,  
And silent thoughts my only prayers !

My choir shall be the moonlit waves,  
When murm'ring homeward to their caves ;  
Or when the stillness of the sea,  
Ev'n more than music, breathes of Thee !”

MOORE.



## THE SUPREME DISCOVERIES OF ASTRONOMY.



**A**VERY recently, Dr. R. S. Ball, F.R.S., Andrews' Professor of Astronomy in the University of Dublin, and Royal Astronomer of Ireland, delivered, at the Royal Institution, the first of a course of four consecutive lectures on “The Supreme Discoveries of Astronomy,” illustrated by the oxy-calcium light. The special topic for the occasion in question was the scale on which the universe is built.

Professor Ball began by remarking that it is the laws of pure mathematics which present to us truths of the highest generality, and principles, which must hold good throughout all space and all time. The supreme discoveries of astronomy were those which, in this respect, most closely approximate to the truths of mathematics. Chained as we were to the surface of the earth, and dazzled by the proximity of the sun, it needed a special intellectual effort to view the solar system in its true perspective. The first step was to apply, as far as possible; the principles of rigid measurement. We must attempt

a survey of the contents of the visible universe. However imperfect that survey, it would yield us information enough to assign to the solar system its true rank among the heavenly bodies. The measurements of that survey depended upon a sure base-line, and the most convenient base was the true distance from the earth to the sun.

Now, various methods had been employed in the determination of this distance ; the best known was that found by means of the transit of Venus. So much had been said and written about the transit of Venus that a comparatively brief sketch would suffice for the present purpose. A conjunction of Venus and the earth took place every nineteen months. Owing, however, to the inclination of the path of Venus to the ecliptic, it but rarely happened that Venus was actually seen in front of the sun. Such an occurrence, however, took place on December 6 last, but no other would happen until the year 2004. By observing the passage of Venus across the sun, from properly chosen spots, a difference in the time of her entering and leaving the solar disk was perceived. From the exact measurement of these differences of time the distance of the sun could be ascertained. The practical application, however, of this method was beset with difficulties. The atmosphere surrounding Venus, and the effects of irradiation, made it difficult to catch the precise moment when geometrical contact takes place.

There were, however, other methods not so celebrated as the transit of Venus, which might be expected to yield results of a satisfactory nature. He would simply describe the principles of one of these alternative methods, which, taking everything into account, seemed to himself to be certainly free from some of the chief objections to which the other was open. The method to which he referred was based upon the observation of the minor planets, those small bodies which revolve between the orbits of Mars and Jupiter. Last year, Mr. Gill, the astronomer at the Cape of Good Hope, invited the co-operation of astronomers, in the northern hemisphere, in an attempt to measure the distance of the sun by watching the minor planets Victoria and Sappho.

It was, then, by methods of this kind, in which the small point presented by a minor planet could be measured in comparison with an equally small fixed star, that the distance of the sun could be obtained without our needing to await the transit of Venus. The distance of the sun, once known, became the measuring-rod by which to reckon the distances of the stars. The star of 61 Cygni still remained the nearest of all the known stars in the northern hemisphere.

The accordance, also, of the measurements made by Professor

Asaph Hall, with those obtained elsewhere, by different methods, had reduced the limits of uncertainty within a very narrow compass.

Dr. Ball further pointed out that, in the same constellation, Cygnus, there is another double star of the same general type as 61 Cygni, which also seemed to be within a strictly measurable distance. The direct measurements of star distances were, however, few and scanty. In most cases, the distances of the stars were hopelessly beyond our ken, and to estimate these distances we could only fall back on Mr. Herschel's reasoning. If Vega, for instance, were shifted ten times as far as it is, it would still be visible to the naked eye; if 100 times, it would still be visible in a small telescope; if 1,000 times, it would yet be seen in a great telescope. The inference was, that some of the minute stars, revealed by our great telescopes only, must be 1,000 times as far off as Vega. In the case of clusters, and other still more distant objects, we could not form even a reasonable conjecture as to their remoteness or their proportions.

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B E N E V O L E N C E.\*

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**W**HEN thou considerest thy wants, when thou beholdest thy imperfections, acknowledge His goodness, O man! Who honoured thee with reason, endowed thee with speech, and placed thee in society, to receive and confer reciprocal helps and mutual obligations.

Thy food, thy clothing, thy convenience of habitation, thy protection from injuries, thy enjoyment of the comforts and pleasures of life, thou owest to the assistance of others, and couldst not enjoy but in the bands of society.

It is thy duty, therefore, to be friendly to mankind, as it is thy interest that men should be friendly to thee.

As the rose breatheth sweetness from its own nature, so the heart of the benevolent man produceth good works.

He enjoyeth the ease and tranquillity of his own breast; and rejoiceth in the happiness and prosperity of his neighbour.

He openeth not his ears unto slander; the faults and failings of men give pain to his heart.

His desire is to do good, and he searcheth out the occasions thereof; in removing the oppressions of another, he relieveth himself.

From the largeness of his mind, he comprehendeth in his wishes the happiness of all men; and from the generosity of his heart, he endeavoureth to promote it.

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\* Translated from an *Indian Manuscript*.

**T**HE HUMAN SKULL.—An American scientist, Mr. W. B. Cooper, endeavours to show that the human skull is becoming thinner. If, he says, we accept the tenets of evolutionists, a race adapted to certain circumstances will, if these circumstances be altered, become modified in a corresponding degree, and retrogression may result as well as improvement, and this modification may be confined to a certain part or organ. What forces, then, have exerted their influence on the casket of the brain? First, natural selection, in the case of those creatures that engaged in fierce combats, would tend to eliminate those individuals with frail craniums; and, as man comes within the category of belligerent creatures, when barbaric warfare and the dangers of the chase were common occurrences, natural selection would, of course, exercise a powerful influence in maintaining a standard of cranial strength. Then, too, in the presence of repeated violence, adaptation would undoubtedly provide a suitable armour for this delicate and important organ. In civilised man, however—at all events, in the higher grades of modern civilisation—natural selection may be said to exert no influence in that direction; war is too infrequent and engages too small a portion of mankind, while the forces with which it deals are of a nature to alter the whole aspects of the case. And while adaptation undoubtedly operates, particularly among the labouring classes, upon other portions of the frame to maintain their rigidity, it is only in rare instances that the skull is called upon to support any greater pressure than that exerted by the headgear. It is not to be overlooked that among semi-civilised people,

where the facilities for transportation are limited, the head is often made to support considerable weights; and, except where rigid rules of caste prevent the intermarriage of classes, the joint action of adaptation and heredity disseminate the effects of this custom throughout the community. A blow that would shatter a European skull, falls harmless on that of a negro. There probably never was a time in the history of the world when the skull was subjected to so little violence as since the introduction of modern methods of transportation; and, when we recall the fact that it was but a few centuries ago that the more advanced nations of the present day were barbaric, it is too soon to look for any great change. Yet it is not uncommon to hear of cases of the fracture of the skull which are ascribed to its unusual thinness. May not these be the results of the co-operation of the agencies referred to? If the force of the position assumed by Mr. Cooper is accepted, the logical conclusion is that we are approaching a time when the human cranium will become much thinner—so delicate, in fact, that it will be easily fractured; we may then, he thinks, expect a revival of natural selection, and an increase of cases of death from violence to the head.



**G**OOD MANNERS.—Good manners constitute the most valuable of earthly possessions. All may have them by the cultivation of the affections, and none without it. Only for the few are learning and genius, wit and beauty, wealth and fame; but good manners, with their dowry of happiness, are for all who are willing to pay the price of self-culture. That

woman lives not, whatever her station in life, but who, by an amiable temper, pleasant words, and kind acts, may shed light and comfort on the hearts and homes of earth. That man is yet to be born who may not possess those elements of power, if true to the obligations of his being, which brighten and bless human society. There is a wealth of affection and kindness in every human heart, if properly developed; and the development and expenditure of the same in social life is a duty we at once owe to ourselves and the world.

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 “CLEANLINESS” AND “GODLINESS.”  
 —There is to be seen, meeting the traveller's gaze ever and anon, one gigantic poster, that may be taken as pointing a moral which it is almost a duty to wish could be realised. Some jolly monks are therein depicted, washing and shaving, and above them is the motto that “Cleanliness is next to godliness.” We might well go farther, and say that cleanliness must come before godliness, for surely a dirty man can scarcely be other than an ungodly one. Oh, if our philanthropists could but realise that motto practically, even to the giving of a few thousands less to possibly wild salvation and missionary schemes, and a few thousands more towards the building of clean and healthy homes for the poor, baths and wash-houses and recreation grounds! The horrible dwelling dens of the great majority of the poor throughout the land are still a disgrace to civilisation, not to say to Christianity. It is at best but doubtful good spending millions to get at souls which are encased in dirt—they are, in the vast multitude of instances, humanly speaking, unapproachable.

What if those who would really benefit their fellow-creatures did but send out missionaries of cleanliness, and teach the laws of health, remembering that the body of man is a temple of God! There could be no holier work than to help the masses in their struggle towards purer surroundings, no nobler task than to lift them out of the quagmires of dirt and disease, in which they seem condemned to wallow. This great crusade of health and cleanliness would do more than all the more specially aimed organisations in the world, perhaps, to bring about at least a spirit of true godliness. Make the dwelling-place of the spirit fair, and so we may say with the great playwright who wrote dramas when posters were unknown—

“There's nothing ill can dwell in such a temple:  
 If the ill spirit have so fair a house,  
 Good things will strive to dwell with 't.”

If that means anything at all, it is an encouragement to try soap and water, good drainage, fresh air, whitewash, &c., first, and then to prosecute, assuredly with immeasurably brighter hope, each higher effort afterwards.

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 INEBRIETY AS A DISEASE.—Under this title, a communication appears in the *Detroit Medical Review*, from the pen of Dr. Crothers, of Hartford, Conn. He points out that inebriety was recognised as a disease long before insanity was thought to be other than spiritual madness—or a possession of the devil. This disease was hinted at in an early age of the world, and is by no means a modern idea. On an old papyrus found in one of the tombs of Egypt, dating back to a very ancient period, was a very significant passage referring to an inebriate who had failed to



keep sober. Many of the sculptures of Thebes and Egypt exhibit inebriates in the act of receiving physical treatment from their slaves, such as purgatives, rubbings, or applications to the head and spine. Herodotus, five centuries before the Christian era, wrote "that drunkenness showed that both the body and soul were sick." Diodorus and Plutarch assert "that drink madness is an affection of the body which hath destroyed many kings and noble people." Many of the Greek philosophers recognised the physical character of inebriety, and the hereditary influence or tendencies which were transmitted to the next generation. Laws were enacted forbidding women to use wine, and young boys were restricted. In the first century of the Christian era, St. John Chrysostom urged that inebriety was a disease like dyspepsia, and illustrated his meaning by many quaint reasonings. This was the first clear distinctive recognition of the disease which had been hinted at long before. In the next century, Appian, the Roman jurist, referred to the irresponsible character of inebriates, and the necessity of treating them as sick men. Many of the early and later writers of Roman civilisation make various references to drunkenness as a bodily disorder, not controllable beyond a certain point, which resulted in veritable madness. Little reference was made to this theory until the thirteenth century, when one of the kings of Spain enacted laws fully recognising inebriety as a disease, lessening the punishment of crime committed when under the influence of spirits. In the sixteenth century, the penal codes of France and many of the German States contained enactments which recognised the disease character of

inebriety. All punishment for crime committed during this state varied according to the condition of the prisoner at the time. In 1747, Condillac, a French philosopher, wrote expressing clear views of the disease of inebriety, also that the State should recognise and provide means for its treatment. He asserted that the impulse to drink was, like insanity, an affection of the brain, which could not be reached by law or religion. Dr. Benjamin Rush, of Philadelphia, in 1790, set forth the same theory, supported by a long train of reasoning. To him belongs the honour of first elaborating this subject, and outlining what has been accepted half a century after.



**S**UCCESS IN LIFE.—"I believe success in life is within the reach of all who set before them an aim and an ambition that is not beyond the talents and ability which God has bestowed upon them. We should all begin life with a determination to do well whatever we take in hand; and, if that determination is adhered to with the pluck for which Englishmen are renowned, success, according to the nature and quality of our brain-power, is, I think, a certainty. Had I begun life as a tinker, my earnest endeavour would have been to have made better pots and pans than my neighbours, and I think I may venture to say, without any vanity, that, with God's blessing, I should have been fairly successful. The first step on the ladder that leads to success is the firm determination to succeed; the next is the possession of that moral and physical courage which will enable one to mount up rung after rung until the top is reached. The best man makes a false step now

and then; and some even have very bad falls. The weak and pining cry over their misfortunes, and seek for the sympathy of others, and do nothing further after their first or second failure; but the plucky and the courageous pick themselves up without a groan over their broken bones or their first failures, and set to work to mount the ladder again, full of confidence in themselves, and with faith in the results that always attend upon cheerful perseverance."—*Lord Wolseley.*

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"**H**UMANE PROGRESS."—Undoubtedly the great fact of "Humane Progress" admits of the plainest secular solution. Man was at first a huntsman, waging war with his prey and with his rivals in the chase. In the ensuing pastoral stage he continued a sanguinary competition for the soil. The survivors he made his slaves in one capacity or another. The weakly and unserviceable perished. So long as the lords of the earth had enough, they cared little for the rest. In the tent the sordid was a slave, often a victim. When men and cattle multiplied, or the pasturage fell short, tillage slowly and feebly came to the rescue. Before it could do much man became predatory, and sought a precarious livelihood on the open sea, the desert, the track of travellers, the river fords, or wherever an ambush or a vantage could be found. When Nature failed Art took her place, and castles were built for want of rocks and defiles. Then came a stage of universal war—the heroic age, as we fondly call it. There ensued conquests and migrations. Great men, or, still better, many men banding together, created an oasis here and there, turned the

self-governing communities. People who had learnt to care for themselves and their surroundings, learnt to care also for humanity in a larger sense, and a good citizen regarded the State as one family. Arts advanced and food multiplied till it became possible to feed the hungry and clothe the naked, to substitute imprisonment for instant execution, and to maintain national defences not involving an appeal to the adventurous, the headstrong, and the vindictive elements of society. Religion assisted, sanctioned, and ornamented these beneficial changes. The face of Nature herself was changed, and man created a dominion. From time to time there came terrible checks, and the fabric of society was shattered, but these were only as the acute diseases which a healthy constitution triumphs over, and which were not without their good. When man had triumphed over brute force and created wealth, law distributed, disposed, and protected it. Even the nation found it better not to make war with nation. Of all history it may be said, What hath man done? —"*Gesta Christi*," in "*The Times*."

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**P**ROVERBS OF ALL NATIONS.—Many of the best and oldest proverbs are common to all nations. They deal with thoughts and feelings which are common to all mankind. Some, like the oak, are native to many soils; others, like our pine and larch, though of foreign extraction, cannot be distinguished from the natives. The thought common to many countries is often embodied in images peculiar to each. It is pleasant to trace the familiar phrase of to-day back to remote antiquity, or to detect it in the disguise of a foreign costume. "Home is home, be it

never so homely," is a proverb dear to us all. It was used lately by a traveller with a whimsical alteration to suit his individual case, which seemed to be that of a lover of the country "in populous city pent." "Home is home," said he, as he prepared to leave the train, "though it be Preston." He perhaps did not know that the ancient Greeks used to say, "One's own house is the best of houses;" that the Spaniards say, "My own house, though small, is the best house of all;" and that it was a classical jest in Greece to apply the proverb to the tortoise, who carries his home on his back. Of vain labour or short-lived union, we often express our sense by using the figure of a "rope of sand," often without being aware that the venerable image is Greek, and was in use among the Athenians who fought at Salamis. "A bird in the hand is worth two in the bush," says the sententious Englishman; "A thousand cranes in the air," says the Arab, "are not worth one in the fist;" "All egg to-day" says the Spaniard, "rather than a fowl to-morrow." The physical varieties of climate and natural products are often finely marked by common phrases and popular figures. Here, if we are drenched with rain, we say we are "wet to the skin;" farther south, in France, people are "wet to the bone;" while the more copious tears of a southern sky are said by

the Spaniard to penetrate "to his marrow." The ancient Greek used to speak of "carrying owls to Athens;" the Hebrew, of "bringing oil to the city of Olives;" the Persian, of "taking peppers to Hindostan"—each conveying what we mean when we talk of "sending coals to Newcastle." "Two of a trade never agree," say we; "The potter is the enemy of the potter," said the Greeks of the time of Hesiod. "Cut your coat according to your cloth," said the prudent Englishman; and the Arab is of the same opinion, but considering it a breach of good manners to expose his feet in sitting, he expresses it thus, "Stretch your legs according to the length of your cloak." How mournfully the state of society and public feeling, under the old Oriental despotisms, is depicted in this Bengal adage, "He who gives blows is a master, he who gives none is a dog." The social condition of Egypt may be read in the proverbs of Cairo as completely as in the best book of travels: "The riches of Egypt are for the foreigners therein," and "The miller steals by handfuls, but the landlord by mule loads;" while in others how beautifully rise before us its rich landscape, fringed with desert, its palm groves and picturesque life—"He is a bad rider, yet he gallops among the date trees;" "The camel has reached the sycamore;" "A well is not to be filled with dew."





THE  
SHIPWRECKED FISHERMEN AND MARINERS'  
ROYAL BENEVOLENT SOCIETY.

——  
“There is Sorrow on the Sea.”

——  
THE SOCIETY'S OBJECTS.  
——



THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY was formally and responsibly INSTITUTED on the 21st FEBRUARY, 1839,\* and thereafter—

*[The better to carry into effect the Society's charitable and benevolent Designs, for the benefit of the Seafaring Classes for whose welfare it was originally Instituted, and—*

*Further to carry out the same by undertaking or promoting, as part of the Objects and Designs of the Society, not only the Objects and Purposes before sought and undertaken by it, but also ANY OTHER Objects, Designs, or Purposes of a benevolent character, for the benefit and welfare of all and every or any of such Classes of Men, or those dependent on them]—*

duly INCORPORATED by “THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY” ACT OF PARLIAMENT, “13TH AND 14TH

\* The disastrous storm in the Bristol Channel, in conjunction with some fearful calamities to fishing-boats, with great loss of life, on the North coast of Devon—which happened whilst there was still vividly impressed on the mind of the whole British Nation the remembrance of the wreck of the passenger steamer *Forfarshire*, on Hawker's Rock, in the Farne Islands, Northumberland, between the night of the 6th and the morning of the 7th September, 1838 (being the occasion of “Grace Darling's” daring deed of heroic rescue, with her father, in their coble-boat, from the Longstone Lighthouse)—led to the formation of “THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY” during the ensuing winter, at a specially influential Public Meeting, held in the London Tavern, on February 21, 1839, as recorded.

VICTORIA, CAP. LXXIII.,” with ROYAL ASSENT of 29th JULY, 1850, having—amongst all the Society’s many other benevolent Functions and Operations, thus under Special Statute permissible to it as a Charitable Corporation—the following NATIONAL OBJECTS in view:—

I.—ASSISTANCE TO THE SHIPWRECKED.

To render Necessary Assistance, and Board, Lodge, Clothe, and Forward Home, *all* Shipwrecked Fishermen, Mariners, &c., or other Poor Persons, of all Nations, cast Destitute upon the Coasts.

II.—RELIEF TO MEMBERS.

To relieve Fishermen, Mariners, &c., *Members of the Society*, for Loss of their Boats or Clothes (by Shipwreck, Storm, or other Accidents of the Sea), and otherwise in their Need and Extremity; and also to relieve their Widows and Orphans, &c.

III.—RELIEF TO NON-MEMBERS.

To administer Relief to Others, and those Dependent on them, of the Seafaring Classes for whose benefit the Society was Instituted and Designed, *although not Members of the Society*, according to the Circumstances of the Case, &c.

IV.—REWARDS FOR SAVING LIFE.

To grant Gold and Silver Medals, and other Honorary or Pecuniary Rewards, for Heroic or Praiseworthy Exertions to Save Life, from Shipwreck, &c., on the High Seas, or Coasts of the Colonies.

The Society’s foregoing National Objects, with the various other Functions and Operations devolving upon it, are carried out by the Central Executive in London, and about 1,200 Honorary Representatives and Agents of the Society, stationed on every part of the Coast of the United Kingdom, as well as Inland, Abroad, and in the Colonies—by whom, in direct co-operation with the General Committee of Management, the Society’s immediate organised relief is personally extended, on an average, to between 13,000 and 14,000 individuals annually.\*

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THE SOCIETY’S PROCEEDINGS.

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HE administration by the Society, as the one National Institution existing for the purpose, of the varied charitable aid embraced within the immense scope of its several National Objects, &c., necessarily involves a most comprehensive and very


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\* See the “Annual General Statistical Return” of the Society’s Operations, as given at the commencement of “The Society’s Work,” under this Heading of “THE SHIPWRECKED FISHERMEN AND MARINERS’ SOCIETY.”

voluminous series of Proceedings, of almost world-wide extent and bearing, fully to detail which, from time to time, would be entirely beyond the available limits of any periodical record.

Amongst many other similarly noteworthy and interesting references to the Society's Operations, however, the subjoined Announcement may here be given as having appeared in the columns of the Public Press, as shown, since the issue of the last Quarterly Number of this Magazine :—

ISSUES OF EXTRA-RELIEF TO WIDOWS AND  
ORPHANS; AND OF BAROMETERS, FOR  
FISHERMEN, &c.\*

T the last periodical meeting of the General Committee of Management of THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY, just held at the Central Office, of this Royal National Benevolent Institution, Hibernia Chambers, London Bridge,—there being present Captain the Hon. Francis Maude, R.N. (in the chair), Lord Ashley, Admiral Sir Claude Buckle, K.C.B., Captains Vincent Budd, J. J. Holdsworth, D. Mainland, T. L. Porteous, and Colonel W. Stuart, with the Secretary, Mr. W. R. Buck,—the usual half-yearly extra issues of charitable relief for the most necessitous dependents of deceased mariners, &c., were formally sanctioned to poverty-stricken recipients, numbering, on this occasion, 618 widows, and 967 orphans, respectively.

Approval was also given to the allotment of the Society's special Marine Aneroid Barometers (as placed at the Committee's disposal, through the philanthropic gifts of various private and public donors, 'To help fishermen to save their own lives, and encourage them in saving the lives of others'), in several individual instances, and to forty-seven fishing stations, to meet pressing local needs; while the Silver Medal of the Institution was likewise awarded in fourteen cases of exceptionally heroic exertions, at great personal risk on the part of master mariners or their crews, &c., in rescuing life from shipwrecks on the high seas, during the more recent gales.

The completed statistics of the Society's work and operations for the past year, 1882, as carried out at Home, Abroad, and in the Colonies, through its 1,200 Honorary Agencies, showed that urgent aid and relief had been extended to a total of 18,145 shipwrecked persons, and widows or orphans, with other variously distressed

\* From "The Graphic," "The Daily Chronicle," &c. &c., March 10, 1883.

“sufferers amongst the seafaring classes. In these figures for the year were comprised a more than ordinarily large number of sad claims from Ireland, in relation to which it was noteworthy that the Society’s local Chief Representative and Honorary Agent-General (Mr. Thomas F. Brady, H.M. Inspector of Irish Fisheries) had on their behalf specially reported the whole maritime community as being, without exception, conspicuous for their complete holding aloof from all participation in the unfortunate course of events in that country.

“With respect to the Society’s later operations, during the current year, the demands upon its organisation and resources, from nearly all parts of the coasts of the United Kingdom generally, had, owing to recurrent storms, been unprecedentedly excessive.”

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### THE SOCIETY’S WORK.

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**U**NDER the subjoined “Annual General Statistical Return,” as well as “Quarterly General Summary of Relief, &c.”—comprising particulars of the Society’s Work, in accordance with its several specified National Objects,\* and various other Functions—will be found the interesting, and, in many respects, touching record of the Society’s benevolent Operations on behalf of all the Seafaring Classes of Men, and those Dependent on them, both during the whole of the past year, 1882, with those preceding it, from the Society’s first Institution in 1839, and since the issue of the last Annual or Quarterly Statements:—

#### ANNUAL GENERAL STATISTICAL RETURN.

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ASSISTED, AND RELIEVED, &c.—UNDER “OBJECTS I., II., III.”

<b>S</b>	HIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS, FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—DEPENDENT WIDOWS AND ORPHANS, &c.	} Last Year (1882) 13,145
		} Previous Years 325,046

**T**OTAL NUMBER, FROM THE INSTITUTION OF THE SOCIETY, IN 1839 .... 338,191

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\* See the details given under “The Society’s Objects,” at the commencement of this Heading of “THE SHIPWRECKED FISHERMEN AND MARINERS’ SOCIETY.”

THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY. 155

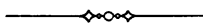
LIFE-SAVING REWARDS, &c.—UNDER "OBJECT IV."

<b>H</b> ONORARY AND PECUNIARY REWARDS FOR SAVING LIFE .....	GOLD MEDALS .....	38
	SILVER MEDALS.....	301
	PECUNIARY AMOUNT, £2,358.	

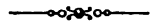
**L**IVES SAVED, FOR WHICH RECOGNITION HAS BEEN GRANTED ..... 7,208

MARINERS, &c., PROVIDENTLY "SELF-HELPING"—UNDER "OBJECT II."

**A**NNUAL NUMBER (1882) CONTRIBUTING THE REGULATED SMALL YEARLY  
**P**AYMENT, TO THE SOCIETY'S FUNDS, AS "MEMBERS" \* ..... 53,500



QUARTERLY GENERAL SUMMARY OF RELIEF, &c.



**T**HE total Number directly succoured or otherwise relieved, &c., by the Society's Central Executive in London, and by its Honorary Representatives and Agents in all parts of the United Kingdom, as well as Abroad, and in the Colonies—under the Society's respective National Objects, viz., I. "Assistance to the Shipwrecked;" II. "Relief to Members;" III. "Relief to Non-Members;" IV. "Rewards for Saving Life, &c."—was as follows, during the past Quarter, ending 31st March, 1883:—

SHIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS,  
 FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—  
 DEPENDENT WIDOWS AND ORPHANS, &c., &c. .... 5,142

**O**F the many Honorary Agencies from which the more numerous claims embraced within these figures were received, the following (appending also the names of the Society's Local Honorary Representatives), with the Amounts allotted to each, may be specially mentioned, viz.:—Aberdeen (Mr. D. Mearns), £115; Tyne and Wear Ports, of Newcastle (Messrs. James Potts and Son), North Shields (Mr. George French and the Rev. C. M. Woosnam), South Shields (Messrs. Crisp and Hails), and Sunderland (Mr. R. M. Hudson), £1,455; Filey (Mr. R. White), £68; Grimsby (Mr. B. Monds), £108; Hartlepool (Mr. S. Armstrong), £168; Hull (Mr. J. W. Day) £369; Lowestoft (Mr. W. Johnson), £97—giving a total of £2,560 (out of the Quarter's Amount of £7,680, granted for these particular "Objects of the Society") as issued, during the past Quarter, at these Agencies and Seaports, &c., alone Throughout the whole period of the three months to which the foregoing figures apply, as the inevitable result of the very tempestuous weather

\* This Number of Contributing "Members," here given, which is being largely added to from year to year, represents those Mariners and Fishermen, &c., of all grades, embraced within the scope of the Society's wide-spread efforts, as quoted in its published Prospectus, &c., for "Specially helping all the Fishing and Seafaring Classes providently to help themselves."



so continuously prevalent for days together,\* the urgent claims upon the Society's resources have proved most exceptionally numerous and heavy, necessitating issues of relief to such an amount, week after week, that the total sum thus, in the aggregate, disbursed on behalf of the numerous sufferers themselves, or the sorrowing dependents of those unhappily lost, has been recorded as without any precedent amongst the Society's labours of benevolence during a similar portion and time of the year.

THE following special awards of the Society's Silver Medals, &c., have been lately made and duly presented for heroic or praiseworthy exertions, at personal risk, to Save Life from Shipwreck at Sea (in accordance with the Society's "Object IV."), viz. :—

WATERFORD.—In case of the s.s. *Comeragh*, of that Port, for rescue of the Captain (P. Christopher) and Crew of three men and a boy, of the Schooner *Milbay*, near the Tuskar Rock, on the Wexford coast, on September 2, 1882 :—

To the Captain of the s.s. *Comeragh*, JOHN COFFEY, the Society's Silver Medal.

To the Chief Officer, NICHOLAS SYNNOTT, the Society's Silver Medal.

To JOHN WALSH (Quartermaster), WILLIAM HUTCHINSON (Quartermaster), PATRICK LANNON, and JOHN HARE, being the four Seamen who, under charge of Chief Officer Synnott, manned the boat effecting the rescue, pecuniary rewards to the amount of £8.†

GRIMSBY.—(1) In case of the Smack *Acceptor*, of that Port, for rescue of the Captain (A. Irvine) and eighteen of the Seamen, being all the Crew of the Barque *Samarang*, of Newcastle, waterlogged, off the Dogger Bank, on October 15, 1881 :—

To the Master of the Smack, JAMES MACE, the Society's Silver Medal, and pecuniary reward of £3; and to the Apprentice, JAMES JAMIESON, the Society's Silver Medal, and pecuniary reward of £2—both of whom manned the Smack's boat effecting the rescue.

Also to JAMES MACE, the Master, was specially awarded one of the Society's "Marine Aneroid Barometers," at disposal for presentation in such instances.‡

\* See details as given under "The Storms of the Past Quarter," at p. 116 of the current Number of this Magazine.

† See *The Waterford Standard*, February 10, 1883, for account of formal public presentation.

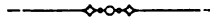
‡ See *The Grimsby News*, December 29, 1882, and *The Grimsby Observer*, January 3, 1883, for account of formal public presentation.

GRIMSBY.—(2) In case of the Smack *Cockatoo*, of that Port, for rescue of six men of the Crew of the Greek Barque *Antiphi*, eastward of the Dogger Bank, on November 5, 1882:—

To the Master of the Smack, JAMES CLEVELAND, the Society's Silver Medal, and pecuniary reward of £3.

To the second hand, CHARLES CLEVELAND, the Society's Silver Medal, and pecuniary reward of £2; and to the third hand, JACOB GUSS, the Society's Silver Medal, and pecuniary reward of £2—the two latter having manned the Smack's boat effecting the rescue.

Also, to JAMES CLEVELAND, the Master, was specially awarded one of the Society's "Marine Aneroid Barometers," at disposal for presentation in such instances.\*



SAMSGATE.—(1) In case of the Smack *Guide*, of that Port, for rescue of the Captain (A. Torgow) and nine of the Seamen, being all the Crew of the Brig *Tenite Juni* (10th of June), about 45 miles off Lowestoft, on April 30, 1882:—

To the Master of the Smack, THOMAS COWELL, the Society's Silver Medal, and pecuniary reward of £4; and to the first hand, RICHARD MOORE, the Society's Silver Medal, and pecuniary reward of £3—both having manned the Smack's boat effecting the rescue.

To the second hand, RICHARD WATTLER, and boy, CHARLES ROBERTS, as the Crew standing by in charge of Smack, pecuniary rewards to the amount of £3.

Also, to THOMAS COWELL, the Master, was specially awarded one of the Society's "Marine Aneroid Barometers," at disposal for presentation in such instances.†



SAMSGATE.—(2) In case of the Smack *Otter*, of that Port, for rescue of G. A. Mortensen, a Norwegian Seaman of the Italian brig *Livietta*, in peril of drowning from a capsized boat at sea, on November 14, 1882:—

To the Master of the Smack, JOHN WOOD, one of the Society's "Marine Aneroid Barometers," at disposal for presentation in such instances.‡

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\* See *The Grimsby News*, December 29, 1882, and *The Grimsby Observer*, January 3, 1883, for account of formal public presentation.

† See *Pullen's Kent Argus*, December 30, 1882, for account of formal public presentation.

‡ See *The Thanet Advertiser*, December 30, 1882, for account of formal public presentation.

SPECIAL CONTRIBUTION LIST.

COLLECTIONS, DONATIONS, LEGACIES, SERMONS, &c., ON BEHALF OF THE SOCIETY, RECORDED SINCE THE ISSUE OF THE LAST QUARTERLY STATEMENT.

	£	s.	d.		£	s.	d.
<b>L</b> ONDON.—Her Most Gracious Majesty the Queen, Patron of the Society (annual) .....	25	0	0	<b>A</b> LDBURGH.—Congregational Collections in Parish Church, after two Sermons, on Sunday, Jan. 28, 1883, by Rev. Henry Thompson, B.A. (per Mr. G. Keesey, Hon. Agent) ..	5	0	0
His Grace the Duke of Marlborough, K.G., President of the Society (annual)....	15	15	0	<b>A</b> RDBOSSAN.—Two-thirds of proceeds of an Amateur Entertainment on February 14, 1883 (per Wm. Guthrie, Esq.) ....	11	12	7
“Deo Gratia” .....	20	0	0	<b>B</b> LAKENEY.—Congregational Collection in Briston Church, East Dereham, after Sermon by Rev. C. Norris, B.A. (per C. J. Temple-Lynes, Esq., Hon. Agent) .....	8	6	8
Mrs. Scringeur .....	25	0	0	<b>C</b> ASTLE DOUGLAS, N.B.—Congregational Collection in Parish Church, after Sermon by Rev. George Walker.....	2	0	0
Trustees of the late Wm. Thorngate, Esq. (annual). ..	70	0	0	<b>C</b> OLDSTREAM, N.B.—Congregational Collection at East United Presbyterian Church, after Sermon by Rev. J. L. Elder, M.A. (per Mr. J. Smith, Hon. Agent) .....	3	1	3
Anonymous, per Messrs. Williams, Deacon & Co. . .	26	5	0				
William Dent, Esq. ....	30	0	0				
Anonymous .....	100	0	0				
H. M. H. ....	25	0	0				
The Leathersellers' Company	21	0	0				
M. S. D. ....	25	0	0				
Mrs. Tarratt .....	20	0	0				
Admiral W. H. G. Whish ..	20	0	0				
The Governors of the London Assurance Corporation ..	21	0	0				
Society for the Discharge and Relief of Persons imprisoned for Small Debts. .	50	0	0				
Readers of <i>The Christian</i> (per Messrs. Morgan & Scott) ..	5	7	6				
Collecting Boxes on board the							
SS. <i>Kaiser und Hind</i> ....	15	1	0				
SS. <i>India</i> .....	0	9	0				
SS. <i>Australia</i> .....	0	2	6				
SS. <i>Deccan</i> .....	1	12	0				
SS. <i>Goa</i> .....	1	9	6				
SS. <i>Gordon Castle</i> .....	0	6	6				
Ditto at Mercantile Marine Offices at Victoria Docks	1	3	11				
Ditto, Poplar.....	0	4	2				

THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY. 159

	£	s.	d.		£	s.	d.
<b>H</b> EPSTOW.—Part of Offer- tory in Caldicot Church, received from Rev. E. Tuberville Williams, M.A. (Vicar) .....	2	0	0	<b>S</b> ORTSOY, N.B.—Proceeds of a Sailors' Concert, per Captain James Smith..	6	1	3
<b>I</b> LMDEE, N.B.—Trustees of the late Mrs. Carr ..	100	0	0	<b>H</b> AVENGLASS.—Offertory in Church on Sunday, March 4, 1883 (per Rev. Henry Bell, the Vicar).....	1	15	11
<b>M</b> ILLSWICK, SHETLAND, N.B. —Congregational Collec- tion in United Presbyterian Church, Ollaberry, after Sermon by Rev. D. H. Russel (per Mr. John An- derson, Hon. Agent) ....	1	1	3	<b>R</b> UGBY. — Congregational Collection in Church Lawford Church, after Sermon by Rev. D. Wau- chope, M.A. ....	3	13	6
<b>M</b> ULL. — Congregational Collection in Middleton Church after Midnight Service, January 1, 1883 (received from Rev. H. D. Blanchard, M.A.).....	1	5	7	<b>S</b> ALISBURY. — Congrega- tional Collection in Netheraven Church, after Sermon by Rev. John Still, M.A. (Vicar).....	0	18	6
<b>M</b> ELFRACOMBE.—Proceeds of Concert on Monday, January 29, 1883, by "The Snowflake Minstrels"— received from J. H. Hux- table, Esq., Hon. Sec. (per Captain G. B. F. Swain, R.N., Hon. Agent) .....	10	0	0	<b>S</b> OUTHPORT. — Congrega- tional Collection in Hes- keth with Beconsall Church after Sermon by Rev. R. O'Brien, M.A. ....	1	9	4
<b>M</b> ERWICK (SHETLAND, N.B.) —Congregational Collec- tion in Wesleyan Church on Sunday, January 7, 1883, after Sermon by Rev. J. H. Hooper .....	1	10	0	<b>S</b> TAITHES.—Collecting Box on board the S.S. <i>Marina</i> , Captain J. F. Sanderson, (per Mr. Thomas Rodham, Hon. Agent.) .....	6	6	0
<b>M</b> ARYPORT.—Proceeds of the Royal Naval Re- serve Ball (per J. R. Buck- ley, Esq., Hon. Agent) ..	1	4	3	<b>S</b> TRANRAER, N.B.—Con- gregational Collection in the Parish Church, on Sunday, February 4, 1883, by the kind permis- sion of Rev. H. P. Charl- ton, the Vicar, after Ser- mon by Rev. G. Hunter, M.A. (per J. Waters, Esq., Hon. Agent).....	11	16	5
<b>P</b> ETERHEAD, N.B.—Pro- ceeds of Exhibition of a Model of "Our Harbours and Bays," made by Cap- tain R. Lumsden (per Alex- ander Robertson, Esq., Hon. Agent) .....	2	9	4	<b>W</b> HITEHAVEN.—Offertory in Moresby Church on Sunday, February 11, 1883, after Sermon by Rev. A. Warris (per Mr. E. M. Boyd, Hon. Agent)	4	5	0
Part proceeds of Entertain- ment promoted by Mrs. Morgan Morgan, the Par- sonage; Alexr. Robert- son, Esq. (Hon. Agent), in the chair.....	5	0	0	—o— <b>L</b> EGACY RECEIVED:— Edward Lambert, Esq., M.D. ....	33	18	1





# THE BEAR, AND THE MONTHS.

1883.

[Jewish Calendar—5643-44. Mohammedan Calendar—1300-01.]

**G**OLDEN NUMBER—3: SOLAR CYCLE—16: DOMINICAL LETTER—G: JULIAN PERIOD—6,596: EASTER SUNDAY—MARCH 25: WHIT SUNDAY—MAY 13: ADVENT SUNDAY—DECEMBER 2.

## THE SEASONS.

“*SPRING—Showery, flowery, bowery:*  
*SUMMER—Hoppy, croppy, poppy.*  
*AUTUMN—Wheazy, sneezy, freezy:*  
*WINTER—Slippy, drippy, nippy.”*

LINES ON FRENCH CALENDAR, 1793.

SPRING, March 20, Sun enters Aries, 11 P.M. | AUTUMN, Sept. 23, Sun enters Libra, 10 A.M.  
SUMMER, June 21, Sun enters Cancer, 7 P.M. | WINTER, Dec. 22, Sun enters Capricornus, 4 A.M.  
The EQUINOXES—at Spring and Autumn; and the SOLSTICES—at Summer and Winter.  
ECLIPSE OF THE MOON (PARTIAL)—April 22, invisible at Greenwich.  
ECLIPSE OF THE SUN (TOTAL)—May 6, invisible at Greenwich:  
ECLIPSE OF THE MOON (PARTIAL)—October 16, visible, partly, at Greenwich.  
ECLIPSE OF THE SUN (ANNULAR)—October 30-31, invisible at Greenwich.

## APRIL.

“*An April flood*  
*Carries away the frog and his brood.”*

PROVERB.

### SUN.

1st DAY ..... Rises 5h. 38m. Sets 6h. 30m. | 15th DAY ..... Rises 5h. 7m. Sets 6h. 53m.  
8th DAY ..... Rises 5h. 22m. Sets 6h. 42m. | 22nd DAY ..... Rises 4h. 52m. Sets 7h. 4m.

### MOON.

7th DAY ..... New Moon 1h. 36m. P.M. | 22nd DAY ..... Full Moon 11h. 27m. A.M.  
14th DAY ..... First Quarter 8h. 50m. A.M. | 30th DAY ..... Last Quarter 7h. 3m. A.M.  
IN PERIGEE, 7th DAY ... 10 A.M. IN APOGEE, 20th DAY ... 6 P.M.

## MAY.

“*Change not a clout*  
*Till May be out.”*

PROVERB.

### SUN.

1st DAY ..... Rises 4h. 34m. Sets 7h. 20m. | 15th DAY ..... Rises 4h. 10m. Sets 7h. 42m.  
8th DAY ..... Rises 4h. 22m. Sets 7h. 31m. | 22nd DAY ..... Rises 4h. 1m. Sets 7h. 52m.

### MOON.

6th DAY ..... New Moon 9h. 58m. P.M. | 22nd DAY ..... Full Moon 3h. 12m. A.M.  
13th DAY ..... First Quarter 10h. 54m. P.M. | 29th DAY ..... Last Quarter 2h. 23m. P.M.  
IN PERIGEE, 5th DAY ... 8 P.M. IN APOGEE, 16th DAY ... 5 A.M.

## JUNE.

“*Upon a crab June rode, that did him bear,*  
*With crooked crawling steps, an uncouth pace,*  
*And backward rode, as bargemen wont to fure,*  
*Bending their force contrary to their face.”*

SPENSER.

### SUN.

1st DAY ..... Rises 3h. 51m. Sets 8h. 4m. | 15th DAY ..... Rises 3h. 44m. Sets 8h. 16m.  
8th DAY ..... Rises 3h. 46m. Sets 8h. 11m. | 22nd DAY ..... Rises 3h. 45m. Sets 8h. 18m.

### MOON.

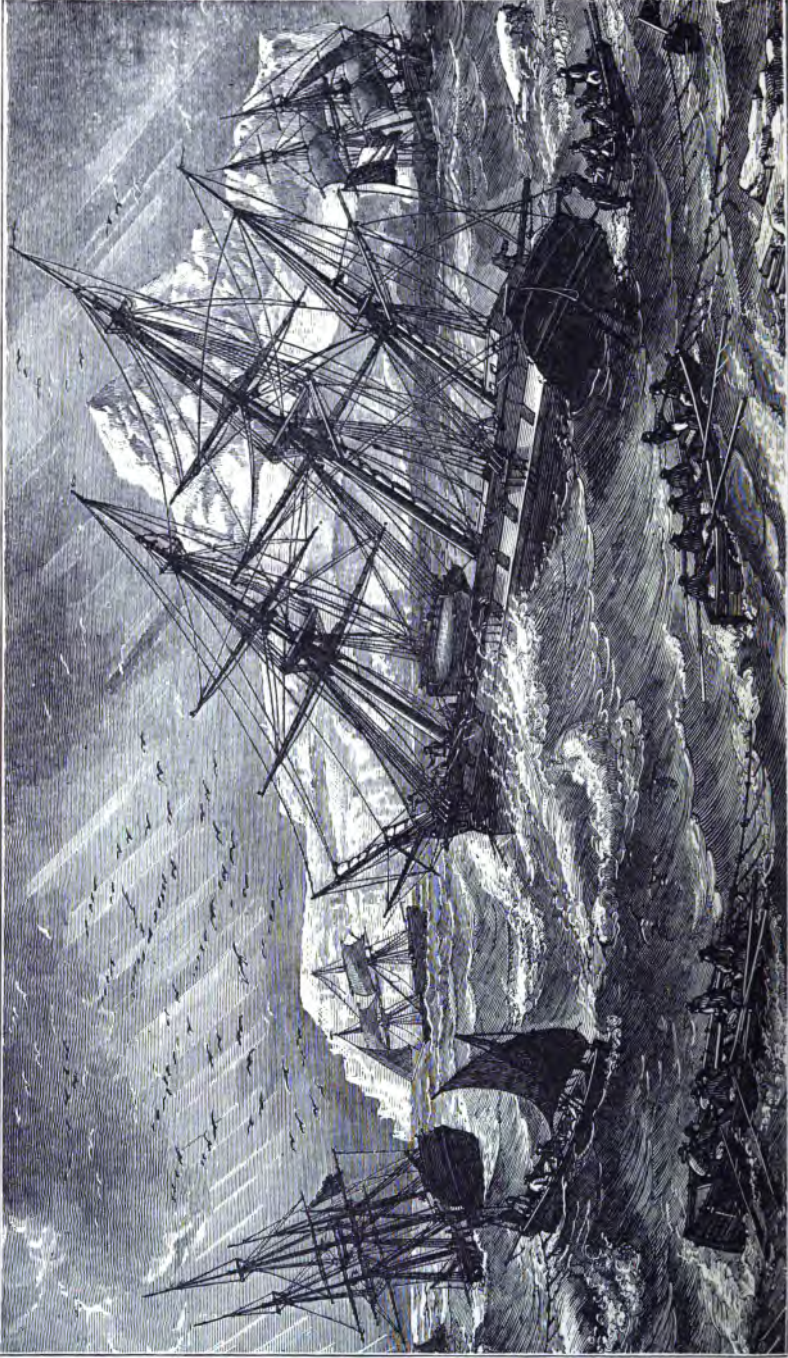
5th DAY ..... New Moon 6h. 13m. A.M. | 20th DAY ..... Full Moon 4h. 32m. P.M.  
12th DAY ..... First Quarter 3h. 42m. P.M. | 27th DAY ..... Last Quarter 7h. 38m. P.M.  
IN PERIGEE, 3rd DAY, 0 A.M. IN APOGEE, 14th DAY, 9 P.M. IN PERIGEE, 30th DAY, 9 A.M.

ILLUSTRATED] “The Shipwrecked Mariner.” [MAGAZINE.

APRIL, 1883.



FRONTISPIECE.—“*The Shipwrecked Mariner.*”—JULY, 1863.



COD-FISHING ON THE GREAT BANK OF NEWFOUNDLAND.



No. CXIX.

VOL. XXX.

# THE SHIPWRECKED MARINER

"There is Sorrow on the Sea."

Quarterly Maritime Magazine.

JULY, 1889.

Published under the Auspices of "The Shipwrecked Mariners' Society."

## THE GREAT INTERNATIONAL FISHERIES EXHIBITION.



"You see the ways the fisherman doth take  
To catch the fish; what engines doth he make!  
Behold! how he engageth all his wits;  
Also his snares, lines, angles, hooks, and nets!"

JOHN BUNYAN.



IN our issue of July, 1881, we introduced our readers to the first English National Fisheries Exhibition, being that inaugurated at Norwich in the preceding April, and notices also appeared in the July and October numbers of 1882, of the International Fisheries Exhibition, then recently held at Edinburgh, in the Waverley Market; and the world may now see how the founders and supporters of these undertakings, and of the former one more especially, encouraged by the great sympathy they attracted from all classes of the population, have built a larger scheme thereon, which is now enjoying the full tide of success at South Kensington. The twelve intervening months since the holding of the Exhibition at Edinburgh represent to those who have been personally



engaged in the promotion of the existing greater Exhibition a period of incessant and intensely interesting work, and a succession of surprising revelations of the magnitude of the subject, and the extraordinary sympathy the mere mention of it arouses in every class of population all over the world.

It seems almost impossible that there can be any other trade or industry which would create so strong a link of sympathy among widely distant nationalities, and widely separated ranks in society; but the domain of the sea has its own peculiar laws, and privileges, and standards, and the details of the hard battle of the fisherman's and the mariner's life are of a character to draw sailors together in fellowship with each other, and a certain scorn of all the world besides, so that wherever the invitations of the Exhibition Committee arrived, they stirred up the people first, and the Governments and authorities tardily afterwards. From Japan and China, and from Malayia, India, the coasts of South America, and all other unfamiliar ends of the world, the local expressions of interest were as strong, and the idea of the Exhibition as popular, as they were in the outlying coasts and islands of Europe, from the Adriatic to the Scilly Isles.

It was to be expected that the hardy, almost amphibious, Scandinavian sailors, the cod-eating inhabitants of Newfoundland, Canada, and the Northern States of America should be the first and most important of intending exhibitors; and, in effect, the nucleus of the great Exhibition was formed by the early applications for space of the representatives of these countries, and the Committee had, for a considerable time, no other than the above foreign exhibitors to depend upon. Then other distant colonies and foreign nations gave in their adherence, eminently the Chinese Empire and the Colony of New South Wales, to the encouragement of the Committee, and in response to the most earnest and assiduous recommendations of the Departments of Her Majesty's Government in charge of the foreign and colonial affairs of the Empire. Of course, the Committee had at this time no certain knowledge of the objects that would be sent, but they received such lists of eminent men in all the countries in charge of the local preparations, as showed that wherever the popular will in the matter had found expression in acts, the success of the section appropriated was secured.

But all this time there were painful difficulties and hindrances with

the European countries, not one of which for a long time would risk even the responsibility of a mere official recognition of the Exhibition, Holland, and afterwards Belgium, being (after the Scandinavian countries) the honourable exceptions. It was not for want of popular interest in the objects of the Committee, for, wherever the translated documents setting them forth in the local languages were distributed,



CHINESE FISHING.

individuals responded with zealous offers of help and contributions; but it was necessary in all these cases to recommend the foreigners to wait for official representation, and, in consequence of the refusal of this, the European foreign sections of the Exhibition must be described as meagre, unsatisfactory, and unworthy of the occasion. This circumstance is deeply to be regretted, as it is unlikely that so

important a visiting public will ever again be induced to take part in a Fisheries Exhibition; and the loss to specific knowledge by the absence of all the instructive things that France, Germany, Austria, and Italy could have shown us, is impossible to over-estimate.

That the Governments of Russia and Spain, awaking at the eleventh hour to the significance of the occasion, filled their convenient separate sheds with the pretty and instructive collections there displayed, is a subject of congratulation to the Committee and the countries concerned.

The prospectus of the Exhibition, spreading its net widely, has gathered together representative collections of every form of human industry and research affecting the interests of the toilers of the deep, or illustrating the natural history of the animal and vegetable produce of the waters. From the stickleback in the fresh-water pond to the great cetaceans of the ocean, and from the Thames angler to the Esquimaux and the Fiji islander, the whole world of fish and fishermen has been laid under contribution; while in the department of scientific research, the labours of the Committee have been effectively helped and directed by the personal concurrence of the great rulers of the republic of learning, culminating in the great International Congress which opened its deliberations the other day, under the presidency of the Prince of Wales, with an exhaustive treatise by the Duke of Edinburgh on the subject of the welfare of fishermen. Such an opening essay harmonised entirely with the disinterested and high object of the Committee, by whom the philanthropic question—the life-saving and life-improving feature of the plan—has throughout been made also the most prominent.

We shall find, as we proceed on our analysis of the contents of the buildings, and the literature created by the Exhibition, the fullest and most valuable body of information ever before collected for this object, so congenial to the Society with which this Magazine is connected.

Familiarised as our readers are already with narratives of disaster and danger upon the sea, there are objects to be seen in the collection which will give new and more vivid reality to such descriptions. The studied elaboration of the details of the construction of the lifeboat, for example, opens the mind to an appreciation of the multifarious forms of danger to be provided against.

But the life-saving contrivances courted by the prospectus refer to

dangers more familiar to fishermen and their wives than to the outside public. Such are those intended for collecting the cargoes of the boats into the carrier sent to bring the fishing harvest home, a process in which an extremity of danger has grown familiar to fishermen from incessant repetition; but which some of the inventions exhibited appear to



AT WORK, IN SCANDINAVIA.

render perfectly safe and easy in the roughest storms, or the jackets and life-belts of cork contrived to overcome the curious sense of shame which leads a seamen to prefer the certainty of sinking like a stone if he happen to fall overboard to wearing them. In connection with the trial of these apparatuses a large tank has been constructed in the

gardens, in which, also, a diver descends for the amusement of the public every day.

In connection with the provision of means of safety for other than fishermen at sea, are a number of life-rafts fitted to the upper decks of passenger ships, the inventor of which, with a very saddening irony, uses as the type of his model the unfortunate *Princess Alice*, fitted with appliances which could have saved a thousand lives. Here also, contributed by the Elder Brethren of Trinity House, are to be seen models of the lighthouses round our coasts, and the Board of Trade have sent a working specimen of their rockets and bucket apparatus for bringing shipwrecked passengers ashore from the mast to the beach. Two seamen in charge of the apparatus work it from morning to night, and a ride to and fro in the bucket, "to be saved," is as popular with the young as the elephant in the Zoological Gardens. But to those who have ever realised the significance—the solemn, too often tragic, function of this *toy*—the object is about as congenial to a feeling of amusement as a model of a coffin or a hearse. In the April number of this Magazine of 1882, for example, our readers will find a short story, the reading of which will prepare the mind for admitting this homely construction of tarpaulin and rope to a share of the interest attaching to the old *Grace Darling* boat, appropriately exhibited, with the oar that the heroine rowed, by THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY,\* or the still more eloquent and weather-beaten relic of the *Eira* expedition to the Arctic seas, in the adjacent gallery. In this last the sextant and compass, and the rusted breechloading rifles, the beaker of water, the half tent stretched over the windward side of the boat, must bring vividly to the minds of those who have read the story of the expedition, the reality of the hardships and dangers endured and the steadily-balanced application of the resources of seamanship and science with which they were encountered. The temptation is great to linger upon detail after detail of the objects shown, if only from the point of view of their silent suggestiveness of the incidents of the sailor's battle with the sea, of the fisherman's toilsome and perilous harvest-home, and of the elaborated resources of science, directed to lighten their danger and strengthen their hands;—by the

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\* See special mention of the Society's Exhibits, in connection with its "Proceedings," under the Society's Heading, at the end of the current Number of this Magazine.

beautifully-curved lines of the models, along which the angry rush of the wave subsides to a caress; the finely-balanced spars and rigging, on which the canvas conciliates the gale, and catches the impulse of the lightest summer wind; the power of the steam capstan, by which the enormous trawling net—immovable by human agency—is recovered with its ponderous harvest from the deep; the cunning knots and meshes of the net, combining the maximum of strength with the minimum of material used, dispersing the strain, giving escape to the



INDIANS SHOOTING AT FISH.

miniature fish unworthy of the chase, doing in the best and most effectual manner exactly what they are contrived to do, with no power wasted and no avoidable accident unprovided against.

And the interest of this study grows and increases a thousandfold from the broad—more than international—*human* interest it involves. Not alone from all civilised coasts are the appliances of the fishermen's ennobling industry contrasted with those of the wild islanders of the Southern seas and the Esquimaux of the Arctic, but the collection goes back to antiquity, that fishermen may see how their forefathers

followed their own beloved craft, fought with their own familiar hindrances and dangers, and substituted a greater hardihood and endurance than even theirs for the appliances of science open to them in this generation.

In the collection from the Shetland Islands we have an interesting series of models, placed side by side with one of the ancient craft of the Vikings, showing the descent of the fishing boats of the present day belonging to the islands of the western "*haaf*" from the "*langskibet*" of the Viking times. "And" (says the descriptive notice in the catalogue) "it will be noticed that all four models have, in common with that of the Gokstad Viking ship, one of the following characteristics:—Fine entrance forward, a flat, or comparatively flat, midship section, a fine run aft, rake, more or less, of stem and stern-post, and sheer, more or less, of gunwale"—qualities sought by scientific builders of the 19th century, so to speak, "give and take" qualities, not attempting to resist the irresistible, but to deal smoothly with the threatening agencies which appear to the landsman at sea as unmitigated foes bent upon an errand of destruction, but to the seaman, familiar with their presence, capable, like all the agencies of Providence, of conversion by patience and conciliation into friendly allies. For the beautiful lesson of a seaman's inventions is this, to make the storm-wind and the angry wave propel him on his way, and submitting cheerfully to the tossing and pitching and threatening of the elements, and, yielding to all that he cannot control or resist, to bring ship and cargo to port by the power of the disciplined human will.

The grave and earnest men who have passed their lives in this discipline are a section of humanity by themselves. They come up to the Exhibition in troops, from north and south of our islands, and from foreign ports; and they are all alike in their breezy heartiness and simplicity of latent power; and the fishermen's women are curiously alike also, wherever they hail from. Nothing was more interesting at the opening ceremony of this Exhibition than the gathering of fishwives from various parts of Europe. They came from Holland, Belgium, and France, from remote seaports on the coasts of Scotland, and from different English and Welsh fishing stations. The variations of their costume were interesting, but even in this they showed the prevailing conservatism of their type, for all these

costumes, British, French, Dutch or Belgian, are old-world relics in their own homes, but religiously adhered to by their class. When all these women and girls of different nationalities came to look at each other and to exchange ideas, as well as they could for the language, what would not a listener have gleaned of interest and amusement from their talk! No less than 400 working fishermen



SCOTTISH FISHWIVES

met together in the Shipwrecked Mariners' Home,\* and it would be a sufficient mission for the International Fisheries Exhibition if one

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\* See reference to visit of these 400 Representative Fishermen (drawn from almost every fishing station in England and Wales, Scotland and Ireland, &c.), in connection with the "Proceedings" of the Society, under the Society's Heading, at the end of the current Number of this Magazine.



result has been co-operation and friendship amongst a tithe of these men, so widely separated in space, so closely united in interests.

It is one of the principal avowed objects of the founders of the Exhibition to forward and protect these interests by ridding the markets of the system of jobbery and monopoly by which a large proportion of the value of the fish is purloined by dealers and go-betweens, or middlemen, with the result that the "toilers of the sea" are impoverished, thousands of tons of the best kind of human food sacrificed to manure the fields, and the consumers of fish made to pay tenfold the value of their purchases, and thus the consumption hindered of a kind of food so peculiarly beneficial to man, that it is reasonably believed to nourish not his body alone, but his *mind*.

Those who are interested—and who is not?—in the promotion and the well-being of the fishery population, should watch the success, or failure (for there are powerful interests opposed to its success) of the fish market opened to the public in the Exhibition.

In connection with this part of our widely-ramified subject is the work of the School of Cookery, the royal and noble promoters of which have co-operated heart and soul with the promoters of the Exhibition in the attempt to educate the British public in the matter of the cooking of fish. Unfortunately for this object, John Bull is conservative in his diet, and whereas in the beginning all kinds of delicate preparations were offered him in the "cheap fish dinners," public opinion has refused to rise to the occasion, beyond the patronage of the fried or boiled specimens of the well-known kinds of fish common in all the cheap fried fish shops of the metropolis. It is remarkable that dishes which a connoisseur, regardless of expense, would esteem a delicacy, are refused by the average Londoner as "messes" which he is not familiar with, and therefore suspicious of. Time alone and patience can prevail over such a prejudice, as a sailor coaxes his vessel along against a foul light wind; but it is not yet to be despaired of that the so-called coarser kinds of cheaper fish may, in the course of the Exhibition, be established in popular favour.

J. W. M.





## INFLUENCE OF THE SEA.



“We never tire of the sea; like the atmosphere, it is a laboratory in which wonders by processes the most exquisite are continually going on. Its flora and its fauna, its waves and its tides, its currents and its salts, all in themselves afford profitable subjects of study and charming themes for thought . . . Its powers are vast, multitudinous, and varied.”—MAURY.



### III.—ACTION OF THE SEA ON THE COAST-CONTOUR.



WHAT mean this rise and fall in the bosom  
Of the vasty deep? These huge pulsations,  
Do they respond to the mighty throbbings  
Of the world's great heart, rhythmical, yet slow,  
As those of a breathing monster, whose life  
Fluid issues in a copious stream

From his aortic valve and runs through all  
Th' arterial channels of his bulky frame?

Come, rouse, old Neptune, from thy ocean lair!  
How many wonders of the deep thou know'st;  
If thou would'st only tell, thou could'st reveal  
To mortals' ears some mysteries profound.

\* \* \* \* \*

I pause: perchance the Sea-King will reply.  
List! what low sound is that I hear? he mocks?  
Nay, 'tis a hollow gurgling from the rocks.

Say, dost thou withhold those hidden things  
For sake of human weal? Would th' unveiling  
Bring us grief and woe? Then keep thy secrets,  
Till *all* shall be revealed,—lest our soul  
Tremble as a frail bark that billows whelm.  
The simple *fisher*, watching by the coast  
Knows well the times of ebb and flow, the set  
Of tides by shoal or sunken rock, and when  
The clouds betoken stormy winds, or aught  
We can or might desire to know; so let  
Us be content to learn so much,—no more,—  
And make a brief survey along the shore.

The atmosphere models the mountains by breaking down their roughnesses, crumbling their rocks, slowly, yet continuously, thus forming gentle slopes to be clothed with the beauties of vegetation.

The ocean carves out the coast lines of islands and continents, breaking them up into inlets, bays, gulfs, or inland seas which afford ready intercourse between nations.

Those elements, so soft and pliable to our touch, are the great master sculptors of the world, and they give the finishing touches to the fine arts of nature. But their action is as potent as it is eternal.

The strong yields to the seemingly weak, for the hardest solid materials of the globe, sooner or later, succumb to their influence.

The igneous rocks—that is, those formed by the action of subterranean heat—withstand the conflict the longest; while the aqueous, which were formed by sediments in the water, and became consolidated, yield first to the action of wind and waves. Hence the irregularities in the coast lines.

The sea denudes the cliffs, cutting them back and back, first bringing down the softer material, which it spreads out on its bottom or carries to some not far distant shore, and uses the harder broken rock to assist in its continuous assaults on the coast.

What are the pebbles on the shore but fragments of rock, washed out of the chalk or clay (the remnants of older denudation), or the *débris* of recent rock, rolled incessantly and rubbed and smoothed by the action of the waters? And the *sand* itself, is not that a mass of tiny pebbles, the ruins of disintegrated quartz rock which has been ground down through countless ages? What a mighty machine is the water, and how unceasingly active!—a machine, however, not a force; and thus we are reminded that—

“Though the mills of God grind slowly,  
Yet they grind exceeding small;  
Though with patience He stands waiting,  
With exactness grinds He all.”\*

The action of the sea seldom produces violent changes on a large scale; it encroaches on the coast here and there, slowly, perhaps through centuries, and, at the same time, restores to other tracts this material by accretion. Were it not so, the plains and the mountains might eventually come under the dominion of the sea. Territory, so

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\* Longfellow, a translation.

called, may diminish: the British Isles have; the gap between them and the Continent having widened, and the sea-wash and the tides seem to have removed the material irrecoverably. As animal life and death, growth and decay, follow each other interminably, so also do the building up and breaking down processes in ruder forms of nature.

“The greater portion of the rocky masses of our island have been arranged and re-arranged under slow processes of the denudation of



AN OCEAN-CARVED COAST-LINE.

old, and the reconstruction of newer strata, extending over periods that seem to our finite minds almost to stretch into infinity.”\*

The coasts of the British Isles are diversified by many indentations which have been scooped out by the sea-wash. The headlands of

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\* It requires a long process of geological education to enable anyone thoroughly to realise the conception of the vast amount of old denudations; but when we consider that, *over and over again*, strata thousands of square miles in extent, and thousands of feet in thickness, have been formed by the waste of older rocks, equal in extent to the strata formed by their waste, we begin to get an idea of the greatness of this power. (Ramsay.)

granitic or other hard rock stands as monuments of their power of endurance.

Denudation seems to have done its work freely, aforesaid, on the coasts of Scotland, where the waste now is slow compared with that of other parts of our coasts. In the Shetland Isles, however, upon which the Atlantic bears with unchecked power, enormous blocks of stone are every winter shifted by the waves, and sometimes transported a considerable distance; and in the Orkneys during stormy winters large blocks are overturned.\*

Earthquakes have sometimes caused great irruptions of the sea, and violent storms have suddenly destroyed large portions of coast. The Goodwin Sands are the remains of a portion of land cultivated in old Saxon times, but now separated from the mainland by the Downs, some miles wide. This is an instance of rapid inundation.†

The Saxon Chronicle of 1014 says: "And in this year, on St. Michaelmas-mass eve (September 28), came the great sea-flood widely through the country, and ran so far up as it never before had done, and drowned many vills, and of mankind a countless number."

Tradition tells of land anciently connecting the coast of Cornwall with the Scilly Isles, and that this was the territory of the renowned King Arthur. Some colour of evidence supports this story, for the Land's End and Scilly are both composed of granitic rock, while in the intermediate space lies the Wolf, a limestone rock, seemingly a remnant of Arthur's land, which, being of softer material, has succumbed to the fury of the boisterous Atlantic waves.

But let us trace the coast from the north-east of Scotland, and, looking at the great inlet between Caithness and Aberdeenshire, we conclude it was formed by early waste of the sea. There are, however, evidences of comparatively recent changes. Fort George, erected in 1746 (on old red sandstone), had its now projecting bastions some distance from the sea. Findhorn (Moray) has been more than once

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\* In 1802, at Stenness, a block 8 feet long, and in bulk 280 cubic feet, was removed a distance of 80 feet or 90 feet, and in 1818 a much larger mass was removed a distance of 30 feet, and shivered to fragments.

† When the Goodwin Sands were formed, there is said to have been great havoc done in Scotland and Flanders, and Sylvester Gyrard reports that "Hen. I. sent dyvers Flemings, which were dryven out of their countrie by the furye of the sea, into the partes about Carleol (Caer-luell), which were afterwards removed into Wales." (? Pemb.)

destroyed. In 1701 a great inundation demolished it; the old town is at the bottom of the sea, a mile or more from the present site, to east of the Findhorn.

Burghhead, the site of an old Danish fort, had formerly a considerable tract of land to north of it, but this is now laid waste. Barrie (Forfar) has a lighthouse which has been removed northwards, from time to time, and the place on which it stood in the seventeenth century is now covered with fathoms of water.



THE CASTLE OF ST. ANDREW'S.

St. Andrew's (Fife) is built on carboniferous rock. The castle in Cardinal Beaton's time (1545) had a considerable portion of land lying seaward. Now only a part of the castle stands on the edge of a cliff as a beacon to sailors.

The north-east coast of Yorkshire, composed of liassic and oolitic strata, has suffered from encroachments. The cliffs are among the finest in England.

By Runswick Bay, six and a half miles north-west of Whitby, there were formerly some important ironworks, with offices, cottages, and a

pier and harbour, but by a landslip they were utterly destroyed in one night, and borne into the sea. (Dr. Ramsay has pointed out that the works, &c., should never have been built there, as the strata of rock had a dip towards the sea. Sufficient knowledge would have prevented this catastrophe.)

Whitby Abbey, built by St. Hilda in 658, is said to have been a mile from the sea; but in 1816 the verge of the east cliff was only 200 yards from the Abbey transept. Hob-Hole, near Whitby, is a remarkable cavern formed by the sea. A double pillar used to support the dome, but this has been washed away.

Along the coast from Flamborough Head the shore consists of boulder, clay, and drift (gravel, sand, and chalk rubble). Great devastation has gone on here, and in the waters of Bridlington Bay lie the remains of former sea-side villages—Auburn, Hartburn, and Hyde, whose names only are known.

For thirty-six miles of the coast of Holderness waste has gone on, and still continues, and towns have migrated westwards. The sea denuded the shore, and eventually engulfed the inland waters on which the towns were built.

Skipsea, Hornsea, Withernsea, and Kilnsea do not derive the termination of their names from their proximity to the German Ocean, but from the fresh-water lakes on which they stood.\* The only lake that survives is Hornsea Mere, which now covers about 480 acres; but the town was once several miles from the sea—now only half a mile, and Hornsea Beck has gone entirely.

The waste on this coast is two or three yards a year. Further south, towards Spurn Head, the depredations have been still greater, and the sea is muddy with its spoil.

Ravenspur,† a considerable port in the 14th century, has long since been swept away, Pennant says: "Ravenspur at one time was a

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\* The termination *sea*, in these names, is derived from the Scandinavian *sið* (a lake or pool), sometimes spelt *sjð*, but *j* in Danish has no sound like *j* in Eng.; *i* and *j* often interchange, and before a vowel = *y* sound in Eng.; *ø* is equal to *œu* in French; but *ø* or *œ* is Dan. for island; as *éa* is Sax. for the same. We see how the signs modify in these words: *Dan.* Løber; *Sw.* Löpa; *Sax.* Hleapan; *Eng.* Leap.

† May not this have been originally a Danish town in a Danish colony? The *Raven* was the Danish standard; *Spur* seems to have some connection with Spurn Head.

rival to Hull, and a port so very considerable in 1382, that Edward Baliol and the confederate English Barons sailed hence to invade Scotland; and Henry IV. (Bolingbroke) landed here in 1399 to effect the deposal of Richard II."

At this day, even at low water, sands only are to be seen where the port once flourished.

Coming to the north-east coast of Norfolk, we find evidences of



VIEW OF WHITBY.

depreddation. The Wash, however, is being filled up; the sea-currents from the Yorkshire coast bear with them their spoil, which is deposited by the coast of Lincolnshire and Norfolk, where large tracts are being won from the sea.

Sir C. Lyell ascertained some important facts as to the rate of sea-gain at Sherringham, near Norfolk. There, between 1824 and 1829, as much as seventeen yards were swept away; and at one point, where a cliff fifty feet high had stood about fifty years before, there was



a depth of twenty feet of water, and the coastguard flag-staff had been moved inland thrice in fifteen years.

Cromer has been subject to the same assaults. The bay is beautiful, but very dangerous, and is called by fishermen "The Devil's Throat." Further south, on the same coast, Eccles-by-the-Sea and Shipden have disappeared.

Outside Yarmouth Roads are the Scroby Sands, on which, since this century began, the grass grew, and people from Yarmouth are said to have held their pic-nics there. Now those sands are completely washed by the sea; but while the sands have decreased the beach has widened, so that the old jetty, which has been considerably lengthened during fifty years, is almost dry at low water.

Dunwich, in Suffolk, is said, according to Bede, to have been the capital of East Anglia in the 7th century. Here was an episcopal see, and in the time of the Plantagenets it was a port of some note.

Stow speaks of "the foundations of down-fallen edifices and tottering fragments of noble structures, remains of the dead exposed, and naked walls divested of the ground about them by the waves of the sea." Churches, monasteries, and other buildings are all gone.

The Naze, in Essex, formerly extended much farther to the east than now. The cliffs, composed of London clay, capped with crag-yielding fossils, have been much denuded.

In Kent, the chalky cliffs waste at the rate of two or three feet per year. At Reculver, west of Isle of Thanet, the church in the time of Henry VIII. was nearly a mile inland.

The cliffs of Dover have before come under notice;\* but to speak of recent times, we may say briefly that immense fragments have fallen off from the undermining of the sea wash, and other, such as atmospheric, causes. The fall of these fragments has sometimes shaken the town like the action of an earthquake. In 1879 a fall took away a quarter of an acre of surface. And, unless we allow considerable poetic licence to Shakespeare, we must conclude that the cliff named after him from his description in "King Lear" has been greatly reduced in height since the following lines were written:—

"The crows and choughs that wing the midway air  
Show scarce so gross as beetles. Half-way down  
Hangs one that gathers samphire; dreadful trade!

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\* See p. 6 of a previous Number (January) of this Magazine for the current year.

Methinks he seems no bigger than his head :  
 The fishermen that walk upon the beach  
 Appear like mice ; and yon tall anchoring bark,  
 Diminished to her boat—her boat, a buoy  
 Almost too small for sight. The murmuring surge,  
 That on th' unnumber'd idle pebbles chafes,  
 Cannot be heard so high : I'll look no more,  
 Lest my brain turn, and the deficient sight  
 Topple down headlong." \*



ACTION OF THE SEA ON ROCK AND CLIFF.

At Folkestone, about 1716, a solid mass of chalk, resting on clay, moved towards the sea gradually, just as a ship is launched on greasy planks.

\* Humboldt, in his *Cosmos*, specially mentions this passage as an illustration of Shakespeare's powers of delineation, and adds : "The description of the view, on looking into the depths below, actually excites a feeling of giddiness."

Beachy Head suffered loss in 1818, as a part of the promontory, 300 feet in length, gave way. By Selsea Bill, too, much waste has gone on in very recent times; and it is notable that the old Saxon church whose modern representative is Chichester Cathedral, lies buried in the waters of the English Channel.

Along the South of England are many relics of the effects of denudation. Such are the Needles, Portland Bill, and other headlands; also many rocky islets on the Welsh coast, as the Mumbles by Swansea Bay. The last are of limestone formation.

St. Bride's Bay affords a fine illustration of the action of air and water on the disintegration of rocks. The soft coal-measures once occupied the place of the present bay, while the north and south projections are formed of igneous rock. The softer strata have been slowly, perhaps, but gradually worn away, leaving the present picturesque bay; while St. David's Head and Ramsey Isle on the north, and Skomer Isle and the southern heads, composed mainly of granitic rocks, still withstand the ravages of the wind and waves.

Without entering into any speculations as to the formation of Cardigan Bay, we may indicate that the Silurian rocks, once formed in water, are subject to waste by the action of air and water; that the south-west projection of Carnarvonshire contains some considerable portions of granitic formation; yet all along those coasts there are, as elsewhere, evidences of waste and destruction as the result of endless elemental warfare.

SEA-URCHIN.



## THE SHIP.



ORN on the waters! and purple and bright,  
 Bursts on the billows the flashing of light!  
 O'er the glad waves, like a child of the sun,  
 See the tall vessel goes gallantly on;

Full to the breeze she unbosoms her sail,  
 And her pennon streams onward, like hope, in the gale;  
 The winds come around her, and murmur and song,  
 And the surges rejoice as they bear her along!  
 See! she looks up to the golden-edged clouds,  
 And the sailor sings gaily aloft in her shrouds:  
 Onward she glides, amid ripple and spray,  
 Over the waters, away and away!

HERVEY.



## OVERBOARD, AT SEA.

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**S**AILORS are men of rough habits, but their feelings are not by any means so coarse: if they possess little prudence or worldly consideration, they are likewise very free from selfishness; generally speaking, too, they are much attached to one another, and will make great sacrifices to their messmates, or shipmates, when opportunities occur.

I remember once, when cruising, that a man fell overboard, and was drowned. After the usual confusion, and long search in vain, the boats were hoisted up, and the hands called to make sail. I was officer of the fore-castle, and on looking about to see if all the men were at their station, missed one of the fore-top men. Just at that moment I observed someone curled up, and apparently hiding himself under the bow of the barge, between the boat and the booms. "Halloo!" I said, "who are you? What are you doing there, you skulker? Why are you not at your station?"

"I am not skulking," said the poor fellow, the furrows in whose bronzed and weather-beaten cheeks were running down with tears. The man we had just lost had been his messmate and friend, he told me, for ten years. I begged his pardon, in full sincerity, for having used such harsh words to him at such a moment, and bid him go below to his berth for the rest of the day. "Never mind, sir, never mind," said the kind-hearted seaman, "it can't be helped. You meant no harm, sir. I am as well on deck as below. Bill's gone, sir, but I must do my duty." So saying, he drew the sleeve of his jacket twice or thrice across his eyes, and quietly mustering his grief within his breast, walked off to his station just as if nothing particular had happened.

In the same ship, and nearly about the same time, the people were bathing alongside in a calm sea. It is customary on such occasions to spread a studding-sail on the water, by means of lines from the fore and main yard arms, for the use of those who either cannot swim, or who are not expert in this art, so very important to all seafaring people. Half a dozen of the ship's boys were floundering about in the sails, and sometimes even venturing beyond the leech rope. One of the least of these urchins, but not the least courageous of their number, when taunted by his more skilful companions with being afraid, struck out boldly beyond the prescribed bounds. He had not gone much further than his own length, however, when his heart failed him, poor little man! and, with his confidence, away also went his power of keeping his head above water. So, down he sank rapidly, to the horror of the rest, who could lend the drowning lad no help.

The captain of the fore-castle, a tall, fine-looking, hard-a-weather fellow, was standing on the shank of the sheet anchor with his arms across, and his well-varnished canvas hat drawn so much over his eyes that it was difficult to tell whether he was awake or merely dozing in the sun, as he leaned his back against the fore-topmast backstay. The seaman, however, had been attentively watching the young party all along, and, rather fearing that mischief might ensue from their rashness, he had grunted out a warning to them from time to time, to which they paid no sort of attention. At last he desisted, saying they might drown themselves if they had a mind, for never a bit would he help them; but no sooner did the sinking figure of the adventurous little boy catch his eye, than, diver fashion, he joined the palms of his hands over his head, and urging himself into swifter motion by a smart push with his feet against the anchor, shot head foremost into the water. The poor lad sunk so rapidly that he was at least a couple of fathoms under the surface before he was arrested by the grip of the sailor, who soon rose again, bearing the bewildered boy in his hand, and, calling to the other youngsters to take better care of their companion, chucked him right into the belly of the sail.

The fore-sheet was hanging in the calm, nearly into the water, and by it the dripping seaman scrambled up again to his old berth on the anchor, shook himself like a great Newfoundland dog, and then, jumping on the deck, proceeded across the fore-castle, to shift his things after the sudden immersion.



## GREAT GALES.

(BY A FELLOW OF THE METEOROLOGICAL SOCIETY.)



“O, I have suffer'd  
With those that I saw suffer! A brave vessel,  
Who had no doubt some noble creature in her,  
Dash'd all to pieces. O, the cry did knock  
Against my very heart! Poor souls! they perished.”

*The Tempest.*



### VII.

(Continued from page 99.)



E now proceed to give brief accounts of gales following  
“The Great Storm” of 1703.

**1704.** Jan. 19. Stormy weather. On the 20th a very great storm, with a tempest of thunder, lightning, and hail in Cornwall. Grand fleet with the King of Spain driven back, and eleven lesser ships lost on the back of the Isle of Wight. Wind long at S.W. and weather warm.—Dec. 21 and following day. “Wind at N.N.W. ; a storm ; the highest tide I ever saw.” (Say.)

**1705.** On 30th March and 5th April, S.W. gales recorded at Upminster. (Lowe.)

Aug. 11. A dreadful storm, or hurricane. Wind S.W. Eight hundred sailors lost ; news full of losses by sea and land.—Dec. “Great and frequent storms—on the 6th and 7th, 8th and 9th, 19th, 28th. The 29th, new style, dreadful storm in France. Tides rose up in the

Loir twenty-five feet, extraordinary; 118 ships, six of them men-of-war, shored; the like in Ireland. Half of Limerick was drowned; the ships came on to the key, &c. Such a flood as never was seen." (Say.)

[A great rain in Wales in July; and a "prodigious flood" in N. of Ireland on 7th October.]

1706. Oct. 25. A great storm from S.S.E. Eight or nine vessels ashore at Yarmouth, most in wreck.

1709. Feb. 12—15. "Ships in great numbers came ashore at Yarmouth, not merely by the violence of the wind, but from the impotence of the sailors to find their hands and from the impossibility of securing the cables, which were thick cased with ice." This gale was preceded by a very severe frost in England and on the Continent, and the spring was very backward, and corn rose to a high price this year. This was called the *cold winter*. Frost is said to have penetrated nine feet into the ground. The Adriatic was frozen over. The olive plantations in France were almost destroyed.—Dec. 31st. A storm; several ships were irretrievably shored, and £5,000 worth of wreck sold for £60.

1710. Nov. 9. "A dreadful storm of wind."

1715. "February began warm, with a terrible storm of four hours' continuance from 1 to 5 a.m., untiling houses, throwing down chimneys, gable ends, and barns in abundance, and forcing ships from their anchors, though an off-shore wind at W." The same day a dreadful hurricane at Dublin, Hamburg, Lübeck, Rouen, &c.—Feb. 19. "Noon until three the next morning, storm, especially on the North Sea, and the highest tide I ever knew at Yarmouth; but said to be the highest at Hull of thirty-two years past. Wind from W. to N.W."\* (Say.)

1716. April 20, 21. Hard gale from E.S.E at Yarmouth, damaging ships.

Sept. 12, midnight. Storm on East coast, "fatal to a vast number of loaden colliers and other ships, but most fatal to Leostoff (Lowestoft)

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\* Under date of 1715, in Lowe's "Chronology of the Seasons," a "violent gale" is recorded, which gale is said to have emptied the Thames at London Bridge to the dimensions of a brook, ten or twelve feet over; but in "A General Chronology of the Air, Weather, &c." by Dr. Short (Longman), 1749 (see note, Vol. XXIX., p. 186), the date is given 1716. Mr. G. J. Symons, F.R.S., in writing upon this subject says: "I think the time must be the low-water nearest to 1 p.m., Sept. 14, 1716, when a W.S.W. gale was blowing the water out of the river."

and Ipswich, Yarmouth, and many other places; terrible wreck of fisherboats."

"One Grainger, an expert sailor, and others that rode at anchor beyond Southwold (Suffolk), observed that their ships never parted all night, and were lost by expecting more water on the sands than they found. And in Yarmouth Road the ebb was observed to run twelve hours." The writer goes on to say that this phenomenon was due to a persistent S. wind, which held back the tides, so that "an entire tide was lost to the rivers."



THE CITY OF ROUEN.

Sept. 13. "It is remarkable that the Thames ran dry for the space of several miles: at Westminster and Limehouse the people walked over it on foot for fourteen hours, there being only a narrow gutter in the middle. Wind there W.S.W., and at sea S.S.W. to S.E. at times."

1717. Aug. 20. Heavy gale. "Fourteen ships were stranded in eight or nine miles; many were blown out of the (Yarmouth) Road, and great numbers unmasted. The storm to sense seemed as great, if not greater, when the mercury rose." (Say.)—Dec. 24. "A most pernicious storm" in Holland and at Hamburg.—Jan. 12. At Ferrara, it is noted that there was a raging north wind, lasting throughout a



period of not less than four days, which tore up trees and broke down houses and walls.

**1722.** In England there were various remarkable phenomena recorded, such as Aurora borealis, parhelia or mock-suns, and a very mild December in London, but I do not find any mention of gales. Port Royal, in Jamaica, was destroyed by a hurricane on Aug. 28. There was also great damage done in the Carolina States.

[Hurricanes occurred at Jamaica on October 22, 1726; October 20, 1744; Sept. 2, 1751; at Antigua, 1740; and in 1783, June 30, a storm struck St. Kitt's (St. Christopher's), and twenty ships were lost. It is not to be understood that the storms were felt at these spots only, but that their greatest force was experienced at the localities named.\*]

**1729.** May 20. A hurricane. (Lowe.) No details given.

**1732.** Jan. 24. A "terrible storm of exceeding cold N. wind, which, like a hurricane, split up trees and tore up others by the roots."—Jan. 26. Boisterous S.W. wind raged with like fury." (Chron. 1749.)

**1733.** Oct. 28 to 30. A gale recorded at Ashby-de-la-Zouch. (Lowe.)

**1734.** Feb. 15 to 18. "A continued storm." August ended with great rain and a raging S.W. wind. (Chron. 1749).—Oct. 1. Gale at Chester. Violent rain; a great flood in the river Dee.—Nov. 26. Gale, violent in the Downs. (Lowe.)

**1735.** Jan. 8 (Wednesday). A gale from W.S.W. and W. at noon. "So violent as has not been known since that memorable one, Nov. 27, 1703." In London several houses and stacks of chimneys thrown down. Many churches in the country were stripped, houses and barns blown down, and trees without number torn up by the roots. Heavy rains swelled the rivers; the country inundated in many parts; stock destroyed; people had to seek the upper rooms of their houses.

Great damage to shipping; wrecks were seen everywhere along the coasts and several ships of the Royal Navy stranded or dismasted at Portsmouth and Plymouth.

The harbour of Wisbech (Cambridgeshire) was deepened, by the

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\* Although the main purpose is to record "Great Gales" which have occurred in the neighbourhood of the British Isles, it must not be regarded as travelling too far from these limits to mention some of those storms which have affected British interests in the regions of great hurricanes, especially as we are coming to that period when our commerce and colonies had so widely developed.

freshes, to the extent of fifteen feet, so that vessels could go up to the town without lighteridge. (*City Remembrancer*, 1769.)

Of a hundred ships in the Texel, Amsterdam, only seventeen rode out this great storm. (Lowe.)

Jan. 20 to 31. A raging N. wind, with cold moist air.—Aug. 13 to 31. "A frightful, stormy season." (*Chron.* 1749.) Violent wind in Sandwich Bay on Aug. 27; and likewise spoken of as doing much damage in many parts. (Lowe.)



OLD WESTMINSTER.

Sept. 7. Gale at Worcester; tremendous rain, especially at Droitwich, where the inhabitants were forced into their chambers; while men, horses, sheep, and bridges were carried away by the force of the flood. (Lowe.)

There were floods later in the year, so that this may be pronounced to have been altogether a *very stormy year*.

1736. Oct. 9. A great storm did considerable mischief to our shipping, but was in France much more severe. (Lowe.)

Nov. 12. Great N.W. gale at Edinburgh. (*Dr. Short*).—Dec. 20.

Gale.—Dec. 24. Very high tide in London. Thames flowed into Westminster Hall. (Lowe.)

1737. Jan. 9. A violent storm of wind, rain, and hail. The lowlands in Gloucestershire and Somersetshire and in Barton Regis overflowed; great numbers of sheep drowned. Great damage at Bristol—about £100,000. At Chepstow the water rose seventy feet; damage, £8,000. In the neighbourhood great loss in cattle—many trees blown down. (Lowe.)

Aug. 2. Violent gale, with heavy rains. Many trees torn up by the roots, chimneys blown down, and ships sunk in the Thames, and the damage at Woolwich £2,000. (Lowe.)

Oct. 11. At the mouth of the Ganges, 2,000 vessels of different kinds cast away. Eight English East India ships lost. The water rose forty feet higher than usual; 800,000 people lost their lives.\*

Dec. 1. Violent gale, much damage in London, and on 16th at Margate.

1738. Jan. 9. "In W. of England was the terriblest hurricane since Nov., 1708. Great was the damage done to houses, woods, shipping, &c." (Chron. 1749.)

Jan. 14. Violent at Edinburgh from midnight till 4 a.m. Many wrecks; several churches blown down. At Newcastle great damage done. (Lowe.)

1739. "From 31st Dec., 1738, to 8th Jan. 1739, most intemperate high winds. Dreadful hurricane from W.S.W. on 8th." (Chron. 1749.)

Jan. 14 (Sunday). A dreadful hurricane from 1 to 4 in the morning; felt most in Scotland, doing much damage at Edinburgh; leads were carried off the roofs, especially in the Parliament Close and the Castle, and thrown upon the rocks.

At Glasgow, several vessels driven on shore, and the coast between Roseneath and Glasgow "was full of gabbards,† and small boats drove up among the corn land."

In the Merse few houses were left undestroyed, several churches blown down—numbers smothered in the ruins; great havoc among

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\* J. W. G. Gutch, M.R.C.S., in *Quarterly Journal of Meteorological Society*, Jan. 1842 to Oct. 1843. London, 1843. (Any other quotations will be marked—"Gutch.")

† A heavy-built coasting vessel or lighter, for inland navigation.

sheep and cattle. The storm was violent in Londonderry, Dublin ; *i.e.* over the northern part of Ireland. (City Remembrancer, 1769.)

Sept. 11. London : much damage. Great damage also about Bristol, and lowlands in Yorkshire, by the excessive rain, which swept away great quantities of outstanding corn, and raised the price of corn. Gale violent from S.W., between Bristol and Portsmouth.

Oct. 30. A gale recorded as prevailing at Newcastle-on-Tyne.



THE RIVER GANGES.

Nov. 21. At Beachy Head, Teignmouth, Lyme, &c., storms. (Lowe.)

Dec. 29, 30. London. Violent E. gale with snow ; and the tides bearing heavy floating ice upon them, many ships were driven on shore and dashed to pieces. (Lowe.)

1740. Nov. 1. From 6 p.m. till midnight, a N. or N.E. gale, "the terriblest of many years ; it did inestimable damage on the N.E. and N. coasts of England, in shipping, goods, and peoples' lives ; its

effects at sea continued until the 5th." "Frequent hurricanes from Aug. 1 to the end of the year." (Chron. 1749.)

**1741.** Sept. 8. About noon a heavy gale of short duration from S.W. felt severely at St. Ives, Huntingdonshire; it blew down the spire, which broke through the church; damage £1,500, and left scarcely a mill standing within seven or eight miles of the town. The spires of Hemingford and Bluntisham also blown down; the storm passed eastwards, and reached Lynn about one o'clock; spreading a general desolation around this town; several ships dismasted; the damage to the town was reckoned at £20,000.

Maidenhead, Slough, Rochester, Chatham, Stroud, several parts of Surrey and Kent felt the fury of the storm; the wind was S. in the south-east of the country. At night the shipping of Sunderland suffered greatly. The wind here from E. (City Remembrancer, 1769.)

**1743.** Feb. 3. London. Great gale, with many wrecks.

April 1. N.E. gale. Violent at Newcastle, Hartley, Blyth, Sunderland, Scarborough, Whitby, and on the Norfolk coast. Many wrecks.

April 27. Gravesend. "His Majesty driven back, and detained at Sheerness by the gale." (George II. going to the Continent on war of the Austrian Succession.)

**1744.** Gales on Feb. 19, 20, felt at Deal and Guernsey.—Feb. 24. N.E. gale, at Brighton, where a dozen ships were driven on shore from the Downs. Same gale experienced at Deal on 25th and 28th.

**1745.** Nov. 18 to 20. Gales general throughout England. Many wrecks.

**1746.** June 24. Kent: a gale, with thunderstorm, violent; much damage.

**1748.** Oct. Norfolk: gale, with snow at night, thunder and lightning. Many trees blown down.

Dec. 16. In London a S. gale; much damage to ships and houses, and many wrecks at Ramsgate and Margate.

**1749.** Jan. 16. At Weymouth: violent with severe floods. (Lowe.)

We now close this chapter, having reached the first half of the eighteenth century.

S. H.M.





## THE SEA AND ITS PERILS.



“Oh, many a bark, to that breast grappled fast,  
Has gone down to the fearful and fathomless grave ;  
Again, crash'd together the keel and the mast,  
To be seen tost aloft in the glee of the wave !”

SCHILLER.



### IN THE BAY.\*



HE screw steamer *Coquet* left a little port on the north coast early one October. She was bound for Genoa ; and as this was a long trip, a little group of men, among whom were several who owned shares in her, waved their farewells from the end of the pier. A number of small tradesmen and a few well-to-do fishermen had formed a company to buy her, so she was regarded as quite an institution of the port. A smart captain had managed her cleverly, and she paid, during five years, an average dividend of nearly fifty per cent., after the modest claims of the “managing” owner had been satisfied. Naturally she was regarded as a treasure, and her fortunate owners used to make triumphant observations about her to less lucky men. The steamer had gone through some very bad weather ; but as every rivet in her hull had been examined while she was being put together, and that, too, by a man whom no skulker could deceive, she had lived in seas that sent scamped ships to the bottom.

The *Coquet* got away down Channel, and struck for Ushant without any mishap ; but when she got well into the Bay the sky began to look

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\* From “*The St. James's Gazette.*”

ominous. On the second morning the sea ran very strong, and by midday the gale had fairly come. All the fine descriptions of heavy weather in the Bay help one but little to understand what it is really like. It is hardly possible to think coherently about the enormous hurly-burly, much less to write or speak so as to make anyone understand how the masses of water move and how they sound. The *Coquet* got into a very bad quarter indeed, and the captain soon saw that it was useless to try running her. All hands were warned; the formalities of watches were dispensed with; and the engineers received orders to get on every possible ounce of steam. Then the ship was placed with her head to the sea, and the master took his place on the bridge. He did not know what a very long spell he would have. Only by keeping the engines at full speed ahead the vessel was enabled to hold her ground, and sometimes when the usual eight great waves were followed by the mountainous ninth she lost considerably.

The captain had to watch like a cat, for an instant's nervousness, a momentary failure of judgment, would have let her come round, and then all would have been soon over. The men hung on anyhow, and the two hands at the wheel were lashed, for the hull was seldom above water. A pouring stream rushed over the steamer, and hardly had one volume of water passed away when another came down like thunder. There was very little of the usual creamy foam, for the sea ran over the ship as though she were not there. When the downward flights came, the captain on the high bridge was often up to his knees in water; and again and again he made up his mind that his vessel could never come out of it. Once, when the mate dodged aft and clambered to the bridge, the *Coquet* took a long rush down, after she had reared on end like a horse. Her plunge was like the dive of a whale, and the screw "raced"—that is, whirled round high above the sea-level. The mate said, "She's gone, sir;" the captain replied, "Give her time." Once more she came up and shook herself; but it seemed as though her elasticity was gone. In truth, her deck had an ugly slant.

During all this time the wind was growing, and the sea was gaining speed and strength. It could not very well last, and nobody knew that better than the captain. A blinding scuffle of cross-seas came, and the *Coquet* was smothered for a while; the captain heard a crashing sound, and when he looked round the starboard boat was smashed and hanging in splinters, while the port boat was torn clean away. These were the only two boats that the vessel had. The slant or "list" grew more pronounced, for the cargo had shifted; and the steamer was now like a boxer whose left hand is tied behind his back. She seemed to take the blows passively, only lungeing doggedly up

when the wild welter had flowed over her, and still keeping her nose to the sea. All night long the captain hung on the bridge. It was his second night, and in that time he had only had one biscuit that the mate gave him. His legs were very tired, and every muscle was strained in the effort to cling fast. He could, of course, see nothing; and it was only by the compass that he could tell how to keep her head. At midnight a wave swept everything; the compass amidships and the one astern both went, and a man was taken overboard. Still the wind kept on, and the only light to be seen was the flash of the curling spray.

The dawn broke, and still the sea was bad. At seven o'clock a tremendous crash sounded, and the vessel staggered: there was a long ripping grind, and the port bulwark was gone; so all the seas that came aboard after this had their own way, and as the vessel "listed" to port the deck was a very dangerous place. The mate managed again to get near the captain. He said: "The men want you to put her before the sea, sir; so do I." The captain replied: "If you propose such a thing again, sir, I'll break your head, as soon as I can get loose from here. Keep the men in heart." At noon the second mate came forward with a white face, saying, "The tarpaulin's gone off the after-hold, sir." The captain was badly put out by hearing this, but he shouted: "Lash the men how you can, and try to make fast again." While the men (with ropes round their waists) were wrestling with the tarpaulin a wave doubled over the ship, making her shake; and, as the captain afterwards said, "the fellows were swimming like black-beetles in a basin of water." One poor "ordinary" went overboard in the wash of this sea, and nothing could be done for him. At four o'clock the chief engineer came up, and managed to tell the captain that two fires were drowned out, and that the firemen would stay below no longer. The captain asked, "Have you the middle fire?" and receiving an affirmative answer, he said, "Give the men each half a tumbler of brandy to put some pluck into them." A merry Irish fireman was so influenced by his dose of spirit that he joked and coaxed his mates down below again, and once more the fight was resumed.

The sun drooped low, and threw long swords of light through rifts in the dull grey veil. The captain knew it was now or never, so he managed to get the men called where they could hear him, and shouted: "Now when that sun dips we'll have the warmest half-hour of all. If she lives through that, and the gale breaks, I can save her. If she doesn't, you must die like men. You should say your prayers." When the "warm half-hour" came it was something beyond belief. The *Coquet* was as bare as a newly-launched hull before it was over,



then came a kind of long sigh, and the wind relaxed its force. All night the sea lessened; and at dawn there was but a light air of wind, with no breaking waves at all. The captain then dared to run before the sea; he got his vessel round, and she went comfortably away on the steady roll. He had known all along that if he tried to fetch her round she would assuredly share the fate of the *London*. That steamer was smashed in by a doubling sea that came over her stern while the captain was trying to take her about.

The master of the *Coquet* had been seventy-two hours on the bridge, and he was nearly asleep as he walked. In trying to get to his berth he fell face foremost, and slept on the cabin-floor in his wet oilskin suit. When he woke he had a nastier problem than ever, for his compasses were gone and the ship had a dangerous "list." However, he soon bethought him of a tiny pocket-compass which he had in his stateroom. Working with this and managing to get a sight of the sun, he contrived to get within fourteen miles of Gibraltar—which was very fair seamanship. He reached Genoa; but the ship was sixteen days overdue, and the people at home were alarmed. . . .

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#### THE STORMS OF THE PAST QUARTER.

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**A**LTHOUGH the second quarter of the present year has been attended by at least its usual complement of gales, there has been a singular absence of any storms of exceptional violence. Coming as it has after so wild a winter, and immediately following so blustering a March, the comparative quiet of the season has been a grateful relief even to those whose lot it is only to *hear* of the desolation caused by one of our severe tempests. To those actually engaged upon the coasts of our islands the change of weather has of course been nothing short of a blessing, the value of which it is impossible to estimate. We cannot at the present time call to mind one single instance of serious or widespread calamity arising from any of the gales to which we shall presently have occasion to refer. It is matter for regret that a quarter with so clean a record should have been marred by the occurrence of one or two maritime casualties which should have been, or at all events might have been, avoided.

Glancing over the meteorological records of the three months, we find that, with the exception of a fresh westerly gale in the extreme north of Scotland on April 15, nothing of any importance occurred until the 17th, when a rather strong southerly gale was experienced on all but our south-east coasts. This breeze was occasioned by a barometrical

depression which skirted the west coasts of Ireland and Scotland, and finally passed away to the northward of our islands. A few days of calm weather succeeded, but on the 22nd a new disturbance made its appearance over the Bay of Biscay, and, pressure being relatively high to the northward of our islands, steep gradients for easterly winds were formed over the entire country. Over our western and northern coasts the differences in pressure were not sufficiently great to occasion anything but strong breezes, but in the Channel, and also along the east coast of England, a slight gale from east or north-east prevailed on the night of the 22nd and morning of the 23rd. The depression to the southward of us subsequently dispersed, and the wind therefore subsided; but on the 26th a new system appeared in the same locality, and, travelling in a north-westerly direction outside our south-west coasts, occasioned strong south-easterly breezes in many places. The passage of a similar disturbance along the Irish coasts on the 29th produced a slight south-easterly gale in the north of Scotland, and for a time the sea on this part of our coast ran very high.

The unsettled weather of the latter half of April continued throughout the early part of May, and sufficed to rob the latter month of those charms which the poet assures us are the prerogative of this season of the year. As if to give the lie direct to all such fancy-dreams, no sooner had May opened than the wind, with strange perversity, chopped round from the southward to the northward of east, and the country experienced a short spell of weather which was not only relatively but actually colder than on many occasions in December and January last. This state of things was brought about by the formation of an area of high barometric pressure to the westward of our islands, and the appearance of some depressions off our east and south-east coasts. On the 2nd of the month strong northerly breezes swept along the coast of England, and on the 3rd, when a depression came up over France, a fresh easterly gale was experienced in the western part of the Channel. As time wore on the general condition of affairs became more and more unsettled, so that by the 7th, when no fewer than three depression systems were found in various parts of our Islands and France, strong north-easterly breezes or slight gales were blowing on all our western, northern, and north-eastern coasts. In the course of the 8th and 9th the three disturbances gradually dispersed, and the wind fell moderate, but by the evening of the latter day a fresh depression had formed over the southern portion of the North Sea, and on the 10th the new system moved slowly, in a north-westerly direction, outside our east and north-east coasts, finally disappearing to the northward of Scotland on the morning of the 11th. Along the coast of England the increase of wind occasioned by this movement was not

serious, but in the north and east of Scotland a fresh gale from north, backing to north-west, was experienced. The final departure of the depression was succeeded by a complete change in the distribution of pressure, and the period of cold gave way to a spell of real spring weather. Atmospherical conditions did not, however, show much inclination to become quite settled. On the night of the 11th, for example, a depression of some size and intensity passed along our western coasts, and occasioned a slight south-westerly gale in the Channel and south of Ireland; while on the night of the 18th, when the weather in the southern parts of the country had become finer and quieter, a north-westerly gale prevailed in the north of Scotland. The remainder of the month passed away without anything further in the shape of disturbed weather, beyond a strong southerly gale in the Hebrides on the nights of the 24th and 25th.

During the month of June one naturally expects that the period of storms will give way entirely to quiet, genial weather, and, in fact, there is no record of the occurrence of any serious gales at this season of the year. On the 27th of the month, however, a southerly breeze was experienced in the north of Scotland, which, although purely local, was sufficient to administer a quietus to all that remained of *H.M.S. Lively*. It will be remembered that the unfortunate vessel in question had, through some strange misconception, been wrecked upon the Hen and Chicken Rocks a week or two previous to this date.

The fact of other very regrettable disasters; individually of no small magnitude, having occurred within the past quarter, has already been adverted to. While it is impossible here to enter into the full details of these particular casualties, it must unfortunately be recorded that they resulted in much loss of property and of life, and caused great consequent distress, both to the sailor himself and to his afflicted dependents.

F. J. B.

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\*.\* The timely aid and relief to the shipwrecked sufferers themselves, or the suddenly bereaved and distressed dependents, directly or indirectly afforded, almost without exception, by THE SHIPWRECKED MARINEERS' SOCIETY in London, and its 1,200 local Honorary Representatives and Agents at Home, Abroad, and in the Colonies, will be found included in the General Statistics of the Society's Work, as given, under the Society's Heading, at the end of each Number of this Magazine.





## MARITIME NOTES.



“The Sea! the Sea! the open Sea!  
The blue, the fresh, the ever free!”

PROCTER.



“Thou glorious mirror, where the Almighty’s form  
Glasses itself in tempests!”

BYRON.



## BATTLE SHIPS.



At the Royal United Service Institution, under the presidency of Admiral Sir Astley Cooper Key, K.C.B., F.R.S., Mr. N. Barnaby, C.B., the Admiralty Director of Naval Construction, lately read a paper under the title of “Battle Ships—a Forecast.” The walls of the lecture-room were hung with various diagrams, the most remarkable being a full-length drawing of the ponderous 100-ton breech-loading gun (*Italia*). The size of the cartridges and projectiles of other large ordnance was shown in black on the screen. Sections were also given of the 80-ton muzzle-loading, the 100-ton (*Italia*) breech-loading, and the projected 68-ton breech-loading guns.

The lecturer began by saying that he considered the power of waging war on the seas depended upon the following elements, stated in their relative order of importance: the quality and extent of the mercantile marine in ships and men, provided that the national tie in both were real and firm; the quality and strength of the trained *personnel* in the State Navy; the ability to produce or procure rapidly and continuously material of war for the use of the State; and the number and efficiency of the regular ships of war possessed by the

State on the outbreak of war. Battle ships formed a part of the last-named element. There had been much controversy concerning the distribution of their armour, the size, number, and mode of mounting the guns, their speed and coal endurance, and other matters. But these questions all resolved themselves into one of size of ship. Armour, guns, speed, and fuel all demanded as much as could be conceded to them; and the limit to each was finally imposed by the size or displacement of the ship. The controversy had taken form and shape in Italy in more imposing proportions than it had in England or France, and it had fastened itself on the question of absolute size. He then quoted the views of Signor Brin, the ex-Minister of Marine of Italy, in favour of large ships of great power, neither adopting nor challenging the arguments set forth, but contenting himself by saying that with increase in speed and size the ship not only increased in mass, signifying greater energy in striking at given speeds, and greater resistance to injury when struck, but it became more easy to secure speed and endurance. England possessed exceptional advantages in forging such weapons, and, within the limits imposed by sizes of docks and shoaling of water, it was conceivable that she might furnish herself with ships far more powerful than any which had been yet seen.

Mr. Barnaby passed on then to explain some interesting diagrams, which set forth the relative State naval power of England, France, Italy, and Germany, as distinct from the possession of merchant ships capable of being turned to war uses. The naval power of England in ironclad ships on the seas, as seen in the diagrams, nearly equalled the combined powers of France, Italy, and Germany; this, however, without taking into account the projected war ships of France. The diagram relating to the British Navy showed only two wooden ships, while the diagram of the French showed a large number of the ships to be of wood. He also showed by diagrams that the British merchant ships steaming fourteen knots ocean speed, and capable of being made additions to the naval power, greatly preponderated in number over similar ships possessed by the combined Powers. He then proceeded to say that constantly-improving modes and means of attack upon ships by ships, and from the shore, threatened to change the character of the battle ship, and it was this uncertainty which emphasised the financial limitation. The recent operations at Alexandria showed that for certain portions of the work the Navy was called upon to perform the ships designed twenty years ago were still efficient; but the neglect of torpedo defence on the part of the Egyptians counted much in favour of the attack.

What the future battle ship of England should be might be

gathered from what it would be required to do, namely, "It must be capable of striking very destructive blows where the enemy is fortified, either in his ships on the open waters, or in his forts upon the sea-coast. The machinery for striking these blows must be capable of being kept in position in the face of an enemy in the open sea or off a port. The use of torpedo-boats of high speed and in great numbers tends to the gradual extinction of the power of attacking or blockading the sea forts of an enemy by means of large ships, because of their great cost and the risk of fatal blows from the torpedo. The advantage of being able to inflict damage upon the shipping which may be under the protection of land fortifications, or to close the port, will also be so great that the mode of attack must modify itself to suit the change in conditions. There can be no doubt that gun vessels with numerous long-range shell guns, and costing not more than one-fourth of the modern battle ship, will displace the battle ship for this service, notwithstanding the disadvantages of the smaller ships in unsteadiness of platform and inferior seaworthiness."

The lecturer urged that the battle ship of large size was not only likely to become obsolete for the attack and blockade of forts, but also for the important service of harassing the commerce of an enemy. This resulted from the great speed and coal endurance of the large ocean steamers. Armed ships of the same character as those to be captured would probably be the favourite weapons for inflicting damage upon commerce. These ships were now nearly twice as long as the ships of war of the same weight, and could, therefore, much more easily secure and maintain a high rate of speed at sea. He considered it would be most impolitic to build regular ships of war on similar principles for the purpose of pursuing and engaging them. The fifteen knots ocean speed of to-day might be exceeded by commercial rivalries in the course of a very few years. It was desirable that this should be so; and, instead of attempting to produce fleets of regular ships of war as a consequence of the existence of these fast possible war cruisers, we should endeavour to modify them and incorporate them in our national defences. Guarding himself against the advocacy of any particular policy, Mr. Barnaby concluded his very interesting paper by sketching out, as one of the possible ships of the future, a small and fast "protected" but unarmoured vessel, to be utilised in conjunction with the larger and more formidable battle ships. The smaller ships would be of from 2,000 to 3,500 tons, with an armament of two 25 or 30 ton guns, one firing ahead, the other astern. These ships would be associated with those recently commenced, which would in all probability be provided with 68-ton guns (breech-loading) or even heavier weapons.

## NEW RIG FOR STEAMERS.

**I**N the early stages of steam propulsion the novel motive power was undoubtedly regarded as an auxiliary to that furnished by the established rig, sufficiently valuable in its way, but not to be depended on when it came to a hard tussle with a head gale and its accompanying heavy sea. Consequently, we find the early steam vessels, both in build and rig, substantially of the same class as their sailing contemporaries, utilising the power of their engines to supplement that of the sails under favourable circumstances of wind and weather, or to enable them to proceed on their course during the prevalence of calms, but mainly relying on sail-power for the prosecution of their voyage; and even at the time when, for the shorter passages, engine power had become the principal instead of the secondary propelling agent, the ordinary ocean voyages which involved lengthened periods of sea-service were performed by sailing ships, with or without auxiliary steam power.

On the first introduction of steam as the probable motive power of the future, comparatively crude forms of machinery were applied to corresponding structural forms of vessel, but once practically tested, improvements in both respects succeeded each other with astonishing rapidity. Improved boilers supplied steam at a more economical expenditure of fuel to improved engines, which in their turn were so constructed as to utilise to the utmost extent the steam with which they were driven. Alterations in the forms of the vessels, such as increased proportion of length to breadth, greater length of entrance, greater length of run, &c., enabled engines of less horse-power to be applied with success to steamers of a tonnage which, under previous conditions, could only have been propelled at a consumption of fuel too extravagant for practical purposes. Breakdowns of the machinery were also frequent during the earlier adaptations to marine service, and on this account, if on no other, it was absolutely necessary to retain sufficient independent power to conduct the vessel in safety.

We have, however, with present types of machinery and ships, arrived at a point where sail power has been practically discarded, the great speed at which our steamers are driven rendering the assistance afforded by sails of little moment, compared to the resistance offered by spars and rigging when proceeding to windward against a strong breeze, and the risk of a breakdown is chanced. The majority of our steamers are, therefore, only provided with the amount of canvas considered necessary to enable them to weather a gale should the engines be disabled, in which case, should it not be possible to effect the

requisite repairs on board, the vessel is totally incapacitated and must remain helpless, so far as her capacity of proceeding on her voyage or into port is concerned, until taken in tow by some friendly steamer, which may happen to relieve her condition. If, then, some modification of the present method of spreading canvas be introduced, which, while affording a considerable area of surface when sail is set, shall, when sail is furled, be of such a character as to reduce to a minimum the resistance due to it and its accessories experienced when steaming to windward, it is obvious that the additional expense incurred by a full rig is of but little importance compared to the advantages which would be obtained by its adoption. Not only would the disabled steamer so rigged be capable of proceeding under sail, according to circumstances, but in the cases of those with small power the spread of canvas would, under certain conditions, be of the greatest assistance to the engines, probably adding one or two knots per hour to her day's run.

It is commonly stated that sailors are unnecessary in steamers, and that, as a matter of fact, the extended use of steam vessels has to a very great degree affected the supply of qualified seamen required by sailing ships. "Sailorising," in the usual acceptation of the term, is not possible in the case of a steamer furnished with the old rig. She cannot afford to stand off her course to enable sail to be reduced and furled should it be impossible to carry it longer; on she must go, and the operation of stowing the now useless canvas not only checks her way, but is itself a matter of the greatest difficulty, if it be at all practicable. It is not to be wondered, then, that sail power in its present form in steamers is at a discount.

The conditions that a suitable rig should fulfil would appear to be the following: There should be plenty of fore-and-aft canvas, combined with a due proportion of square sails. When stowed, the fore-and-aft canvas should be so disposed as to offer no hold to the wind; the square sails should permit of easy furling under all circumstances; and the yards which spread them should be capable of being placed in such a position as to minimise the adverse effect of a contrary wind.

With these objects in view a rig has been designed by Mr. R. B. Forbes, of Boston, U.S., which possesses features of a character so novel to seamen as to render it well worthy of our readers' attention. The rig for steamers from 350 feet to 400 feet in length consists of four masts—foremast, middlemast, mainmast, and mizzenmast. The fore and main masts are square-rigged, the other two carrying fore-and-aft sails only. Commencing from forward there are the usual head-sails, stowing in the ordinary manner; the next fore-and-aft canvas is carried by the middlemast, and consists of two large stay-sails, lower and upper; the mainmast carries one, and the mizzen-



mast two of similar description but of somewhat smaller area. All these staysails are set on spring stays, so fitted that in taking in the sail it is hauled down to its tack, and then sail and stay lowered together, very much in the same manner as some of the staysails were worked in our old men-of-war. The mizzen, in addition to its two staysails, carries a boom trysail with inhauls and brails, and a gafftopsail, which is set and taken in in the ordinary way. So far as fore-and-aft canvas is concerned, with the exception of the trysail, which brails close in to the mizzenmast, all the sails when taken in come down and are stowed on deck. No resistance is, therefore, experienced on their account.

The novel features of the rig are, however, in the masts, yards, and squaresails. The masts are constructed of steel without "break" from keel to truck, and are stayed with three stays; which, on the square-rigged masts are placed, one below the lower yard, one below the topsail yard, one above the royal yard, the four mastheads being further supported by a continuous stay, something after the fashion of a schooner's triatic stay. Contrary to all precedent, the yards are trussed and parrelled *above* the stays. The lower yards are slung from small davits which swing with the yard. The topsail yards are fixtures parrelled with bucket parrels to the mast and slung with a long steel wire standing tye from the masthead, passing through a hole in the parrel chock of the topgallant yard, which is itself parrelled to the mast; the royal yard parrels to the topsail tye.

It will be seen from this account that, when the upper yards are lowered, the three yards—topsail, topgallant, and royal—will be close together, thus effecting a snug stowage, while the increased drift obtained by slinging the yards above the stays enables them to be braced nearly fore and aft.

With regard to the squaresails, the courses are "flying," fitted with short spars in the centre of the head and foot. To the ends of the head spar, and to the earring and other head cringles, are bent tricing lines, which, leading through blocks on the yard, serve to set the sails. To take them in, the centre tricing lines are first kept fast, the outer corners of the head hauled down to the extremities of the foot spar, and the sail then lowered by the centre tricing lines. The topsails are bent at the foot to the lower yard, the heads being fitted with tricing line and centre spar similar to those of the courses; standing jackstays are taken from the lower yard, run through rings in the head of the sail, and set up with lanyards to the topsail yard. In taking the sail in, the tricing lines are let go, the downhauls manned, and the sail furling to the lower yard. The topgallantsail is bent to both topsail and topgallant yards, furling to the former; the

royal is secured at the clews to the topgallant yard, being furled as is usual in the case of an upper topsail. The remaining rigging is of the usual nature and disposition.

Theoretically, this system is all that can be desired, and satisfactorily fulfils the stated conditions. The tricing lines and downhauls at first sight appear somewhat complicated, but in reality are much less so than the sheets, clewlines, &c., which they supersede. That the stowage of the sails would be unsightly to the nautical eye trained to the old style follows as a matter of course; but the sacrifice of beauty to utility is a matter of daily occurrence in nautical life, and it is to be noted that the vessels for which the rig is intended do not carry an unnecessarily large complement of seamen such as they are.

The weak point in the inventor's scheme appears to be in the masts and their rigging. Making every allowance for the capabilities of steel to withstand severe strains, the very nature of the method of working the yards prevents a judicious disposition of the stays and rigging, and for a considerable portion of its length the upper part of the mast must be inefficiently supported. If this want is satisfactorily met by the strength of the mast, then there is little to find fault with. Modern appliances enable us to construct and manipulate spars of the required size, and as in our mercantile dockyards it is no uncommon practice to hoist in lowermast, topmast, and topgallantmasts, often with the rigging attached, in one hoist, there should be no difficulty in dealing with steel masts 160 feet to 170 feet in length, which is the size proposed by Mr. Forbes.

Such a revolution in the sparring and rigging of ships as that we have endeavoured to sketch will perhaps be ostracised by the seafaring community as a "Yankee notion;" but it is significant that the double topsail, at first so violently opposed, and subsequently universally adopted, was first fitted to an American vessel, the *Great Republic*, then the largest sailing vessel in the world.

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### NIGHT THOUGHTS AT SEA.

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#### I.



T such a sight a man for dread might swoon,—  
 Cold from the islands where the snow and ice  
 Heighten the horror of each precipice,  
 A South wind whistled and a shadowy moon  
 Haunted the waters with her ghostly rays,  
 And from the yards dim phantoms seemed to stare  
 Upon the silent ship, as if they were  
 Waked from long slumber in a great amaze.

Above was darkness, and below soft sleep  
 Shut every eye save those that watched with me,  
 But saw not as I saw the ancient deep  
 Recall her mariners to their liberty,  
 And place them once again beside the sail,  
 To quaff the breath of ocean and the gale.

## II.

Shine on, shine on, fair moon, and shining give  
 Thy light to sea and mountain, town and field,  
 Till every sight forget itself and yield  
 A new delight and peopling fancy live  
 In every wave that throws its passionate arms  
 About our vessel, and in every sigh  
 Of wind a mermaid mourn, and far and nigh,  
 We see their jewels and their phosphor charms;  
 Shine on, thou silver moon, and rain thy spell  
 Of quiet into weary souls that fain  
 Would rest in haven, could they cross the main  
 To that far shore where all is ever well.  
 Shine on, and rule for peace the tides that flow  
 Within our hearts till we have done with woe.

**I**RISH FISHERIES. — The report of the Inspectors of Irish Fisheries for 1882 has now been issued. By the returns received from collectors of Customs and the Coastguard, it would appear that, during 1882, the number of registered vessels in Ireland fishing for sale amounted to 6,089, with crews numbering 21,597 men and 794 boys. Of these, 1,978 vessels, 7,310 men, and 401 boys are returned as having been exclusively employed in fishing, and 4,111 vessels, 14,287 men, and 393 boys as partially engaged. These figures seem to show that there has been a considerable decrease in fishing vessels, men, and boys employed in 1882, as compared with the previous year, but the inspectors state that reliance cannot be placed upon this as strictly correct. The report is a long and elaborate document, going into much detail, and embody-

ing separate reports from the individual inspectors as to the salmon fisheries and other matters in their respective districts.

**T**EMPERATURE OF THE THAMES.— Until three years ago daily records were kept of the temperature of the Thames, but no observations have been made since 1880. Now, however, the practice is to be renewed, instructions having been given by the committee of the Corporation, who act as port sanitary authority for London, to Mr. G. J. Symons, F.R.S., to sketch a scheme of observations to be organised and continued at their expense. Some years back the Corporation purchased the dockyard at Deptford, and converted parts of it into a foreign cattle market, and for the convenient unloading of vessels three jetties were run out (each

about 200 ft.) into the river. The extremities of these jetties have a depth of 11 ft. of water even at dead low water; there is, therefore, at all times, more than sufficient volume of water entirely to annul any warming or cooling effect due to shallow shore water. At this spot it has been determined to conduct the operations. For observations of river or sea temperature it is imperative that the thermometers be so constructed as not to be liable to derangement in pulling up or letting down. For this reason a very carefully made form of Six's thermometer has been adopted, something like those used at sea, but specially adapted to the circumstances. Two have been provided—one to show the highest and lowest temperature within a foot of the bed of the river, the other floating with the tide, but always 2 ft. below the surface of the water. Besides these river temperatures, a set of air thermometers, &c., has been erected on a grass plot opposite to the offices, and these will supply all the data required for a climatological station, and a copy of the results will be forwarded to the Meteorological Society for publication with other Metropolitan returns in the *Quarterly Record*. These observations will be of considerable interest when compared with those on the Observatory-hill at Greenwich, which have so long been taken as representative of the climate of London. In the organisation of the river observations Mr. Symons has had the advantage of consulting Mr. W. H. M. Christie, F.R.S. (Astronomer Royal), and Mr. Ellis, under whose supervision the later river observations were made. The instruments have all been constructed by Messrs. Negretti and Zambra, and duly inspected and verified at Kew.

**SINGING FISH.**—In some parts of the world there is a superstition that fish can be attracted to the surface of the water by music, and it is no uncommon spectacle to see an Indian standing in the bow of his canoe with spear poised, while his companion, usually a child, elicits a few plaintive notes from a reed at intervals. Such a notion is, of course, absurd, since fish give very few signs of hearing proper, and are only affected by sounds of such violence that communicating their vibration to the water, they can be appreciated by common sensibility, just as a person who is "stone deaf" can perceive and experience a disagreeable sensation on the report of a cannon near at hand. Tame fish confined in an aquarium may not be alarmed at the most boisterous movements or moderately loud noises close to them; but if the glass be thin, the slightest tap will cause them to flash away. It is curious that the so-called "singing fish" of the Indian Ocean and Spanish Main is yet unknown to naturalists—that is to say, the fish itself may be known, and no doubt is, but the particular species which emits the remarkable sounds has not been identified, nor has the precise mode of their production been discovered, though many hypotheses have been framed. They have often been heard on stilly nights at Greytown—a rhythmical, monotonous, but not unmusical twanging, like the stroke of a jew's-harp, faintly heard on deck, but loudly audible in the hold, especially on an iron ship, and proceeding apparently from directly underneath her keel. Black sailors attribute a supernatural origin to these tinklings, and declare that they are caused by seamen who have found a watery grave trying to get back into the

vessel. Nothing would induce a nigger to go below when this harmonious hammering is heard.

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**S**TEAM SHIPPING PROSPECTS.—The importance of the shipbuilding industries to the engineering trades gives interest to the question of what effect the comparatively low rate of freights that prevail will have upon shipbuilding, which for above eighteen months has been exceedingly brisk. It may be taken for granted that freights are on a lower range than they were a few years ago, and that the tendency is to decrease as the tonnage of the merchant navy increases. But those who take a pessimist view of matters forget that, concurrently with the decrease in the rate of freights, there is a decrease in the cost of the production of vessels. Ten years ago, or even before high prices ruled, the cost of ship plates—iron plates—was about £11 per ton; now, in the same producing centre, they are obtainable at £6 10s.; and ship angles have fallen in a similar proportion. When the largeness of the tonnage of iron used in vessels is borne in mind, it will be seen that the cost of production is very materially reduced, and thus, other things being equal, lower freights will pay the same dividend; and there is also to be remembered that these lower freights tend to materially increase the trade across the seas, and that whilst on the one hand lower freights do not diminish the earning power of a vessel owing to its lesser cost, yet they do increase the work of the steamship; and there is a further benefit from the low prices of the vessels—this country is better enabled to compete with foreigners in the cargo carrying

trades, for the effect of the bounties that some of them impose is to increase the first cost of the vessels. On the other hand, it cannot be said that the cost of working our vessels is being reduced so rapidly as it ought to be when the large additions to the labour-saving appliances on board is borne in mind, and it may be that the low freights that now prevail will stimulate owners in this direction to revise the rate of costs. Eras of low prices and low rates are usually favourable to economical working, and there is room in the working of our steamers for more of this. But looking at the question broadly, although the tonnage built is now so large, yet with losses of iron vessels which increase in number yearly with the increase in the total of our steam merchant marine, and looking at the fact that we have yearly to do a share of the trade of the world that is increasing, and that must for some time increase because other nations are building fewer steamers, there seems ground for the belief that the era of great activity in our shipbuilding yards is not likely to pass away soon; and this conclusion is apart from the question whether the Americans may take steps to increase their merchant navy. If they do, it will, in the first instance, benefit us; if they do not, as their trade grows so will the demand that they make on our carrying vessels. Our shipyards may not, perhaps, keep at the present high pressure in regard to steamship building; but there are grounds for the belief that for some time to come there will be continued activity in them, and that activity is necessarily reflected upon the marine engine works of the country, and that in an increasing degree, because of the fact that not only do new

vessels need engines, but that the old ships need renewals of engines from time to time.—*Engineer.*

**S**ALMON FISHING ON THE COLUMBIA RIVER.—The enormous capabilities of the salmon fisheries on the Columbia River are but little understood. It appears from a statement just published that there are thirty-six canneries, nearly all of which are at Columbia, the mouth of the river. Several of the companies engaged in the fisheries have 100 boats, and about 7,000 men are employed. The capital invested is about \$2,000,000. In 1882, 585,000 cases of salmon were packed, which at \$5.20 a case would yield \$2,782,000, giving a very considerable profit. The salmon are packed in 1 lb. cans, and forty-eight cans make a case. The men employed are chiefly Greeks, Portuguese, and Russian Finns. Considering that there is a wholesale destruction of salmon in the Columbia River by traps and wheels, the continued run of the fish is very surprising. The salmon are scooped in by the wheels and thrown into a chute, down which they slide into water boxes, and find themselves on shore. This system of fishing is very inexpensive and strongly destructive, as the fish are killed, and those which are too small to be canned are thrown away. One wheel will cast upon the shore from 3,000 to 4,000 lbs. of fish in twenty-four hours. A movement is on foot to suppress this practice, as well as the violation of the law, which forbids fishing from Saturday at sundown till Monday morning. It is proposed to establish a hatchery, and seeing that the canneries have packed from 400,000 to 500,000 cases yearly,

simply from fish that escaped to their natural spawning grounds, it can easily be surmised what may be done when a hatchery has been established. It is calculated that at least 1,000,000 cases annually could be taken, and the world supplied with the fish. In fifteen years \$20,500,000 worth of salmon has been shipped from the Columbia River. Astoria, the salmon fishing town, is at the mouth of the Columbia. It was settled in 1811 by the Hudson Bay Company, and took its name from the well-known John Jacob Astor, who was a large stockholder. The fishing season lasts for four months, beginning with the closing week of April.

**F**ISH PASSENGERS.—It appears that one of the palace cars, belonging to the United States Fish Commission, started recently for California with a passenger list of young fish numbering 18,000. The car in its appearance resembled a modern sleeping-car, having the compartments at each end. The central part had an aisle running through the middle, and, in place of the seats on each side, were wooden ledges about 3 ft. high, on which were placed the tin fish tanks. The human passengers, as well as the fish, lived in the car. The fish were not placed in the tanks filled with water, as the motion of the train would dash the water about and destroy many lives among the young passengers. But, instead, about twenty fish were placed in gallon tin pails, and these pails were put in the tanks, and then the latter filled with water. With the carp, however, the water in the pails was sufficient, and the motion of the car tended to the circulation of air in the

water, keeping it fresh. The attendants renewed the water every eight hours, and kept a careful watch to remove any fish that might have died. The percentage of fish lost by death, however, was very small. The fish did not complete their travels when they left the car. At St. Louis, the first stop made by the car, supplies of fish were left for applicants residing in Missouri and Arkansas. From this point pails of fish were sent all over the States, by express, at the expense of the consignee.

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**P**ORT OF GENOA.— Through the opening of the St. Gothard Railway, Genoa has become the most convenient seaport for North and Central Switzerland. The distance from Zurich to Genoa is 458 kilometres as compared with 696 to Antwerp; and from Milan the distance to Zurich is only 382 kilometres (216 miles), little further than from London to Liverpool. The geographical situation of Genoa is, moreover, very favourable for trade between the Levant, the South of Russia, and Central Europe. Great efforts are being made to provide increased accommodation for shipping and commerce in the North Italian port. The harbour, for the improvement of which the late Duke of Galliera left a bequest of 20,000,000 lire, is now seven kilometres long, and, as it is computed that a kilometre of quay-length is capable of accommodating 280,000 tons of merchandise, the capacity of Genoa in this regard is equal to a total of 2,000,000 tons. Antwerp, which, after Marseilles, is Genoa's most formidable rival, possesses 20 kilometres of landing room. The trade of the northern port is growing with great

rapidity. In 1881 more than 1,000,000 railway waggons arrived at Antwerp laden with merchandise for shipment to various parts of the world. Much is hoped at Genoa from the fusion of the two great houses of Rubattino and Florio (of Palermo). These two firms own 100 steamships, and the new company has taken the name of "Navigazione Generale Italiana." Another steamship company, Raggio & Co., has recently been formed at Genoa for running a line of steamers between that port and La Plata. The great difficulty under which Genoa labours is scarcity of return cargo, and the consequent higher rate of freight demanded by inward-bound vessels. A large proportion of the vessels which leave Genoa go out in ballast. This arises from the fact that the bulk of the manufactures produced in Central Europe, for export, are destined for the United States, and go naturally by way of Antwerp. The only means whereby this difficulty can be met is such a development of Italian industry and agriculture as will provide outbound ships with a cargo they lack. This, again, can be effected only by a liberal modification of the protective tariff which Italy a few years ago adopted, and which is enforced with a rigour that intensifies its evil effects. A country that wants to increase its exports must encourage imports, and in her soil, her climate, her numerous harbours, and her splendid position, Italy possesses advantages which, properly developed and fostered by a wise fiscal policy, would make her one of the richest and most prosperous of Continental lands. At present the St. Gothard Railway, as well as the North Italian lines, labour under the serious drawback

of dear fuel, whereas the lines of access to Antwerp and Marseilles obtain their supplies of coals on much more favourable terms. If this difficulty could be overcome, the freight rates on the St. Gothard system might be considerably reduced, to the great advantage of all concerned. The line traverses streams which, properly utilised, would give almost limitless water power, and experiments are being made with a view to transmuting, by means of electricity, this potential power into a force that will render it possible to run trains, from the Rhine at Basle to the shores of Lake Maggiore, without any fuel whatever. In this way may Switzerland's want of minerals be more than compensated by the abundance of water with which nature has gifted her.

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**M**ODERN STEAMERS.—The *Nautical Magazine* remarks that there is one thing that we know, or that we should have learnt, from the vast experience of the last ten or twenty years—an experience, perhaps, as gloomy and unsatisfactory as it has been rash: that the majority of "cargo steamers," as at present constructed and sent to sea, have already—long since—reached the limit of safety in loading; if, indeed, many of them have not got much beyond it. If this be not so, how are we to account for the great number of such vessels which annually disappear? There is, surely, unmistakable evidence to prove that something is wrong somewhere; for many of them are comparatively new ships. After two long centuries of experience of all kinds of ships,

and over all seas, a vanished school of able and sagacious seamen laid it down that a good ship, fairly loaded, and ably commanded, will live in any storm—excepting, perhaps, cyclones and hurricanes, and the accidents which they engender; she positively cannot sink, but is as certain to ride over those great rolling mountains of seething water, as a well-built church is of standing on its foundation. It is a great mistake to suppose, as some shipbuilders really do, that because a ship is big, no heavy seas will ever run on board; in consequence of this fallacy, they take all manner of liberties in designs and construction. It is difficult to believe there are such opinions in such quarters, yet it is so, notwithstanding. There is, doubtless, less science imported into shipbuilding now than in former times, when iron for such work was a novelty, and when the worthy blacksmith, though occupying an indisputable position, played only second fiddle in the symphony; but the merest riveter should understand that the long, low steamers, which are now turned out of our building yards, are the wettest, and, in too many cases, the most dangerous ships which can ever put to sea. A great ocean wave, however high or fast it may run, will lift up, bodily, any small ship or boat; but not so some 400-footer; and, as a matter of course, if it cannot lift, must run over some part of her. Allowing such a wave to run at thirty-five miles an hour, and a great part of its crest, say twenty-five tons of water, to overwhelm her decks, we have at once a force equal to the charge of a locomotive against everything in the shape of an obstruction to its course.







## MISCELLANEOUS JOTTINGS.



“Here a little, there a little.”



“O Reader! had you in your mind'  
Such stores as silent thought can bring,  
O gentle Reader! you would find  
A tale in everything.”

WORDSWORTH.



## FISH AND FISHERIES.



T the first of a series of conferences on subjects connected with the fisheries of the world, held at the great International Fisheries Exhibition, the inaugural address was delivered by Professor Huxley, F.R.S., Inspector of Fisheries, His Royal Highness the Prince of Wales presiding.

Professor Huxley, in his highly interesting address, said: It is doubtful whether any branch of industry can lay claim to greater antiquity than that of fishery. The origin would seem to be coeval with the earliest efforts of human ingenuity; for the oldest monuments of antiquity show us the fisherman in full possession of the implements of his calling; and even those tribes of savages who have reached neither the pastoral nor the agricultural stages of civilisation are skilled in the fabrication and in the use of the hook, the fish-spear, and the net. Nor is it easy to exaggerate the influence which the industry thus early practised and brought to a considerable degree of perfection has directly and indirectly exerted upon the destinies of mankind, and especially upon those of the nations of Europe. In our quarter of the globe, at

any rate, fishery has been the foster-mother of navigation and commerce, the disseminator of the germs of civilisation.

Having glanced at the development of the industries connected with fishing, more especially by the Phœnicians, he continued :—These few remarks must suffice to indicate the wide field of interesting research which fisheries offer to the philosophical historian, and I pass on to speak of the fisheries from the point of view of our present practical interests. The supply of food is, in the long run, the chief of these interests. Every nation has its anxiety on this score, but the question presses most heavily on those who, like ourselves, are constantly and rapidly adding to the population of a limited area, and who require more food than that area can possibly supply.\* Under these circumstances, it is satisfactory to reflect that the sea which shuts us in at the same time opens to us supplies of food of almost unlimited extent.

In reference to the relation which the fisheries bore to the total supply of food of those who had easy access to the sea, he quoted the following paragraph from the report of the Fisheries Commissioners, 1866 :—“The produce of the sea around our coasts bears a far higher proportion to that of the land than is generally imagined. The most frequented fishing-grounds are much more prolific of food than the same extent of the richest land. Once in a year an acre of good land, carefully tilled, produces a ton of corn or two or three hundred weight of meat or cheese. The same area at the bottom of the sea in the best fishing-grounds yields a greater weight of food to the persevering fisherman every week in the year. Five vessels belonging to the same source in a single night's fishing brought in 17 tons' weight of fish, an amount of wholesome food equal in weight to that of 50 cattle or 800 sheep. The ground which these vessels covered during the night's fishing could not have exceeded an area of 50 acres.” My colleagues and I made this statement a good many years ago. I have recently tried to discover what yield may be expected, not from the best natural fishing-grounds, but from piscicultural operations. At Comacchio, close to the embouchure of the Po in the Adriatic, there is a great shallow lagoon which covers some 70,000 acres and in which pisciculture has been practised in a very ingenious manner for many centuries. The fish cultivated are eels, gray mullet, atherines, and soles; and, according to the figures given by M. Coste, the average yield for the sixteen years from 1798 to 1813 amounted to 5 cwt. per acre—that is to say, double the weight of cheese or meat which could have been obtained from the same area of good pasture land in the same time. Thus the seas around us are not only important sources of food, but they may be made still more important by the artificial development of their resources.

But this Exhibition has brought another possibility within the range of practically interesting questions. A short time ago a visitor to the market might have seen fresh trout from New Zealand lying side by side with fresh salmon from Scandinavia and from the lakes and rivers of North America. Steam and refrigerating apparatus combined have made it possible for us to draw upon the whole world for our supplies of fresh fish. In my boyhood, Newcastle was the furthest source of the salmon cried about the streets of London, and that was generally pickled. My son or, at any rate, my grandson, whenever he goes to buy fish, may be offered his choice between a fresh salmon from Ontario and another from Tasmania.

The fishing industry being thus important and thus ancient, it is singular that it can hardly be said to have kept pace with the rapid improvement of almost every other branch of industrial occupation in modern times. If we contrast the progress of fishery with that of agriculture, for example, the comparison is not favourable to fishery. Within the last quarter of a century, or somewhat more, agriculture has been completely revolutionised, partly by scientific investigations into the conditions under which domestic animals and cultivated plants thrive, and partly by the application of mechanical contrivances and of steam as a motive power to agricultural processes. The same causes have produced such changes as have taken place in fishery, but progress has been much slower.

It is now somewhat more than twenty years since I was first called upon to interest myself especially in the sea fisheries. And my astonishment was great when I discovered that the practical fisherman, as a rule, knew nothing whatever about fish, except the way to catch them. In answer to questions relating to the habits, the food, and the mode of propagation of fish—points, be it observed, of fundamental importance in any attempt to regulate fishing rationally—I usually met with vague and often absurd guesses in the place of positive knowledge. The Royal Commission, of which I was a member in 1864 and 1865, was issued chiefly on account of the allegation by the line fishermen that the trawlers destroyed the spawn of the white fish—cod, haddock, whiting, and the like. But, in point of fact, the spawn which was produced in support of this allegation consisted of all sorts of soft marine organisms except fish. And if the men of practice had then known what the men of science have since discovered, that the eggs of cod, haddock, and plaice float at the top of the sea, they would have spared themselves and their fellow-fishermen, the trawlers, a great deal of unnecessary trouble and irritation.

Thanks to the labours of Sars in the Scandinavian seas, of the German Fishery Commission in the Baltic and North Sea, and of the

United States Fishery Commission in American waters, we now possess a great deal of accurate information about several of the most important of the food fishes, and the foundations of a scientific knowledge of the fisheries have been laid. But we are still very far behind scientific agriculture, and, as to the application of machinery and of steam to fishery operations, in this country at any rate, a commencement has been made, but hardly more. The relative backwardness of the fishing industry made a great impression on my colleagues and myself in the course of the inquiries of the Royal Commission to which I have referred; and I beg permission to quote some remarks on this subject which are to be found in our report issued in 1866:—"When we consider the amount of care which has been bestowed on the improvement of agriculture, the national societies which are established for promoting it, and the scientific knowledge and engineering skill which have been enlisted in its aid, it seems strange that the sea fisheries have hitherto attracted so little of the public attention. There are few means of enterprise that present better chances of profit than our sea fisheries, and no object of greater utility could be named than the development of enterprise, skill, and mechanical ingenuity which might be elicited by the periodical exhibition and publication of an influential society specially devoted to the British fisheries."

Taking the Exhibition, the third of its kind, as evidence that the public attention to fisheries for which they hoped had been attained, he remarked that the conferences opened that day formed an entirely new feature of such exhibitions, and expressed a hope that there was in them a germ of that which, by due process of evolution, might become a great society, having for its object the welfare and the development of the fisheries of these islands.

He presently turned to the question whether fisheries are exhaustible; and, if so, whether anything can be done to prevent their exhaustion. He did not think it possible to give a categorical answer. There were fisheries and fisheries; but he had no doubt that there were some fisheries which were exhaustible.

Instancing the salmon rivers, he said it was quite clear that those who would protect the fish must address themselves to man, who was reachable by force of law; and that it not only might be possible, but it was actually practicable to so regulate the action of man with regard to a salmon river that no such process of extirpation should take place.

But if we turned to the great sea fisheries, such as cod and herring fisheries, the case was entirely altered. Those who have watched these fisheries off the Lofoden Isles on the coast of Norway, say that the coming in of the cod in January and February is one of the most

wonderful sights in the world ; that the cod form what is called a "cod mountain," which may occupy a vertical height of from 20 to 30 fathoms—that is to say, 120 to 180 feet, in the sea, and that these shoals of enormous extent keep on coming in in great numbers from the westward and southward for a period of something like two months. The number of these fish is so prodigious, that Professor Sars, the most admirable authority, from whom I quote these details, tells us that when the fishermen let down their loaded lines, they feel the weight knocking against the bodies of the codfish for a long time before it gets to the bottom. I have made a computation, with the details of which I will not trouble you, which leads to this result, that if you allow the fish each of them four feet in length, and let them be a yard apart, there will be in a square mile of such shoals something like 120 million fish. I believe I am greatly understating the actual number, for I believe the fish lie much closer, but I would beg your attention to the bearing of this under-estimate, because I do not know that the Lofoden fishery has ever yielded more than 30 million fish in a good season ; and so far as I am aware the whole of the Norwegian fisheries, great as they are, do not yield more than 70 million. So you will observe that one of these multitudinous shoals would be sufficient to supply all the fisheries of Norway completely, and to leave a large balance behind.

And that is not all. These facts about the cod apply also to the herring ; for not only Professor Sars, but all observers who are familiar with the life of the cod when it has attained a considerable size, tell us that the main food of the cod is the herring, so that these 120 million of cod in the square mile have to be fed with herring, and it is easy to see, if you allow them only one herring a day, that the quantity of herring which they will want in the course of a week will be something like 840 million. Now I believe the whole Norwegian herring fishery has never reached the figure of 400 million fish—that is to say, one half the fish which this great shoal of codfish eats in a week would supply the whole of the Norwegian fisheries.

On these and other grounds it seemed to him that this class of fisheries—cod, herring, pilchard, mackerel, &c.—might be regarded as inexhaustible. But he should not venture to say this of the whole of the sea fisheries—of the oyster fisheries, for example. Here, again, the operations of man became exceedingly important. Regarding the regulation as to close time for oysters as alone absolutely futile for the purpose of protection, he urged that the more logical provisions of Government supervision in Denmark, France, and elsewhere, were impracticable of application beyond the three-mile limit of this country. It was under this conviction that the Commission

to which he referred recommended the abolition of all restrictive measures.

In conclusion he pointed out how heavily this question bore on the social condition of the fisherman. Every act of legislation with regard to the fisherman created a new offence. If the common welfare and the common interest, said Professor Huxley, can be clearly shown to render such regulations desirable or necessary, then of course fishermen must put up with this as they put up with anything else—as we all put up with such restrictions. But supposing that no good case is made out—supposing that regulations of this kind are made on insufficient inquiry, and based on insufficient understanding of circumstances of the case, then I am free to confess that I think those who make such laws deserve very much severer penalties than those who break them.

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#### NOTABLE DATES.

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**V**EGETABLES were first imported from the Netherlands about the year 1509; there being no kitchen gardens then in England. Before that time sugar was eaten with meat as a corrective. Potatoes were brought from America in the year 1586; their cultivation introduced into Ireland in 1610; but into England not till 1650. Asparagus was introduced in 1602, artichokes and cauliflowers came in the year next following.

Sugar was not refined in England before 1659. Tea, introduced in 1666, became of general use, even though costing sixty shillings a pound. Coffee had been brought into England fourteen years before. Chocolate had been brought by the Spaniards from Mexico in 1520. Two years before the arrival of coffee, English bread was for the first time made with yeast.

Currant-trees were introduced from Zante in the year 1588. Apricots, cherries, pears, and grapes were first planted in England in the middle of the sixteenth century. Mulberries arrived six years later. Rose-trees were introduced in the year 1522.

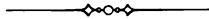
The first glass windows were used in this country in the year 1177, but the ordinary use of glass in houses dates from at least three centuries later. The first coal fires were made in London in the year 1278, but the use of them was forbidden by proclamation, as they were considered to corrupt the air. Holborn was first paved in the year 1417.

Distaff spinning was introduced from Italy in the year 1505. The spinning-wheel was invented at Brunswick in the year 1580. Calico was first imported by the East India Company in 1681; there was none printed here till 1676. We first used pins in 1543, before which time the ladies kept themselves in trim with skewers.

Punctuation by the comma and full stop was not invented till the fifteenth century; the colon was not used till 1580, and the semicolon was invented in another nineteen years.

Steam navigation was commenced in 1812. The first Railway Act was passed in 1801; passenger traffic upon railways was not, however, contemplated at that time.

On the 29th of December, 1660, the Post Office was established.



**T**REES IN STREETS.—An interesting controversy on the utility, or otherwise, of trees in streets and open spaces, has lately been going on at Geneva, in the columns of the local press. The controversy arose out of a discussion in the International Hygienic Congress, which was held there in August, and Dr. Piachaud, a member of the Congress, has since contended, in a letter addressed to the *Journal de Genève*, that trees in streets do more harm than good, that they impede the circulation of air, and that, as for the shade they afford, people who do not like sunshine have only to keep on the shady side of the street. Instead of planting more trees in towns, as some propose, he would rather, in the interests of hygiene, remove all existing trees. To him replies Professor Goret, of the University, who, though an eminent physicist and chemist, disclaims any special knowledge of medicine or hygiene. He treats the matter from an exclusively common-sense and scientific point of view. As for people who want shade keeping always on the shady side of a street,

he points out that, as streets have generally shops and houses on either side, Dr. Piachaud's advice in this regard, however ingenious, can hardly be looked upon as practical. But the functions of trees in streets are not limited to acting as screens for sunshunning wayfarers; they temper the heat and serve as a protection against dust. The evaporation from their leaves tends to keep the surrounding air cool and moist. One of the best means of refreshing the air of a sick chamber is to place in it plants and branches and sprinkle them with water. A like effect is produced by trees. Sunlight is necessary to health; but trees, if not too thickly planted, do not intercept sunlight; the perpetual vibration of their leaves and swaying of their branches admit the light every instant, and in sufficient measure, and serve, moreover, to protect the eyes from the noonday glare. So far from trees impeding the circulation of air, they help to purify the air; the evaporation from their leaves determines a current from above, and the fresh air thus brought down helps to drive away the heated and dust-impregnated gases

of the streets. Another useful property of foliage is that, while in hot, dry weather it moistens the surrounding atmosphere, thereby rendering it fitter to breathe, this effect, which is due to evaporation, ceases in wet weather. Trees, moreover, act as purifying agents by absorbing carbonic acid and giving out oxygen. But the action of trees on the air is far less important than their action on the soil. Their roots draw up stagnant waters and absorb the organic matters contained in the filth from which the streets of a town are never free, and which, after infiltrating the ground, are a frequent cause of fevers and infection. Trees, in fact, have the same effect on the subsoil of towns as fields have on the contents of their sewers—they act as disinfectants.

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**SUN SPOTS.**—The periodicity of sun spots is known to have been discovered by Herr Schwabe, of Dessau, and from personal observations he thought the period ten years. Subsequent researches have proved the phenomenon to be rather complex, and the conclusions arrived at by the *savans* who have studied it do not well agree. Herr Wolf, of Zurich, has recently made a fresh investigation (by a method we need not here describe) of the most complete and certain portion of the observations on record, that extending from 1751 to the present epoch. He deals with 120 years' observations, given in 1,440 monthly averages. His conclusions are these: (1) There is a period of ten years; (2) there is a second period of eleven years four months; (3) there is not a period of twelve years, imputable to the action of Jupiter. It further appears that, notwithstanding the great dif-

ference of the two periods, the interval from a *minimum* to the following *maximum* is the same for both, viz., four and a half years. Again, as seventeen periods of ten years are equivalent to fifteen periods of eleven years four months, the complete phenomenon covers 170 years, after which the *maxima* and the *minima* are reproduced in the same order and with the same numerical values. To have a full idea of the phenomenon, we have to add the other remarkable periodicity, not in the number but in the geographical distribution of the spots, suspected by Mr. Carrington, and brought into clear light by Herr Spörer. It consists in this, that, when after a *minimum* the spots commence to re-appear on the sun, they first do so suddenly at high latitudes, and are then progressively restrained towards the zones near the equator, till the next epoch of *minimum*. No adequate explanation of these remarkable phenomena has yet been offered.

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**TOWN AND COUNTRY TEMPERATURE.**  
**T**—A scientific journal of Boston discusses the lack of accord between the readings of standard thermometers owned by persons living at a little distance from the heart of the city and the published observations of the Signal Service observer of their locality. The reason for this discord is the disturbing action of the heat which the city emits; and it is observed that it is very little to the credit of the Weather Bureau that this particular source of error was not long since recognised and avoided. Professor Whitney has made some pertinent remarks on this subject relating to observations made in London. "It is a well-known fact,"



says the Professor, "that cities are considerably warmer than the more thinly-inhabited country otherwise under similar climatic conditions. Statistics prove this to be true, and there could be no doubt that such would be the effect of an immense aggregation of population within a limited space, even if there were no statistics bearing on this question. Many millions of tons of coal are burnt in and about London during every year; and the whole mass of brick of which the city is built is heated during the entire winter, and more or less in the summer, many degrees above the natural temperature. There can be no question that conditions such as are here indicated vitiate all observations made in or near large cities with a view to the determination of any possible secular variation of the temperature."

**A**MERICAN NEWSPAPERS IN 1888.—From the new edition of Rowell & Co.'s American Newspaper Directory, it appears that the periodicals of all kinds issued in the United States has reached a total of 11,196—an increase of 585 in twelve months. The present total in New York State is 1,899—a gain of 80 in the past year. The increase in Pennsylvania is 48, the existing number being 948. Nebraska's total grew from 175 to 201, and Illinois' from 890 to 904. A year ago Massachusetts had 420 papers; now the number is 438. In Texas the new papers outnumbered the suspensions by eight, and Ohio has 788 papers instead of 692. The most remarkable change has occurred in the territories, in which the daily papers have grown from 48 to 68, and the weeklies from 169 to 248—Dakota being the chief area of ac-

tivity. The figures given above are exclusive of Canada, which possesses a total of 606. The number of journals issued in Manitoba was nearly doubled during the year.

**F**ISH AS FOOD.—Dr. W. B. Richardson, F.R.S., as president of the first of a series of local meetings convened by the Fish League, at the New Temperance Hall, Paddington, delivered an address on "The nutritive value of fish as an article of common food." He said that every effort to supply healthy food and good sanitary conditions to the people was deserving of consideration and support, and both subjects were becoming the question of the day. It was a pregnant, if not an alarming fact, that England never had at command much more than a month's food supply derived from our own productive resources, and hence the utility, if not the necessity, of considering every available source of home food supply. The fish supply was an exceedingly important question, as tending to increase the available food for the people. But as an article of food, it should be taken for its worth in supplying the constituents of physical life. The elements required for the sustentation of healthy life were the flesh-building, the force or heat-producing, the mineral, and the watery milk. Most fish contained all these necessary constituents, some more than others. Pollock, however, held all the necessary qualities very equally balanced. But the strongest and most nutritive fish was sturgeon, which equalled in all the essentials the best flesh meats. It was a question whether fish could not be made generally as nutritive as flesh meats, and he suggested that

the Government should institute an analytical commission on the subject. In the matter of distribution, they wanted to bring fish as a food to the doors of the poor, and he believed the best method for doing so was to improve the costermonger system, by sending fish round in specially constructed vehicles. To popularise information on the best method of living physically should be one of the objects of the movement, and by and by a healthy race could be produced by reducing the consumption of flesh meats and regulating the dietary in fish, vegetables, and other cheaply obtainable foods.

PLANTS AND MOONLIGHT.—Plant-movements of the nature of those called "heliotropic" may be produced by light of little intensity. M. Musset has recently tried the effect of moonlight in the following way:—He sowed in pots some seeds of plants that are known to be easily affected to movement by light, such as lentil and vetch. When the plants had grown a few inches they were put in a very dark place and kept there some time, so that the stems became thin and white, and the few leaves yellow. Then, on three successive nights afterwards, when the sky was exceptionally clear, the plants were placed in a large window looking south, where they received the direct light of the moon from 9 p.m. to 3 a.m. Almost directly the stems (the position of which was carefully noted at the outset) began to bend over towards the moon, and to follow it in its course. About 2 a.m., owing to the moon's position, the stems became nearly straight, the terminal bud always pointing to that orb. The

plants being then brought to a window looking west, a new flexure occurred and continued till the moon disappeared behind the hill. A few minutes after this the stems straightened more or less. Such movements of plants in moonlight M. Musset proposes to call *selenotropic*.

"RALEIGH" AND "CAXTON" MEMORIALS.—A magnificent memorial window was last year presented to St. Margaret's Church, Westminster, by American citizens, in honour of Sir Walter Raleigh, whose headless body was carried to the church from the scaffold. The following four lines were written as an inscription for the window by Mr. J. Russell Lowell, the American Minister:—

"The New World's sons from England's breast we drew  
Such milk as bids remember whence we came,  
Proud of her past wherefrom our future grew,  
This window we inscribe with Raleigh's fame."

A fine window was presented to the church about the same time, mainly by the publishers and printers of London, in honour of Caxton, who also lies buried there. For this window the following four lines have been written as an inscription by Mr. Tennyson. They are founded on Caxton's motto, "*Fiat lux*," which is emblazoned on the window:—

"Thy prayer was 'Light — more Light—while Time shall last!'  
Thou sawest a glory growing on the night,  
But not the shadows which that light would cast  
Till shadows vanish in the Light of Light."

**ASHES OF COLUMBUS.**—It appears that a Pittsburg glass manufacturer has taken the contract for making an urn of plate-glass for the ashes of Columbus. He was buried at the Convent of St. Francis, in Seville, but only temporarily, and, after several funerals, with an interval of some years between each, his remains were conveyed across the Atlantic and deposited in American soil. Finally, his bones were removed to the Cathedral of S. Domingo. The custodians of the remains sent a communication to a Pittsburg firm requesting a design for an urn, with the estimate of the cost. The letter stipulated that the urn must be large enough to hold the casket with the lid open, so that the inscription may be visible; the urn must be ornamental, yet nothing in the design must interfere with a clear view of the casket, while it was particularly stipulated that the urn, when completed, must be graceful and attractive in appearance. The casket is not large. The space within the urn must be 17·94 in. in length, 8·19 in. in width, and 13·5 in. in depth; and within those dimensions the casket and the dust can be held. These conditions have been accepted, and the work is being proceeded with.

**DIAMOND RATTLESNAKE.**—Of all the snake varieties of which we have yet any knowledge, the diamond rattlesnake, as it is called, seems to be the most deadly. It grows to a length of 6 ft. or 7 ft., and is somewhat thicker than a man's wrist. It is armed with the whitest and sharpest of fangs, nearly an inch in length, with cisterns of liquid poison at their

base. A terror to man and beast, he turns aside from no one, although he will not go out of his way to attack any unless pressed by hunger. A description of his movements, by a traveller who has encountered him, states that he moves quietly along, his gleaming eyes seeming to emit a greenish light, and to shine with as much brilliancy as the jewels of a finished coquette. Nothing seems to escape his observation, and on the slightest movement near him he swings into his fighting attitude, raising his upper jaw and erecting his fangs, which in a state of repose lie closely packed in the soft muscles of his mouth. This snake is not so active as the famous copper-head of North America, nor so quick to strike, but one blow is almost always fatal. His fangs are so long that they penetrate deep into the muscles and veins of his victim, who has little time for more than a single good-bye before closing his eyes for ever. In one instance, the fangs were found to be seven-eighths of an inch in length, and though not thicker than a common sewing-needle they were perforated with a hole through which the greenish-yellow liquid could be forced in considerable quantities, and each of the sacs contained about half a teaspoonful of the most terrible and deadly poison.

**AGE OF CLOCKS.**—The water-clock was introduced at Rome about 152 B.C., and toothed wheels were applied thereto about 140 B.C. Pacificus, archdeacon of Genoa, invented a clock in the ninth century, and clocks moved by wheels and weights began to be introduced into monasteries of Europe about the

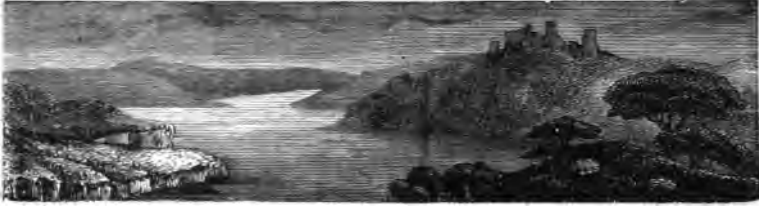
eleventh century. It does not appear that Europe is entitled to the honour of this invention, but that it is rather to be ascribed to the Saracens. Watches were used in the reign of Henry VIII. of England. Dante was the first author who mentions a clock that struck the hour; he was born in 1265, and died in 1321—so that striking clocks could not have been very uncommon in Italy at the latter end of the thirteenth century, or the beginning of the fourteenth. But the use of clocks was not confined to Italy at this period, for there was an artist in England about the same time who furnished the famous clock-house near Westminster-hall with a clock to be heard by the courts of law, out of a fine imposed on the Chief Justice of the King's Bench in 1288.

**FISH-PRODUCING STATES OF AMERICA.**—In the list of fish-producing States in America, Virginia ranks seventh; and the oyster, menhaden, and shad fisheries are the three branches in which her citizens are most extensively interested. In regard to her oyster fisheries, she comes second only to Maryland, having 16,815 persons employed in the industry, with products valued at 2,218,876 dollars. Her menhaden fisheries are of recent origin, but they have developed with singular rapidity. The fleet numbered 102 sail in 1880, and the oil, scrap, and compost produced sold for 808,829 dollars. The river fisheries are also important, furnishing employment to 2,641 persons; and over 3,000,000 lbs. of shad, and nearly 7,000,000 lbs. of alewives (known locally as herring)

with many other river species, were taken, the whole having a value of 272,828 dollars. A full tabular statement of the fishing interests of the State gives the following figures:—Persons employed, 18,854; fishing vessels, 1,446; fishing boats, 6,618; capital dependent on the fishery industries, 1,914,119 dollars; number of pounds of sea products taken, including oysters, 146,122,545; value of the same, 2,851,616; number of pounds of river products taken, 12,752,064; value of the same, 272,828 dollars; and total value of products to the fishermen, 8,124,444 dollars.

**REGAL NOTES.**—Queen Victoria this year attained her 64th birthday, an age which has been exceeded by only 11 of the sovereigns of England, dating from the Norman Conquest—viz., Henry I., who lived to the age of 67 years; Henry III., 65 years; Edward I., 67 years; Edward III., 65 years; Queen Elizabeth, 69 years; James II., 68 years; George I., 67 years; George II., 77 years; George III., 82 years; George IV., 68 years; and William IV., 72 years. On the 20th of June last Her Majesty had reigned over the United Kingdom for 46 years, a length of reign which has been exceeded by three of the Kings of England only—viz., Henry III., whose reign extended to 56 years; Edward III., whose reign lasted 50 years; and George III., whose reign extended to the long period of nearly 60 years. The Queen has now been a widow for nearly 22 years, the Prince Consort having died on December 14, 1861.

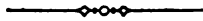




## QUIET THOUGHTS FOR QUIET HOURS.



“Pii orant tacite.”



“The turf shall be my fragrant shrine ;  
My temple, Lord ! that Arch of Thine ;  
My censer's breath the mountain airs,  
And silent thoughts my only prayers !

My choir shall be the moonlit waves,  
When murm'ring homeward to their caves ;  
Or when the stillness of the sea,  
Ev'n more than music, breathes of Thee !”

MOORE.



## OUR THOUGHTS.



It is said that our best thoughts come to us, like sunbeams, unawares, and that those that are crude and valueless are the “lucifer matches” we strike ourselves. This is confirmed by many distinguished writers, who assure us that much of their success was owing to the habit, early formed and strictly observed, of carefully noting whatever of importance occurred to them without premeditation. By this means, they say, they were enabled to lay up a stock of valuable ideas on many subjects, which, when required, furnished abundant material of an excellent kind for the construction of theories and opinions on a strong, substantial basis.

There is no doubt much truth in the cynical remark sometimes made that there are many to whom anything sensible seldom occurs. To such individuals, of course, a note-book and pencil would be of no earthly use. But there are also many who frequently stumble across a thought well worth preserving for its originality and truth ; and if such persons would but take the trouble of treasuring up these stray

sunbeams they would be amply recompensed by the advantages conferred thereby both on themselves and their species.

Everyone who is accustomed to commit his thoughts to paper, or write on subjects upon which he had not previously bestowed much consideration, is aware how difficult it sometimes is to strike even a "lucifer match" on the walls of his imagination; while on other occasions his thoughts, as if by inspiration, come trooping through his mind with such rapidity that his principal difficulty arises from being at a loss to determine which of so many are best, brightest, and most to the point.

Most of the works of genius in science and literature owe their origin in a great extent to "sunbeam" rays, which have illuminated their authors' minds and forced their thoughts to spring forth and blossom into beauty and splendour like flowers beneath the genial warmth of a summer sun. These moments of inspiration occur to all of us; but much depends on ability to seize the precious material, and prepare and present it to the world for its guidance and instruction.

It is a mistake, however, to suppose for an instant that we are to remain in a state of mental inactivity until we feel inspired. To some—in fact, to the great majority of us—this would mean an apathy amounting to the densest ignorance and stupidity. Our minds, the same as our bodies, require constant exercise, and unless we keep them cultivated and healthy they will never conceive anything useful or ornamental. The mind may be led by gentleness and attention, but, like a high-spirited horse, it cannot be forced against its inclination without imperilling its best qualities and depriving it altogether of that vigour and energy which are indispensable to its noblest and grandest performances.

If we would have our minds prolific of good and useful thoughts, we must keep them in such a state of cultivation that they will be always susceptible to the influence of "sunbeams;" and then we will find that we need no longer to undergo the toil and tear of pulling against the tide of our inclinations, but, pushing boldly into mid-stream, may sail down the current of our thoughts with ease and rapidity.

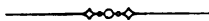
◆◆◆  
 MY FOUR SHIPS.  
 ◆◆◆



STOOD and watched my ships go out,  
 Each, one by one, unmooring free,  
 What time the quiet harbour filled  
 With flood-tide from the sea.

The first that sailed, her name was Joy;  
 She spread a smooth, white, ample sail,

And eastward drove with bending spars  
 Before the singing gale.  
 Another sailed—her name was Hope ;  
 No cargo in her hold she bore,  
 Thinking to find in Western lands  
 Of merchandise a store.  
 The next that sailed, her name was Love ;  
 She showed a red flag at the mast—  
 A flag as red as blood she showed,  
 And towards the south sped fast.  
 The last that sailed, her name was Faith,  
 Slowly she took her passage forth,  
 Tacked and lay-to, at last she steered  
 A straight course for the north.  
 My gallant ships, they sailed away  
 Over the shimmering summer sea—  
 I stood at watch for many a day,  
 But only one came back to me :  
 For Joy was caught by Pirate Pain,  
 Hope ran upon a hidden reef,  
 And Love took fire and foundered fast  
 'Mid whelming seas of grief.  
 Faith came at last, storm-beat and torn ;  
 She recompensed me all my loss—  
 For as a cargo safe she brought  
 A Crown linked to a Cross.



**I**MMENSITY OF THE UNIVERSE.—About the year 1610, the telescope, then recently invented, was for the first time applied to astronomical investigation by Galileo ; he, with his refracting telescope, with a power of about thirty times, observed thousands of stars invisible to the naked eye. Since the days of Galileo the telescope has been very much improved. The large 40 ft. reflecting telescope of the late Sir William Herschel was frequently charged with the great magnifying power of 6,450 times. With such a power, the heavens seemed, as it were, to dissolve before its strength ; on directing it to that peculiarly white track in the sky,

commonly called the "Milky Way," it was instantly perceived that "its groundwork was of stars." In one proportion of this track 116,000 stars swept over the field-view of this telescope in fifteen minutes ; at another time 258,211 in forty-one minutes ! It has been calculated that the "Milky Way" alone contains at least 18,500,000 stars, which are equal to 5,314 times the number of visible stars in the heavens, or about 19,000 times the number visible to the eye, at one glance, in the most favourable evening. Although the other parts of the celestial canopy are not so densely crowded, yet it is astonishing to consider the increased number the telescope unfolds to view in every con-

stellation. It may safely be asserted that the telescopic number of the stars is at least 80,000,000 (eighty millions), some of which must be upwards of thirty-one thousand billions of miles distant from the earth. It is well known that the late Sir William Herschel concluded, from unquestionable evidence, that his telescope enabled his eye to reach and rest on portions of space 497 times further distant than Sirius. Suppose the distance of Sirius to be as great as the star Cygni, or 62,528,490,691,900 miles multiplied by 497 = 31,076,659,873,874,300 miles for the probable radii, 62,153,819,747,748,600 miles for the diameter, and about 195,000,000,000,000,000 (one hundred and ninety-five thousand billions) of miles for the circumference of the universe, as developed by the telescope alone! At such enlarged views of the amazing distances and number of worlds, as sounded by the telescope, the pious and contemplative mind may well exclaim, "Great and marvellous are His works! Yet these are but part of His ways." There is every reason to conclude that these are "but as the small dust in the balance," compared with the overwhelming number of worlds located in every nebula. Up to the present year there have been reckoned about 3,275 nebulae. Nebulae is a name given to a singular celestial appearance, cloudy in aspect, somewhat resembling small patches of froth swimming on the surface of water. It is not improbable that each of these 3,275 nebulae may contain at least 80,000,000 of stars! What must we then think of the vast extent of the universe and its innumerable hosts of stars? Even although these nebulae contain the great number of stars mentioned, they must only be considered as a very small part of

an overwhelming and incomprehensible whole—only as a few groups, clustering on the "frontiers of the Creator's dominions."—HENDERSON.



**R**ECREATION.—Naturally identified with amusement is recreation, and becomes, in common language, synonymous with that term. Recreation might, perhaps, be better defined as the means of amusement, and it is in this light that the sanitarian and physiologist are accustomed to regard the former name. There is no lack of evidence, drawn from the highest sources, to show that, for health, "amusement" is a necessity, and it lies strictly within the department of physiology to show how the various forms and modes of recreation relate themselves to modern life. The foundation of health, in one sense, lies in the wise adjustment of our amusements and our life and work. The gravest warnings of science ring out against the folly, practised by thousands, of making a toil of pleasure, and of indulging in recreations for which they are either physically unfitted, or which are entirely unsuitable to the daily labour of those who practise them. It has been well said that many a man's health is ruined through his recreation being unwisely chosen; and medical science confirms the observation. For example, it is a dangerous and unsafe expedient for a man whose daily labour involves hard muscular exertion, to indulge in sports and recreations that make a similar demand upon his constitution. Many a lad, ardent in the ranks of the volunteers, or heading a bicycle or football match, is, in reality, burning the candle at both ends. He is working when he should be resting;



and he is qualifying, not for a sound constitution, but possibly for a weakened heart and shattered nerves in after life. Conversely, there are thousands, who, pent up in offices and kept at sedentary employments day by day, would find immense benefit by participating in active but moderate physical exercise as a means of recreation. It is the wise choice of exercise and recreation that we argue for, as a primary feature in the discussion of this great and national question. And it is useless to attempt to place any facts before the public until the truth is appreciated, that for health our recreation must bear as clear and defined a relation to our life and work, as does the food we eat to the labour we accomplish. —*Health.*

THE SCIENCE OF HYGIENE.— Speaking recently at the Parkes Museum on the origin and development of the science of hygiene, Professor de Chaumont remarked that the observance of the Mosaic Law would have preserved large masses of people who had been from time to time swept away prematurely by disease. That law was so connected with religion that when pestilence befell the people it was declared with truth that the evils arose from the “disobedience to the law.” The remarkable immunity of the Jews, in all ages and countries, from the ravages of disease which affected other peoples, he attributed to hygienic causes—to the temperance and frugality of the Jews, to the care shown in the preparation of their food, in the selection of meat free from disease, and in the religious law that the whole household should be periodically cleansed in every part. He referred to the brutal prejudices

aroused against the Jews in Russia and Prussia, and to the ill-founded character of the accusation made against a people on the score of their following special hygienic laws. He passed on to review the hygienic provisions of the ancients, especially of the Greeks and Romans, and he adduced evidence to show that in the civil populations, as well as in the armies, hygienic rules and laws were carefully observed. He remarked upon the fact that in the large armies sent forth by Rome, in ancient times, there was an absence of those epidemics which were so destructive in the Middle Ages. The Christian period, after the fall of Rome, he described as an age when to live in dirt was to live in the “odour of sanctity,” dirt being regarded as the antithesis of heathenism; and he dwelt upon the evils resulting from the Christian disregard of hygienic rules.

RELIGIONS IN INDIA.—The latest statistics upon this subject, founded on the census of 1882, show that out of the grand total of the population of British India, which is given at 254,899,516, the various sects and castes of Hindoos made up no less than 187,987,450. The Mahomedans, who came next in order, numbered 50,121,585. The nature worshippers, or demonolaters, numbered 6,426,511; the Buddhists, 3,418,844; Christians, 1,862,634; Jains, a sect whose worship is mingled Buddhism and Hindoism, 1,221,896; the Sikhs, who are simple Theists, 853,426; and those who came under the heading of other creeds, or were altogether unspecified, 3,057,180. The Christians enumerated are exclusive of persons of European nationality. The number

of Roman Catholic Christians was set down as 963,058, or a little over a half the whole. Indeed, a strict scrutiny is stated to have brought out the total of native Protestant Christians as only a little over half a million. But this number shows the very satisfactory increase of 86 per cent. in ten years, as in 1871 the total was only 318,363; 80 years ago the number of native Christians was only 102,951. In 1861 this number had increased by 53 per cent., and again in 1871 by 61 per cent., so that there has been for some time back a rapid and unbroken progress.

ROME.—Home is sometimes thought flat and dull, and too often made so, just for the want of recognising what it stands for. The relations of life that go to form the household are the source not only of life's richest joys and most sacred memories, but also of some of the finest and noblest characteristics of men. The love, the fidelity, the forbearance, the self-sacrifice that are nourished by family life are among the richest possessions of humanity. Such life can never become wearisome or common-place, save to those who fail to comprehend its meaning or refuse to act in harmony with it.

CONTENTMENT.—Contentment produces, in some measure, all those effects which the alchemist usually ascribes to what he calls the philosopher's stone; and if it does not bring riches it does the same thing by banishing the desire of them. If it cannot remove the disquietudes arising from a man's mind, body, or fortune, it makes him easy under them.—*Addison*.

VANITY OF FEAR.—What we fear may not come to pass. No human scheme can be so accurately projected but some little circumstance intervening may spoil it. He who directs the heart of man at His pleasure, and understands the thoughts long before, *may*, by ten thousand little accidents, or an immediate change in the inclinations of men, disconcert the most subtle project, and turn it to the benefit of His servants. In the next place we should consider that, though the evil we imagine *should come to pass*, it may be much more supportable than we imagine—like rocks and steep precipices which look rugged and barren at a distance, but at our nearer approach we find little fruitful spots, and refreshing springs mixed with the harshness and deformities of nature. In the last place, let us consider that, as the thing we fear may not *reach us*, so we may not *reach* the thing we fear. Our lives may not extend to the dreadful point we have in view, He who knows all our failings, and will not suffer us to be tempted beyond our strength, is often pleased, in His tender severity, to separate the soul from the body and its miseries together. If we look forward to Him for help we shall never be in danger of falling down the precipices our imagination suggests.

THE HUMAN FOOT.—The human foot is an instrument admirably adapted to all the various uses it has to serve, which fashion has done its best to spoil by improper treatment. The bones of the instep are so adjusted as to form an arrangement which combines, in exquisite perfection, the resistance of the arch with as much elasticity as enables it

to bear safely the prodigious strain to which it is subjected. The whole frame of the foot is kept in position, and made capable of its proper range of movement, by means of muscles and tendons, constituting a living and sensitive bandage, increasing or relaxing its pull or pressure in the most exact obedience to our will. In a sound, free foot, each part of the machinery is in constant readiness to bring it into the required position, whether to lift the body, to bound, or to sustain the shock of the whole weight in coming down again, or to perform any other of a number of complications of movement. How perfectly the foot is adapted for these purposes, and is protected against too great pressure and sudden shock, is shown by the fact that such violent actions as leaping, or the being burdened with a weight twice or thrice that of the whole body, causes no uneasiness to a sound foot, the injury, if any, resulting from such exertions

being usually felt elsewhere. The skin, very thin and delicate on the upper part of the foot, is thick and tough, though soft and pliable, on the sole. Beneath it is a layer of fat, strengthened by strong fibres crossing it and binding it to the muscles and ligaments. The sole can endure great pressure and even violent shocks, but it is at the same time curiously sensitive, especially to the touch. It is very easily tickled. This property serves a very important purpose in walking, for the pressure upon the ground stimulates the muscles of the foot to their required activity, without any effort of the will, and indeed, without our being conscious of the operation. This spontaneous alertness of the muscles, on which the energy and grace of movement depend, can be secured only by their being kept uncramped, free, and well exercised.—  
*Popular Science Monthly.*

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AT CLOSE OF DAY.

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F you sit down at set of sun,  
 And count the acts that you have done,  
 And, counting, find  
 One self-denying act, one word  
 That eased the heart of him who heard ;  
 One glance most kind,  
 That fell like sunshine where it went,—  
 Then you may count that day well spent.  
 But if through all the livelong day  
 You've cheered no heart by yea or nay ;  
 If through it all  
 You've nothing done that you can trace,  
 That brought the sunshine to one face ;  
 No act most small,  
 That helped some soul, and nothing cost,—  
 Then count that day as worse than lost.



THE  
SHIPWRECKED FISHERMEN AND MARINERS'  
ROYAL BENEVOLENT SOCIETY.

—❦—  
“There is Sorrow on the Sea.”

—❦—  
THE SOCIETY'S OBJECTS.



THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY was formally and responsibly INSTITUTED on the 21st FEBRUARY, 1839,\* and thereafter—

*[The better to carry into effect the Society's charitable and benevolent Designs, for the benefit of the Seafaring Classes for whose welfare it was originally Instituted, and—*

*Further to carry out the same by undertaking or promoting, as part of the Objects and Designs of the Society, not only the Objects and Purposes before sought and undertaken by it, but also ANY OTHER Objects, Designs, or Purposes of a benevolent character, for the benefit and welfare of all and every or any of such Classes of Men, or those dependent on them]—*

duly INCORPORATED by “THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY” ACT OF PARLIAMENT, “13TH AND 14TH

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\* The disastrous storm in the Bristol Channel, in conjunction with some fearful calamities to fishing-boats, with great loss of life, on the North coast of Devon— which happened whilst there was still vividly impressed on the mind of the whole British Nation the remembrance of the wreck of the passenger steamer *Forfarshire*, on Hawker's Rock, in the Farne Islands, Northumberland, between the night of the 6th and the morning of the 7th September, 1838 (being the occasion of “Grace Darling's” daring deed of heroic rescue, with her father, in their coble-boat, from the Longstone Lighthouse)—led to the formation of “THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY” during the ensuing winter, at a specially influential Public Meeting, held in the London Tavern, on February 21, 1839, as recorded.

VICTORIA, CAP. LXXIII.," with ROYAL ASSENT of 29th JULY, 1850, having—amongst all the Society's many other benevolent Functions and Operations, thus under Special Statute permissible to it as a Charitable Corporation—the following NATIONAL OBJECTS in view:—

I.—ASSISTANCE TO THE SHIPWRECKED.

To render Necessary Assistance, and Board, Lodge, Clothe, and Forward Home, *all* Shipwrecked Fishermen, Mariners, &c., or other Poor Persons, of all Nations, cast Destitute upon the Coasts.

II.—RELIEF TO MEMBERS.

To relieve Fishermen, Mariners, &c., *Members of the Society*, for Loss of their Boats or Clothes (by Shipwreck, Storm, or other Accidents of the Sea), and otherwise in their Need and Extremity; and also to relieve their Widows and Orphans, &c.

III.—RELIEF TO NON-MEMBERS.

To administer Relief to Others, and those Dependent on them, of the Seafaring Classes for whose benefit the Society was Instituted and Designed, *although not Members of the Society*, according to the Circumstances of the Case, &c.

IV.—REWARDS FOR SAVING LIFE.

To grant Gold and Silver Medals, and other Honorary or Pecuniary Rewards, for Heroic or Praiseworthy Exertions to Save Life, from Shipwreck, &c., on the High Seas, or Coasts of the Colonies.

The Society's foregoing National Objects, with the various other Functions and Operations devolving upon it, are carried out by the Central Executive in London, and about 1,200 Honorary Representatives and Agents of the Society, stationed on every part of the Coast of the United Kingdom, as well as Inland, Abroad, and in the Colonies—by whom, in direct co-operation with the General Committee of Management, the Society's immediate organised relief is personally extended, on an average, to between 13,000 and 14,000 individuals annually.\*

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THE SOCIETY'S PROCEEDINGS.

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HE administration by the Society, as the one National Institution existing for the purpose, of the varied charitable aid embraced within the immense scope of its several National Objects, &c., necessarily involves a most comprehensive and very

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\* See the "Annual General Statistical Return" of the Society's Operations, as given at the commencement of "The Society's Work," under this Heading of "THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY."

voluminous series of Proceedings, of almost world-wide extent and bearing, fully to detail which, from time to time, would be entirely beyond the available limits of any periodical record.

Amongst many other similarly noteworthy and interesting references to the Society's Operations, however, the subjoined Announcements may here be given as having appeared in the columns of the Public Press, as shown, since the issue of the last Quarterly Number of this Magazine :—

REPRESENTATIVE FISHERMEN AT THE GREAT  
INTERNATIONAL FISHERIES EXHIBITION.\*

“ **I**N connection with the inauguration of the Great International Fisheries Exhibition, an element of the picturesque will be found in the costumes of the deputations of Scotch, French, and Dutch fishwives and their husbands, and of the Fishermen, to the number of about four hundred, brought up from different places on our coasts as representatives of their order, at the opening ceremony. For the housing and care of these visitors, during their stay of six days in London, arrangements were made by Mr. W. R. Buck, Secretary of ‘THE SHIPWRECKED FISHERMEN AND MARINERS’ ROYAL BENEVOLENT SOCIETY,’ in whose charge the several contingents specially remained throughout their sojourn in the Metropolis. Moreover, for the accommodation and greater comfort of these and others of the class who may visit the Exhibition later on, a house in the grounds, designated ‘Fishermen and Mariners’ Home,’ is set apart for a ‘Day Rendezvous’ and ‘Aid and Inquiry Resort;’ and this building, erected at the suggestion and cost of the Society just named, and provided with newspapers, &c., and various essential facilities, will be under the direction of the Secretary of the Society, for use of those concerned, during the whole period of the Exhibition.

“ Our piscatorial brethren appear to have been the lions of the moment, sharing to the fullest degree the honours of the Fisheries Exhibition, so that a short account of their visit will not prove uninteresting. In view of the national character of the occasion, the various Railway and Boat Companies passed the men to and from London free, and the expense of their maintenance in town was generously defrayed by members of both Houses of the Legislature, and by local contributions from the respective ports and districts represented. For some time previously preparations were made for their reception at the Sailors’ Home, Well-street, London Docks,

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\* From “ *The Times*,” “ *The Standard*,” “ *The Eastern Post and City Chronicle*,” &c.

“ though the capacity of that extensive Institution was somewhat  
 “ strained by the addition of so many as four hundred men to the  
 “ usual number of boarders. The worthy manager, Mr. Thomas  
 “ Balding, with his most indefatigable deputy, Mr. Clement Conrad,  
 “ assisted by their excellent staff, proved fully equal to the occasion,  
 “ however, and though, of course, a vast amount of work was entailed,  
 “ it is satisfactory to know that the men expressed themselves in terms  
 “ of high praise at the accommodation provided for them.

“ The Fishermen began to arrive on Friday, May 11 (being the day  
 “ preceding that fixed for the opening of the Exhibition), coming from  
 “ every fishing district in the kingdom, and were met at the various  
 “ railway stations by officials from the Home, who conducted them to  
 “ their destination ; and by the time all had assembled together, Eng-  
 “ land and Wales, with the Isle of Man and Channel Islands, were  
 “ duly represented by some two hundred men, Scotland by one  
 “ hundred and fifty, and Ireland by fifty, these last accompanied  
 “ by Mr. Thomas F. Brady, Her Majesty's Inspector of Fisheries in  
 “ Ireland.

“ The next morning the entire body were early astir, and, though  
 “ the weather was unfortunately wet, they were marched, after  
 “ breakfast, to Aldgate Station (accompanied by the brass band of  
 “ the Boys' Industrial School), where a special train was in waiting to  
 “ convey them to South Kensington. The details of the opening of  
 “ the Exhibition are well known, so it is needless to recapitulate them;  
 “ suffice it to say that the Fishermen lined each side of the corridor  
 “ by the Prince of Wales' own Pavilion, and had the satisfaction of  
 “ seeing the Royal Procession passing and repassing through their  
 “ midst—their appearance and stentorian cheering, each time, being  
 “ one of the most noticeable features of the ceremony—and returned  
 “ to the Home tired, but highly delighted with their excursion.

“ The scene at breakfast, on the Sunday morning, will long be  
 “ remembered by those who witnessed it, and certainly no such sight  
 “ has been known in the annals of the Institution. Including the  
 “ boarders, upwards of seven hundred men were served, the vast limits  
 “ of the dining-hall being barely sufficient for their accommodation.  
 “ Afterwards, some went to St. Paul's Cathedral, others to West-  
 “ minster Abbey, and many of the Irish contingent to the Roman  
 “ Catholic Church in Prescott Street ; but the larger number pro-  
 “ ceeded to the Metropolitan Tabernacle, where an impressive address  
 “ was delivered by the Rev. C. H. Spurgeon. After dinner the greater  
 “ proportion accepted the invitation of the Zoological Society, and  
 “ went to the Gardens at Regent's Park, where they were met by the  
 “ Baroness Burdett-Coutts and others ; while in the evening they,

“ almost to a man, attended the service at the Church of the Sailors’  
 “ Home itself, St. Paul’s, Dock Street, the sermon being preached by  
 “ the Bishop of Bedford, in accordance with the personal request of  
 “ the Vicar and Honorary Chaplain; the Rev. Dan Greatorex.

“ Amongst the doings of the Fishermen, when not further engaged  
 “ at the Exhibition, during the remainder of their stay in London,  
 “ were visits by command and invitation to Windsor, where they  
 “ were shown over the Castle, and seen by the Queen from one of the  
 “ windows of the Royal apartments, subsequently dining in the Glass  
 “ House at the Royal Mews; to Marlborough House, heartily welcomed  
 “ and hospitably entertained by the Prince and Princess of Wales; to  
 “ the Mansion House, where they spent a most agreeable evening  
 “ with the Lord Mayor and Lady Mayoress; to the Westminster  
 “ Aquarium, by special arrangement of the Baroness and Mr. Burdett-  
 “ Coutts; and finally to Fishmongers’ Hall, to meet Mr. J. H.  
 “ Fordham, Prime Warden, and to the Tower, the Houses of Parlia-  
 “ ment, &c., &c.

“ The great majority of the men had never before visited the  
 “ Metropolis, many indeed having never previously left the precincts  
 “ of their native villages, and they are understood to have expressed  
 “ themselves as completely overcome by the marks of kindly interest  
 “ and attention showered upon them from all sides, their loyal grati-  
 “ tude for the notice taken of them by Her Majesty, and the various  
 “ members of the Royal Family, in particular knowing no bounds.  
 “ It will, too, afford peculiar satisfaction to the many well-wishers  
 “ of the fishing classes to be made aware that from first to last there  
 “ was not a single case of even the slightest misconduct; the several  
 “ representative groups and nationalities, on the contrary, vieing  
 “ throughout with each other how best and most effectively to carry  
 “ out the requisite instructions from day to day.

“ Before departing homewards, at termination of their six days’  
 “ sojourn in London, the Fishermen, as their last act, presented a  
 “ bouquet of choice flowers, intertwined with which the letter “ F ”  
 “ appropriately stood forth, to the Princess of Wales, in response to  
 “ which the subjoined letter was received by the Secretary of ‘ THE  
 “ ‘ SHIPWRECKED FISHERMEN AND MARINERS’ SOCIETY,’ in charge of the  
 “ four hundred representatives during their stay, as already men-  
 “ tioned:—‘ Marlborough House, May 19, 1888.—Dear Sir,—I am  
 “ ‘ directed by Her Royal Highness the Princess of Wales to inform you  
 “ ‘ that it has given Her Royal Highness great pleasure to receive the  
 “ ‘ beautiful bouquet which the Fishermen of the United Kingdom, who  
 “ ‘ had come to London for the opening of the International Fisheries  
 “ ‘ Exhibition, have presented to her as a token of their loyal attach-



“ ‘ment to the Royal Family, and which was brought here by a  
 “ ‘deputation of three of their number, accompanied by yourself.  
 “ ‘The Princess of Wales fully appreciates the kind feelings which  
 “ ‘have prompted the offer of this present, and Her Royal Highness  
 “ ‘requests you to convey the expression of her best thanks to the  
 “ ‘donors.—I am, &c., M. HOLZMANN, Private Secretary.’ ”

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THE SOCIETY'S EXHIBITS AT THE  
 GREAT INTERNATIONAL FISHERIES EXHIBITION,  
 SOUTH KENSINGTON.\*

—◆◆◆—

“ **I**N the southern arcade of the Exhibition Building, where the  
 “ ‘exhibits bearing on the British sea fisheries are collected,  
 “ ‘and placed suggestively near the boat, freshly painted, but warranted  
 “ ‘to be the original coble, in which Grace Darling and her gallant old  
 “ ‘father saved nine of the survivors from the wreck of the *Forfarshire*,  
 “ ‘is a series of photographs of vessels that have come to grief at sea.  
 “ ‘Of some which, so far as appearances go, might be supposed to have  
 “ ‘been the aggressors in marine encounters, the stems have been  
 “ ‘wrenched off; others have gaping, jagged wounds in their sides;  
 “ ‘but all are safely and without prejudice described as having been  
 “ ‘in collision’ with such and such a ship. This curious, and perhaps  
 “ ‘instructive, collection of battered unfortunates is lent by Messrs.  
 “ ‘Fletcher, Son, and Fearnall, and the photographs were taken while  
 “ ‘the vessels were in the Union Dock, Limehouse, awaiting repair.  
 “ ‘The stand on which they are hung, behind the historic boat lent by  
 “ ‘Mrs. Joicey, is that of ‘THE SHIPWRECKED FISHERMEN AND MARINERS’  
 “ ‘ROYAL BENEVOLENT SOCIETY,’ who, with one thing and another, make  
 “ ‘a very interesting show at the Exhibition. Among their exhibits are  
 “ ‘the Aneroid Barometers which the Society lends to fishermen. These  
 “ ‘instruments, in the use of which the rough and ready seafaring men  
 “ ‘of our coasts are easily instructed, are placed in strongly-made oaken  
 “ ‘boxes. There are no fixings to be misplaced, lost, or broken. Pieces  
 “ ‘of stout cord, which fasten down the lid when the box is shut, serve  
 “ ‘to hang it up by when opened and ready for use in the cabin. A  
 “ ‘rather larger oaken case with a glass front, containing also a ther-

\* From “*The Times*,” June 7, 1883. See, also, the allusion to these Exhibits in Special Article upon “The Great International Fisheries Exhibition,” at page 161 of the current Number of this Magazine.

“mometer, and a weather chart for the recording of daily observations, is provided to hold the instruments, in public use, while they are at the stations of the Society; and it may not be out of place to add, seeing that the charitably-intended work of this Institution is carried on by means of voluntary contributions, that there is a collecting-box in the lower part of the case. A hundred of these Marine Aneroid Barometers were made by Messrs. Dollond & Co., for a gentleman who wished to make a suitable present to the Society.”\*

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THE CENTRAL HONORARY AND EXECUTIVE STAFF,  
AND LOCAL REPRESENTATIVES, &c.

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**S**INCE the last announcement, Captain John Bayford Butler, of the Royal Navy, has been duly elected to fill an existing vacancy upon the Society's General Committee of Management, in London, and has taken his seat at the Board, as a new member, accordingly.

The auditing of the Society's Accounts has been this year placed in the hands of the Messrs. Quilter, Ball, Crosbie, Glegg, and Welton, Chartered Accountants, the Committee unanimously expressing their grateful thanks to the late Honorary Auditors, Messrs. Robert Walker and Henry Glanvill, on their retirement, for their past very able and much appreciated services.

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**A**MONGST its 1,200 stations, &c., on the Coast, Inland, Abroad, and in the Colonies, as many as twenty-seven fresh appointments of Local Honorary Representatives and Agents of the Society have, from death, change of residence, or other unavoidable cause, been rendered necessary since the previous reference to such alterations, in this Magazine. In recording their obligations, on behalf of the Society, to all those who had thus—in some instances for many years—so heartily laboured in furthering the Society's charitable work, the Committee of Management have specially had to deplore those changes occasioned by the decease of Honorary Representatives and Agents as follows: Ipswich—Isaac Walker, Esq.; Kenmare—Mr. D. Downing; and Passage East—Rev. G. L. C. Pasley.

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\* See the notification as to gift of these Barometers, in a previous Number (January, 1883, at p. 74) of this Magazine.

THE SOCIETY'S WORK.

**U**NDER the subjoined "Annual General Statistical Return," as well as "Quarterly General Summary of Relief, &c."—comprising particulars of the Society's Work, in accordance with its several specified National Objects,\* and various other Functions—will be found the interesting, and, in many respects, touching record of the Society's benevolent Operations on behalf of all the Seafaring Classes of Men, and those Dependent on them, both during the whole of the past year, 1882, with those preceding it, from the Society's first Institution in 1839, and since the issue of the last Annual or Quarterly Statements:—

ANNUAL GENERAL STATISTICAL RETURN.

ASSISTED, AND RELIEVED, &c.—UNDER "OBJECTS I., II., III."

<b>S</b> HIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS, FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—DEPENDENT WIDOWS AND ORPHANS, &c.	} Last Year (1882) 13,145 Previous Years 325,046

**T**OTAL NUMBER, FROM THE INSTITUTION OF THE SOCIETY, IN 1839 .... 338,191

LIFE-SAVING REWARDS, &c.—UNDER "OBJECT IV."

<b>H</b> ONORARY AND PECUNIARY REWARDS FOR SAVING LIFE .....	} GOLD MEDALS ..... 38 SILVER MEDALS..... 301 PECUNIARY AMOUNT, £2,358	

**L**IVES SAVED, FOR WHICH RECOGNITION HAS BEEN GRANTED ..... 7,208

MARINERS, &c., PROVIDENTLY "SELF-HELPING"—UNDER "OBJECT II."

**A**NNUAL NUMBER (1882) CONTRIBUTING THE REGULATED SMALL YEARLY PAYMENT, TO THE SOCIETY'S FUNDS, AS "MEMBERS" \* ..... 53,500

QUARTERLY GENERAL SUMMARY OF RELIEF, &c.

**T**HE total Number directly succoured or otherwise relieved, &c., by the Society's Central Executive in London, and by its Honorary Representatives and Agents in all parts of the United Kingdom, as well as

\* See the details given under "The Society's Objects," at the commencement of this Heading of "THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY."

† This Number of Contributing "Members," here given, which is being largely added to from year to year, represents those Mariners and Fishermen, &c., of all grades, embraced within the scope of the Society's wide-spread efforts, as quoted in its published Prospectus, &c., for "Specially helping all the Fishing and Seafaring Classes providently to help themselves."

Abroad, and in the Colonies—under the Society's respective National Objects viz., I. "Assistance to the Shipwrecked;" II. "Relief to Members;" III. "Relief to Non-Members;" IV. "Rewards for Saving Life, &c."—was as follows, during the past Quarter, ending 30th June, 1888 :—

SHIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS,  
FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—  
DEPENDENT WIDOWS AND ORPHANS, &c., &c. .... 1,954 .

OF the many Honorary Agencies from which the more numerous claims embraced within these figures were received, the following (appending also the names of the Society's Local Honorary Representatives), with the Amounts allotted to each, may be specially mentioned, viz. :—Aberdeen (Mr. D. Mearns), £64; Newcastle (Messrs. James Potts and Son), £22; North Shields (Mr. G. French), £180; South Shields (Messrs. Crisp and Hails, and Rev. H. W. Farrar), £349; Sunderland (Mr. R. M. Hudson), £240; Yarmouth (Mr. G. G. Watson), £61—giving a total of £1,466 (out of the Quarter's Amount of £4,987, granted for these particular "Objects of the Society") as issued, during the past Quarter, at these Agencies and Seaports, &c., alone.



THE following Special Awards of the Society's Silver Medals, &c., have been lately made for heroic or praiseworthy exertions, at personal risk, to Save Life from Shipwreck at Sea (in accordance with the Society's "Object IV."), viz. :—

FULL.—In the cases of the undermentioned Smacks of the Port, for rescues, as shown, at much risk, in a heavy gale at sea, upwards of 100 miles N.E. of the Humber, between the 2nd and 6th December, 1882 :—

1. To the second and third hands, GEORGE HOWE and HENRY KNIGHT, of the *Minerva*, who manned the Smack's boat, and, after two attempts, saved the Crew of the German schooner *Johannes*—the Society's Silver Medals.
2. To the second and third hands, GEORGE HAME and WILLIAM TURNER, of the *Liberty*, who in the Smack's boat took off the whole Crew of fourteen hands from the Swedish Barque *Charlotta*—the Society's Silver Medals.
3. To the second and third hands, JOHN BOWMAN and EDWARD HANTZ (the latter subsequently washed overboard and drowned), of the *Lusty*, who saved, in the Smack's boat, the Captain and five men forming the Crew of the Dutch Schooner *Anna Ellena*—the Society's Silver Medals.

And, in respect of the same services, in particular recognition of their gallant and humane efforts, to each of the Masters of the Smacks in question, SAMUEL BIRCH (*Minerva*), EDWARD CAWOOD (*Liberty*), and BEN BACKHOUSE (*Lusty*)—one of the Society's Marine Aneroid Presentation Barometers for Fishermen.

**L**ONDON.—(1) In case of the ship *Cardiganshire*, of Liverpool, for rescue of Crew of the Barque *Davina*, of Liverpool, when foundering at sea on May 10, 1881 :—

To the Chief Officer of the ship *Cardiganshire*, WILLIAM JONES, who manned the Lifeboat, and also personally rescued, under exceptional circumstances, the Captain's wife and Second Mate of the Barque *Davina*—the Society's Silver Medal.

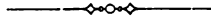


**L**ONDON.—(2) In case of the s.s. *Burns*, of London, for the gallant rescue of the Crew of the s.s. *Red Star*, of North Shields, driven ashore outside the Harbour of Sulina, on October 13, 1882 :—

To the seven Seamen manning the boat effecting the rescue, with determined bravery and after prolonged effort, the Society's Silver Medals as follows, viz., FRANK HOOLE (Boatswain), GEORGE GIRLING, JOSHUA CARTER, WILLIAM WELBOURNE, LEWIS SMITH, and JAMES DOWNCY.

Also, to WILLIAM TAYLOR, Chief Officer of the s.s. *Lucretia* (belonging to same service as the unfortunate s.s. *Red Star*), who likewise personally volunteered his services in the rescuing boat—the Society's Silver Medal.

Further, to the Captain of the s.s. *Burns*, THOMAS JEFFERSON, was specially awarded one of the Society's Marine Aneroid Presentation Barometers, in recognition of his gallant and humane conduct upon the occasion in question.



**L**ONDON.—(3) In case of the s.s. *Antenor*, for rescue, from on shore at Ras Asir, on July 27-28, 1882, of the Master, Second Officer, Third Officer (with broken leg since time of wreck), Quartermaster, and a passenger, with twelve others of the Crew, being all the survivors out of forty-nine persons on board the s.s. *Fleurs Castle*, lost three miles south of Ras Asir, near Cape Guardafui, on July 9, 1882 :—

To the Captain of the s.s. *Antenor*, JOHN THRELFALL BRAGG, Lieutenant R.N.R. (already in possession of the Society's Framed Testimonial\*)—one of the Society's Marine Aneroid Presentation Barometers.

To the Chief Officer, RANDOLPH S. CAMPBELL, in charge of the ship's Lifeboat effecting the rescue, under special circumstances, through surf, &c.—the Society's Silver Medal.

To the five Seamen manning the boat in question (CHARLES LILLEY, JOHN ROBINSON, PATRICK HARE, ALFRED TITHERIDGE, and JOSEPH WILLIAMS)—a Special Pecuniary Award of £10 10s., in general recognition of their services on the occasion.

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\* See Account of this previous service at p. 70 of the Number of this Magazine for January, 1881, in the Annual Volume, No. xxviii.

SPECIAL CONTRIBUTION LIST.

COLLECTIONS, DONATIONS, LEGACIES, SERMONS, &c., ON BEHALF OF THE SOCIETY, RECORDED SINCE THE ISSUE OF THE LAST QUARTERLY STATEMENT.

	£	s.	d.		£	s.	d.
<b>L</b> ONDON. — Joseph Roberts, Esq. ....	50	0	0	<b>B</b> LAKENEY. — Moiety of proceeds of two Entertainments by Rev. J. M. Rendall, of East Dereham (per C. J. Temple-Lynes, Esq., Hon. Agent) .....	2	0	0
Messrs. Fredk. Huth & Co.	21	0	0	<b>B</b> ROUGHTON.—Collected from Sunday-school Class, by Mr. Wm. Wibberly.....	0	3	0
Messrs. J. S. Morgan & Co.	20	0	0	<b>P</b> LFRACOMBE.—Second Concert by "The Snowflake Minstrels," from J. H. Huxtable, Esq., Hon. Sec. (per Capt. G. B. F. Swain, R.N., Hon. Agent) .....	8	0	0
Dr. H. S. Morris (no address)	5	0	0	<b>R</b> OCHDALE. — Concert-Lecture in Public Hall, April 18, (per Robt. Hope Brown, Esq.) .....	5	1	0
Collecting Boxes on board—				<b>S</b> TROMNESS.—Collection in United Presbyterian Church, April 1, after Sermon by Rev. D. Woodside (per Mr. J. R. Garriock, Hon. Agent) .....	7	2	3
SS. <i>Ann</i> .....	0	13	4				
SS. <i>Orient</i> .....	0	9	3				
SS. <i>Chimborazo</i> .....	0	8	2				
SS. <i>Garth Castle</i> .....	4	10	10				
SS. <i>Cuzco</i> .....	1	3	5				
SS. <i>Keplar</i> .....	1	17	9				
SS. <i>Goa</i> .....	4	4	4				
SS. <i>Kinfauns Castle</i> .....	2	0	0				
SS. <i>Shannon</i> .....	5	7	6				
SS. <i>Ganges</i> .....	2	0	0				
"From One in humble life, whose dear departed Brother was a Sailor" .....	0	3	0				
"A Friend to the Shipwrecked Mariners" .....	0	2	6				
"From Little London Children, for Poor Sailors," per Rev. A. Styleman Herring.	0	13	6				
"West Indian" .....	1	0	0				
"A Thankoffering' from a Captain," per Rev. Charles Griffiths, Bristol .....	1	0	0				
<b>B</b> ARNSTAPLE.—Collection in Tavistock Church, after Sermon by Rector, Rev. C. J. Down, B.A., April 15 (per Capt. G. B. Pearse, Hon. Agent).....	5	1	0	<b>L</b> EGACIES RECEIVED:—			
				Edwin Thomas, Esq. ...	100	0	0
				Mrs. Jane Kemplay.....	9	0	0
				James N. Paterson, Esq. ..	450	0	0
				C. W. Mason, Esq. ....	50	0	0
				G. J. Eyre, Esq. ....	200	0	0





# THE YEAR, AND THE MONTHS.

## 1883.

[Jewish Calendar—5643-44. Mohammedan Calendar—1300-01.]



OLDEN NUMBER—3: SOLAR CYCLE—16: DOMINICAL LETTER—G: JULIAN PERIOD—6,596: EASTER SUNDAY—MARCH 25: WHIT SUNDAY—MAY 13: ADVENT SUNDAY—DECEMBER 2.

### THE SEASONS.

“*SPRING—Showery, flowery, bowery:  
SUMMER—Hoppy, croppy, poppy.  
AUTUMN—Wheezy, sneezy, freezy:  
WINTER—Stippy, drippy, nippy.*”

Lines on French Calendar, 1793.

SPRING, March 20, Sun enters Aries, 11 P.M. | AUTUMN, Sept. 23, Sun enters Libra, 10 A.M.  
SUMMER, June 21, Sun enters Cancer, 7 P.M. | WINTER, Dec. 22, Sun enters Capricornus, 4 A.M.

The EQUINOXES—at Spring and Autumn; and the SOLSTICES—at Summer and Winter.

ECLIPSE OF THE MOON (PARTIAL)—April 22, invisible at Greenwich.

ECLIPSE OF THE SUN (TOTAL)—May 6, invisible at Greenwich:

ECLIPSE OF THE MOON (PARTIAL)—October 16, visible, partly, at Greenwich.

ECLIPSE OF THE SUN (ANNULAR)—October 30-31, invisible at Greenwich.

### JULY.

“*Sweet summer-time,  
When the leaves are green and long.*”

OLD VERSE.

#### SUN.

1st DAY ..... Rises 3h. 40m. Sets 6h. 18m. | 15th DAY ..... Rises 4h. 2m. Sets 6h. 9m.  
8th DAY ..... Rises 3h. 54m. Sets 6h. 15m. | 22nd DAY ..... Rises 4h. 11m. Sets 6h. 2m.

#### MOON.

4th DAY ..... New Moon 3h. 4m. P.M. | 20th DAY ..... Full Moon 3h. 31m. A.M.  
12th DAY ..... First Quarter 7h. 40m. A.M. | 27th DAY ..... Last Quarter 0h. 13m. A.M.  
IN APOGEE, 12th DAY ... 3 P.M. IN PERIGEE, 25th DAY ... 1 P.M.

### AUGUST.

“*August led a lovely maid  
Forth by the lily hand, the which was crowned  
With ears of corn, and full her hand was found.*”

SPENSES.

#### SUN.

1st DAY ..... Rises 4h. 25m. Sets 7h. 47m. | 15th DAY ..... Rises 4h. 47m. Sets 7h. 22m.  
8th DAY ..... Rises 4h. 36m. Sets 7h. 35m. | 22nd DAY ..... Rises 4h. 58m. Sets 7h. 8m.

#### MOON.

3rd DAY ..... New Moon 1h. 26m. A.M. | 18th DAY ..... Full Moon 0h. 54m. P.M.  
11th DAY ..... First Quarter 1h. 29m. A.M. | 25th DAY ..... Last Quarter 5h. 32m. A.M.  
IN APOGEE, 9th DAY ... 10 A.M. IN PERIGEE, 21st DAY ... 7 A.M.

### SEPTEMBER.

“*Month of the harvest and its queen.*”

HARVEST SONG.

#### SUN.

1st DAY ..... Rises 5h. 14m. Sets 6h. 46m. | 15th DAY ..... Rises 5h. 36m. Sets 6h. 14m.  
8th DAY ..... Rises 5h. 25m. Sets 6h. 30m. | 22nd DAY ..... Rises 5h. 47m. Sets 5h. 53m.

#### MOON.

1st DAY ..... New Moon 2h. 14m. P.M. | 16th DAY ..... Full Moon 9h. 41m. P.M.  
9th DAY ..... First Quarter 6h. 38m. P.M. | 23rd DAY ..... Last Quarter 0h. 51m. P.M.  
IN APOGEE, 6th DAY, 4 A.M. IN PERIGEE, 18th DAY, 7 A.M.

ILLUSTRATED] “The Shipwrecked Mariner.” [MAGAZINE.

JULY, 1883.





FRONTISPIECE.—“The Shipwrecked Mariner.”—OCTOBER, 1883.



“TOILERS OF THE DEEP.”



Published under the Auspices of "The Shipwrecked Mariners' Society."

## THE GREAT INTERNATIONAL FISHERIES EXHIBITION.



[SECOND NOTICE.\*]



AS a sequel to the more general and introductory remarks which have already appeared upon the subject in these pages, we now proceed, by what we will term "A Walk through the Fisheries Exhibition," to place before our readers, in greater detail, some further descriptive account of this vast collection of maritime objects. The International Fisheries Exhibition, now in the last month of its existence, has proved its importance by the passage of more than two millions of visitors through its gates. A considerable proportion of these consisted of parties of fishermen and sailors from the seaports, to whom the courtesy of a free admission was extended by the Executive Committee. Large excursions of country visitors, amounting in several cases to more than a thousand in a party; then schools, public and private, and a great number of public institu-

\* See First Notice, in the preceding Number (July, 1883) of this Magazine, page 161.

tions, have, in addition to the general and regular crowd of the British public, kept the galleries thronged with appreciating visitors for the six months during which they have been opened.

By these means alone a wide extension of knowledge of the specific subjects illustrated must have been promoted, and interest excited in the general question of the relation of the fisheries to our modern life. But, in addition to the passing crowds of visitors, there are to be reckoned amongst those whose attention is attracted, by the Exhibition, to the fisheries, the readers of the body of literature published in connection with the International Conferences, which will form a safe guide for the future treatment of the interests and industries affected. In these, not superficially discernible, but open to the eye of the thoughtful observer, are the results of world-wide and life-long experience applied to details—seeds which will germinate, with or without another exhibition, and blossom into practical improvements and economies.

Before the great show closes let us take a survey of it with our readers, hastily of necessity, and superficially, because a hundred times the space at our disposal would not suffice for an exhaustive notice of the objects collected.

Entering, then, the vestibule at the main entrance, we find there all things ornamental, and rich, and rare, among the products of the sea; and, in the first place, pearls and corals, the former carrying our minds to the fisheries of Ceylon, the rude catamaran, with its crew of black-skinned and unclad, but slim and symmetrical, Hindoos, rolling and pitching awkwardly in their ill-managed, roughly-built craft. We see them proceed to the fishing-grounds, and lower the selected diver, with a block of stone at his feet, by a long coir rope, to the dark field of his labour, where he gathers his crop of pearl oysters in haste and fear, for the absence or presence of sharks is a matter of entire uncertainty.

The coral fishery involves no such risk. There is a model in the Italian Court of its process, showing a sturdy crew of a dozen Italian sailors propelling, with long sweeps, a heavy vessel, from the stern of which an iron grapnel hangs, by which the coral branches are raked up from the bottom of the sea, and cast into a trawling-net attached.

A model, exhibited by H.R.H. the Princess of Wales, illustrating the process of trawling, is well placed in the vestibule, introducing

the student of the Exhibition to a study of the various forms of the trawling net shown in the chief gallery below.

Passing on, then, down the steps to the long principal arcade of the Exhibition, devoted to the British deep-sea fisheries, we notice first these immense engines for trawling, and wonder how, among the



A BRITISH FISHING STATION.

turmoil and unsteadiness of the waves, it is possible for such unwieldy objects to be raised with their burden from the bottom of the sea.

For this class of work a special construction of vessel is required, and the whole centre of this gallery is occupied with models, many of extreme beauty and finish, of the various kind of "trawlers" designed. Amongst them are many other models, and a few full-sized craft, including, as previously referred to, the *Grace Darling*, and the boat

used in the *Eira* expedition, with some others, remarkable for the interest of their story, or for some novelty in their construction. We have not the space wherein to recount particulars of our visit to all these specimens, but the collection is one which will long be remembered by those specifically interested who have studied it.

From the centre of this arcade a broad, open way leads us between "The Fishermen and Mariners' Home," or "Day Rendezvous, and Inquiry Office" (as specially erected under the auspices of "THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY," for use of all seafaring men visiting the Exhibition), and the machinery in motion, and so under an arch to the beaver tank, on the left of which we enter the building appropriated to the Belgian, Dutch, Norwegian and Swedish sections. These we must pass very hurriedly, unfortunate though it be to have to do so. Especially striking and beautiful, however, and most interesting objects, are the pictures along the walls of the Norwegian gallery, illustrating the scenery and the wonderful atmospheric effects of the high latitudes of the North. The gathering of a fishing fleet off the mountains of Iceland is peculiarly attractive in the dreamlike unreality of the vapour of cloud, penetrated by the horizontal rays of the sun, that hangs like a soft curtain over the snow-covered mountains, and casts its warm reflection on the sea. This court is full of objects illustrating the fishery industries of the far North, and has in the centre a trophy in a circular shape, around which all kinds of craft used in the northern seas are sailing, in the shape of miniature models; and over against these same models stands one of the thousand-year-old Viking ship, discovered on the Norwegian coast, restored for comparison with the naval architecture of modern times, of which it is the antetype. Crossing the dividing space from Norway to its rival, Sweden, we find a similarly valuable assortment of samples of produce of the seas, and of natural history specimens, amongst which a number of large skeletons of the northern species of whale is prominent; and in a glass case, wooden figures of a skin-clad Esquimaux family, occupied in the miserable occupation of angling through a small hole in the ice with a line and bait. Similar illustrations of Indian life attract the eye of the visitor entering the United States Court, here, in the form of Red Indians pursuing the larger species of fish with harpoon and canoe. This court alone would repay the visitor for more than a few days' study of it, possessing, as it does,

a perfect collection of stuffed or modelled specimens of the fishes of the American coasts, and lakes, and rivers, and an equally complete illustration of their commercial utilisation; and, from a scientific point of view, a still more exhaustive museum of specimens in spirits or microscopical preparations. No country has devoted the same amount



TUNNY FISHING.

of labour and learning to the Exhibition as the United States, and none approaches its section for thoroughness and interest.

The United States division is separated from that of the Dominion of Canada only by a narrow passage, and the rivalry of the neighbouring—may we not say sister?—nation is well exemplified. The Canada

section, besides an exhaustive collection from the mercantile and scientific points of view, dealing more than the States do with the utilitarian question, exhibits remarkable refrigerators, in which monster halibuts, salmon, and other fish indigenous to the Dominion are shown, frozen and fresh, after a residence in ice of more than a year. The enterprising Canadian Committee imported for this purpose their own supplies of ice, which lasted through the summer. Then, from Canada, we enter the court of Newfoundland, distinguished by its remarkable collection of stuffed specimens of fur-bearing animals, seals, walruses, and polar bears. On either side of the block of galleries just described are iron sheds, in which Russia, on the west, and Spain, on the east, display full and valuable collections of the commercial products of their seas. Their collections have, further, a scientific interest and value, but are not so attractive to the ordinary visitor as some of the less valuable but more "sympathetic" collections.

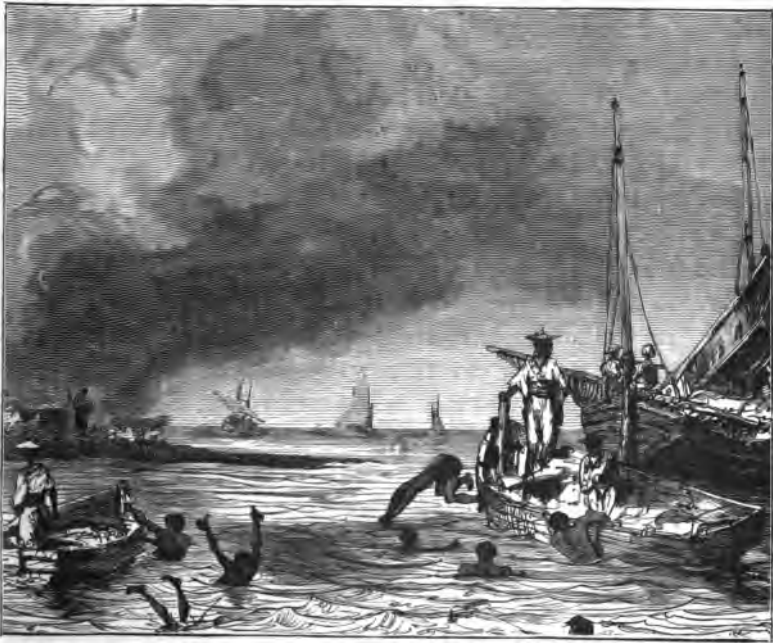
The north end of either of these courts will bring the visitor out into the wide and open arcade called "The Promenade," reserved principally for festivals of music or ceremony. Here the imposing pageant of the opening ceremony was held, and the arcade was found admirably adapted for a grand *coup d'œil* on the occasion, showing stars and garters, uniforms, gold lace, and feathers to the best advantage.

The objects exhibited in this court have so high an interest to the classes concerned with them, that quite a large number of visitors on their frequent visits to the Exhibition make their way straight hither, and remain in admiration of the display until they leave. For this is the court for the implements of modern angling, the rods and lines, flies, artificial baits, and other appliances, which share their empire of the minds of the disciples of Isaac Walton only with the *four miles of stuffed fish* to be found in the rows upon rows of glass cases in the permanent arcade.

"Yet fish there be that neither hooks nor line,  
Nor snare, nor net, nor engine can make thine;  
They must be groped for, and be tickled, too,  
Or they will not be caught, whate'er you do."

The eastern extremity of the Promenade opens upon the gallery which, for beauty of decoration, and general popular interest of contents, bears away the palm of the whole Exhibition. On the north,

China has so thoroughly nationalised her allotted space, that the two living and breathing sons of the Celestial Empire, and the dozen wooden images of their compatriots, are as perfectly at home as the marvellous, comical, wonderfully-finished models of junks, Chinese waterside scenes, and fishing-boats. In these, and in the similar collection of models in the adjacent Indian Court, the humour of the little wooden dolls, representing boatmen and passengers, is so remarkable, that visitors, especially children, greet them with shouts of



FISHING IN THE INDIAN OCEAN.

laughter. The nautical visitor will study with wonder the frail constructions, with their frailer rigging, and sails of woven palm-leaf, in which the Chinese boatmen venture on the deep; and in Ceylon the rough catamaran, bound together without rivets or nails, is constructed to ride over the heavy surf of the coast. A remarkable object in the Chinese Court is the cormorant boat. This is life-size, and contains a spirited figure of a Chinese boatman, with a crew of a score of black cormorants, all busily fishing for their master over the sides

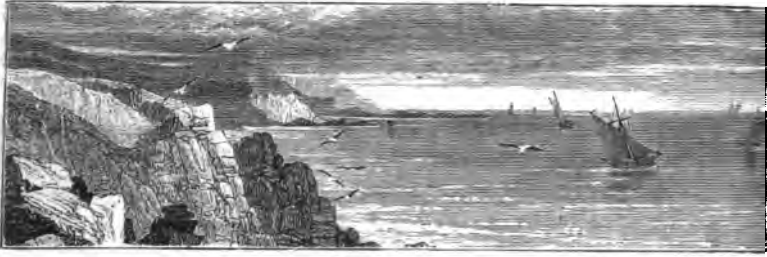


of the boat. Some are presented with fishes in their mouths, others plunging to seize them ; all have rings round the neck, preventing them from swallowing the prey. Amongst the Indian figures a group forming a fish market is very amusing, the variety of action of the women, lifting their trays, carrying them poised on their heads, or chaffering in a bargain, being represented with a remarkably true sense of humour. In the same rich gallery are the collections of Japan, Ceylon, Chili, the Straits Settlements, some foreign European countries, and the Australian Colonies. It is balanced by a similar building on the western side of the grounds, which contains the collections of a number of European countries, and opens into the special section of pisciculture, which of itself constitutes, for a large section of the visitors, the only great centre of interest in the grounds. Here we see the myriad-fold produce of the roe of the salmon and other fishes, saved from the innumerable agencies of destruction that beset it unprotected, and carefully tended and hatched, and the fry nursed from stage to stage of their precarious existence, until they are shown to us fit to be turned out upon the world of waters to provide and to fight for themselves, to live, that is (ungrateful for the protection that was given to their own infancy) by the wholesale slaughter of their kind ; for, provide as man may, fishes will eat each other according to their kind.

Near to the pisciculture, and the oyster-breeding, and mollusc collection, is the aquarium of live fishes, where those who are indifferent to the pressure of a crowd may contemplate these silent and solemn existences at home in their natural element, and indulge in conjecture of the extent and limits of their appreciation of the compliment paid to their importance in the world of men by their personal introduction to the tanks of the Great International Fisheries Exhibition of 1883.

J. W. M.





## IBYLLS OF THE SEA.



“The sounds and seas, each creek and bay  
With fry innumerable swarm, and shoals  
Of fish, that with their fins and shining scales,  
Glide under the green wave in sculls that oft  
Bank the mid-sea . . . or, sporting, with quick glance,  
Show to the sun their waved coats dropt with gold.”

MILTON.



### IV.—THE FAUNA OF THE SEA.



HERE am I by the sea—as is my wont—and, to be in my element, where else should I be found? Neither my kin nor I ever deserved to be called “land-lubber;” and though my ancestry may be traced back (according to my pseudonym) in unbroken succession from the time when the Oolitic and Cretaceous rocks were formed, in which rocks many of my progenitors were embalmed and entombed more lastingly than ever were the corpses of great princes, yet we as a race never lost our “sea-legs.” \*

These legs, seemingly so fragile, enable my kindred and me to move in any direction, to burrow in the sand—even to excavate our bed in the limestone rocks, or to move on the land. We are found in many seas; † to what extent our legs have taken us hither and thither I

\* The shell and spines of the *Echinus* are not periodically thrown off, like the shell of the crabs, to allow for growth, but according to Agassiz, there is a beautiful spiral arrangement for the addition of new plates.

† See “Voyage in the *Challenger*,” by Sir C. Wyville Thomson.

know not, but whatever our individual rate of locomotion, we have not been reproached with being "too fast."

I hesitate to say more of myself or of mine just now (lest I drift into an *Autobiography of a seashell*), for I wish to say a little of other denizens of the deep, and to learn more about them, if I can only secure the intelligent aid of my old friend Adelpheos.

Does his absence imply inactivity? I trow not, for though he seems of late to have been as quiet

"As a painted ship upon a painted ocean,"

he may, meanwhile, have been the more energetic; may be he has been making some "deep-sea dredgings and soundings," or striving to devise some scientific method of "fish-culture;" to organise "a Zoological station" on this coast, if he can find any Government paternal enough to aid him; \* perhaps seeking some fresh fishing-grounds which may afford a fresh "harvest of the sea," or take the place of those where the deep-sea fishes have been killed almost to extinction.

Any means devised to prevent cruelty to marine animals would, methinks, be a noble achievement. Any means whereby fishers may be taught *economic fishing*, or how

"To take the prime for food of man,  
And leave the young to grow,"

is worthy of supreme effort.

The fecundity of many pelagic animals is such that some of the *savants* are confident there is no danger of the food-fishes failing. True this may be as regards most of the gregarious fishes, as the *Clupeida*, or herring tribe, and the *Gadida*, or cod tribe, but what of the mackerel, which used to appear in large shoals in the North Sea in early summer? Are they driven from their old ground by the everlasting dragging over the same area for the soles, dabs, flounders, and other flat-fish that love to repose at the bottom of the sea where they find their food—fish, by the way, which are none too plentiful in the market now-a-days? Is there any diminution of the food of these fishes? Have they been affected by any change of the

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\* Since this was written the British Association, this year met at Southport, has, curiously enough, suggested to the Commissioners of the Great International Fisheries Exhibition to found such a Zoological Station.

water temperature, or is their apparent scarcity due to some capriciousness in their wanderings? There are, indeed, many points in the Natural History of fish yet to be solved.

Hither comes Adelpheos; he emerges from behind yon hillock like a Genius sprung out of the dunes, these dunes that skirt the shore. Welcome!



"A VOICE OF THE WATERS."

The voice of the waters and the music of the shells salute you, Adelpheos!

I have been reflecting on the condition of the tenants of Ocean, and have been wondering how far the action of man affects that condition. There are many *opinions* afloat, I know, but opinions are not always based on fact. What say you on the subject?

“The fish of the sea have many foes,” said Adelpheos; “they are the prey of the marine mammalia and of birds innumerable, and there are carnivora in the sea as ravenous as are the tigers and wolves on land; and then most fishes—even our favourite food fishes—are themselves carnivorous; they feed on the fry of herrings and on other small fish which, curiously enough, are unwarily entrapped by the soles and some other flat fish which have coloured mouth cavities.\*

“But there is a class of sea-animals which seem somehow beneath our sympathy, they are so rudimentary or jelly-like; these abound enormously in certain regions, and form the food of many of the sea quadrupeds, birds, and fishes.

“The ocean teems with life which can hardly, it would seem, be perceptibly diminished by any effort of man, yet I cannot help thinking that he may, while taking the ‘food-fish,’ kill more than he takes, or may drive them off from their old haunts. Fishing, too, is limited very much to the catching of surface swimmers, or of bottom swimmers which live at no very great depth; but supposing these latter be driven into deeper water, then a few fathoms may put them out of the range of the fishers’ art.” (One exception to this is the cod-fishery, which is effected by line, one end of which is sunk to the bottom.)

“Some of the marine animals, however, have been extinguished by man, and others will soon disappear. The great northern sea-cow (one of the *Sirenia*) was extirpated more than a century ago, and the whales are doomed to destruction. Cruel man slays without compunction those huge, warm-blooded, suck-giving creatures. ‘No races,’ says one, ‘are of purer or gentler disposition, none more fraternal towards their kin, more tender towards their offspring.’ And though these cetaceans are carnivorous, they have no teeth to lacerate their prey, and they thus accomplish the task which Nature has ordained with the least possible infliction of pain.

“Mankind scours the face of the earth in quest of prey, and all animate things retire at their approach. These have become terror-stricken by the raids made upon them, though in former times they were unsuspecting and even confiding.

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\* The mature cod-fish feed largely on herrings, and devour a far greater number than even men catch, great as this is.

“When the Polar regions were first visited, the voyagers could walk among the seals as among domestic pets, and the wild geese allowed themselves to be taken by hand. One instance of the destruction of seals may be cited, namely, that more than three millions of seals are reported to have been taken on one group of islands in Behring’s Straits in the fifty years ending 1833.\* Such wholesale slaughter inevitably leads to extermination, which will not only deprive some folks of their finery, but will despoil the northern islanders, the Esquimaux, of the very means of existence, for seals



ESQUIMAUX WATCHING FOR SEALS.

supply these people with every imaginable want. They eat even its (the seal’s) liver and blubber; their clothes, boats, tents, weapons, and even the coffins for their dead are derived from it, and they sew with its sinews.†

“Looking to another region of the world, I find instances of the unsuspectingness of animals. Captain Cook was amazed to find them

\* Ansted’s “Physical Geography,” chap. xix.

† See G. B. Howe’s “Zoology and Food Fishes.” 1883.

on the islands near Cape Horn so mutually happy. The sea-lions (*Phoca jubata*), the sea-bears (ursal seal), the shags (commorants), and penguins seemed to live in harmony, and even the eagles and vultures perched on the hillocks beside the shags.

"We have seen," he says, "all these animals mix together, like domestic cattle and poultry, in a farmyard, without one attempting to molest the other." Also on his visit to Kerguelin's Land (on third voyage) he found the penguins could easily be struck down by a stick, and on the shores of Christmas Harbour, the seals (ursine) allowed themselves to be taken without any resistance."\*

"The advocates of a wiser policy, I trust, may yet prevail over the care-for-nought destructives," I added.

"There is the salmon of Britain—this has been in a precarious condition of late; and what of the oysters, the sweet little 'Natives' (such, perhaps, as had the honour of being served up on the table of Julius Cæsar), did not they seem doomed to be things of the past? I recall that somewhere—was it in an American official report?—I have seen it stated, I could wish it was only a dream, that by the coasts of North America, the oyster, now plentiful, is used on the land as manure. I will not dilate."

"I have thought, Adelpheos, that the sea, the free and open sea, affords a better chance for animals to hold their own through ages than the land could possibly do."

"So it is," he replied, "for the oldest animal species on the globe have still their representatives in the sea. The fossils of the *Ganoids* are found in the old red sandstone—of this kind the sturgeon is the best known. The order has endured through most of the geologic period, it early reached its maximum, and has gradually died off. The *sharks* are as old as the oolites, which are of vast antiquity, but the *true rays* are older than the sharks, and rays of the present day in warm seas, are specimens of a robust old age, seeing 'their broad flat bodies measure twelve or fifteen feet across. The *Cephalopods* are a very ancient, once a very numerous, race; hundreds of species have been

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\* It is interesting to note, too, that Mr. C. Darwin, while travelling in some unfrequented districts in South America, found a gun almost unnecessary, for he could push even a hawk off a branch of a tree with the butt end; and once while he was drinking from a pitcher, a thrush alighted upon it, sipped the water, and allowed itself to be handled by him.

fossilised in the rocks, among them ammonites as large as a carriage wheel, or as bulky as a large *sun fish*, and widely spread. The pearly nautilus, formerly abundant in our seas, is the only existing species of the nautili. Its ally, the cuttle-fish or squid, is found on our coasts.



"THE SEA, THE FREE AND OPEN SEA."

The nautilus is at present confined to the Southern Seas. The *Brachiopods*, or arm-footed animals, are said to have suffered most from time. Thirteen hundred species are known to have existed, while only seventy-five are living. And now I speak of the *oldest animal on earth*, the *Lingula*. Fossils of this are abundant in the British silurian rocks.



The animal exists to this day, but in the Philippine Islands, and a living biologist of high authority (M. Gaudy) pronounces it the best example of 'fine old age' yet recorded. And, further, it is remarkable that the most ancient fossils of this animal differ in no essential respect from this living representative.

"The Bony, or *Teleostean*, fishes came on the scene later than those named, or not sooner than the Cretaceous period, and have gradually developed into their maximum in our present seas."

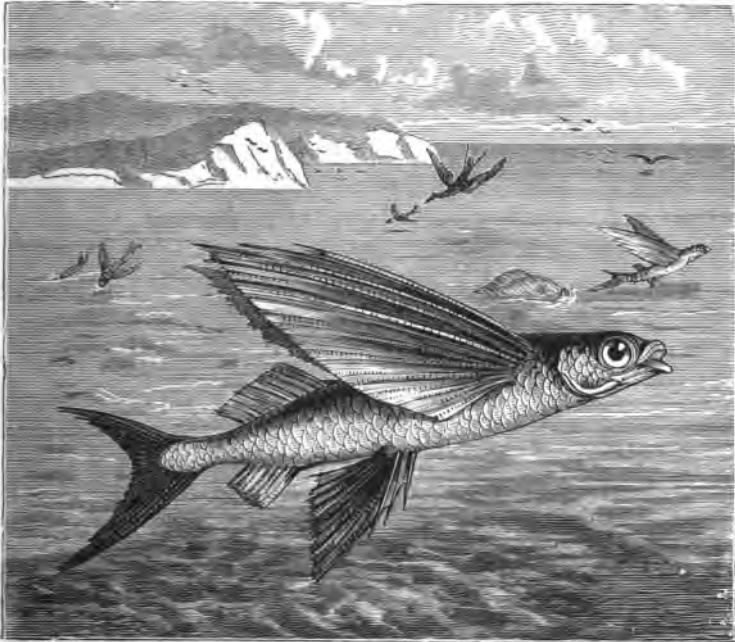
"It is not a little remarkable," I rejoined, "that these older forms of marine fauna possessed some kind of armour (as the Ganoids) and that their survivors exist mostly in warmer climes than our own, while in the Wash are found relics of Arctic shells, and fossilised remains of the Polar bear as far south as Suffolk. How is that?"

"In different periods of the world's history different climates have prevailed, or there has been an interchange of climate in the north and south hemispheres," said my friend; "and I can only indicate that this is due to the eccentricity of the earth's orbit, and when this is greatest, the earth is more than ten millions of miles further from the sun than when it is nearest; then there is the combined effect of the Precession of the equinoxes and of Nutation, which is now gradually bringing the earth nearer to the sun during the northern summer, so that in the year 11,700 A.D., the extreme summer and winter of the southern region will be transferred to this northern hemisphere,\* in fact, the heat may become more extreme because of the greater amount of land in this north region."

"Well, if it be so," I said, "and if the world last so long, our descendants will be glad to find that *all* the *sharks* have been fossilised, and that the great *rays* of the present warm seas, with their long poisoned, arrow-headed tails, have been extinguished; for if these survive, they may migrate hither. However that may be, there is one marine phenomenon which, I hope, will not pass away—that brilliant sparkling at night—some call it 'the phosphorescence

\* "In the immense period which geologists contemplate in the past history of the earth, this alteration of climate must have happened, not only once, but thousands of times; and it is not impossible that some of the indications which they have discovered of the prevalence at some former epoch or epochs of widely different climates from the present, in the northern hemisphere, may be referable, in part at least, to this cause."—SIR JOHN HERSCHELL.

of the sea.\* I love to watch this luminosity; every crest of the billows seems fringed with molten silver, but in some seas the colours are said to vary, instantaneously passing from the most lively red to the principal tints of the solar spectrum—to the crimson of the morning, to orange, to azure blue, or to opaline yellow. There are beauties in the sea! and I could wish them to last to all generations. Now, friend, can you throw any light on this spectacle?"



DENIZENS OF OCEAN.

“ The organisms which contribute to this illumination of the ocean are numerous.

“ The so-called phosphorescence near our shores is due to the infinite multitude of animalculæ, called *Noctiluca*. Then there are exquisitely beautiful *Medusa*, or minute jelly fish, in the northern

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\* See most interesting allusion to this phenomenon at pp. 273—74 of the Number of this Magazine for October, 1881, under article entitled “At Sea,” in Annual Volume, No. xxviii.; and also further reference thereto at p. 113 of the Number for April, 1882, in Annual Volume, No. xxix.

seas, and these are 'phosphorescent,' and fulfil a double purpose, for they serve as food to the whale and they illuminate the sea. Again, there are *Crustaceans* (Copepod), which emit brilliant sparks of light, the *Pyrocystis Noctiluca*, too, in mid-Atlantic, and also in the open seas of the south the *Pyrosoma*, which is a free swimming colony of simple ascidians.\* To these and the like the luminosity of the ocean is due."

"Well, friend, time would fail us if we attempted to name a tithe of the interesting creatures in the sea, not to say the wonders therein. Quadrupeds, birds, fishes, crustaceans, mollusca, and reptiles: yes, there are reptiles—the great 'sea-serpent' † may yet be a reality, and though he has never been caught, he may turn up some day; there are snakes though, veritable poisonous snakes, and lizards, and that very interesting animal, the turtle, all living entirely in the sea. If we plunge into the great dark depths—some hundreds of fathoms, there we find living things—and, what is marvellous, some have no eyes, while others have them fully developed. And if we scrape up the mud in the vast ocean, and examine it with the microscope, we find it composed of beautifully-coloured shells—ay, thousands of square miles of the deep sea are covered with these exquisite remains of life—the *Foraminifera*, tiny things, that in former ages played no small part in forming the rocks of our globe.

Of shells in general, with all their beauty of form, and their gorgeous colours, what shall I say? Were they thus embellished for the gratification of the other dwellers of the deep, or to excite the admiration of intellectual beings? And if anyone should read what I have said I will make one inquiry before we part—

"Hast thou heard of a shell on the margin of ocean,  
Whose pearly recesses the echoes still keep,  
Of the music it caught when, with tremulous motion,  
It joined in the concert poured forth from the deep?"

SEA URCHIN.

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\* See "Voyage in the *Challenger*," "The Atlantic," vol. ii.

† It is noteworthy that what seemed at first sight the distinct semblance of just such a monster, quite recently showing itself almost close in shore, off the South Coast, on nearer inspection proved to be nothing but the long wavy line of "soot," apparently discharged overboard, in a slimy condition, during the clearing out of the stokehole, &c., of some steam-vessel in the Channel!



## THE SEA IN MOTION.\*



AFTER the storm, calm is pleasant; and there are few who do not prefer smooth to rough waters. Yet a sea ever waveless, tideless, and motionless, would be not only doleful but dangerous. Just as the atmosphere if always at rest would become charged with disease and death, so the ocean would lose its salubrity, if never disturbed by the winds and the waves. The storm and the tempest may bring danger and disaster, but greater would be the destruction and death if either the air or the sea were never cleared and purified by change and motion. But for this, the very deep would rot, and death would brood over a putrid and slimy sea. "Water, water, everywhere," but it would be like that in which the 'Ancient Mariner' found himself:—

"Down dropped the breeze, the sails dropped down,  
'Twas sad as sad could be;  
And we did speak only to break  
The silence of the sea!  
  
Day after day, day after day,  
We stuck, nor breath nor motion;  
As idle as a painted ship  
Upon a painted ocean."

Happily for man, and for the greatest good of the greatest number

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\* By kind permission (with Illustrations), from "SEA PICTURES—Drawn with Pen and Pencil." By JAMES MACAULAY, M.A., M.D., Editor of "The Leisure Hour." London: THE RELIGIOUS TRACT SOCIETY, 56, Paternoster-row, &c. An appropriate Souvenir of The Fisheries Exhibition, and of which Mr. Ruskin says: "This beautiful book is far the best I have ever seen on its subject."

of living creatures, whether on the land or in the water, the ocean is not in perpetual rest; and, while even the hurricane is better than the pestilence, storms are comparatively rare on land or sea, both of which are, nevertheless, kept in constant and wholesome motion. This movement is produced and maintained principally by the action of waves, tides, and currents.

Waves are chiefly due to the action of wind upon the surface of the sea, and depend for their height and force upon the strength and duration of the wind. The smaller ripples made by water breaking on the shore are sometimes spoken of as waves, but these are chiefly due to the tidal movement of the sea, as they may be seen even during a breathless calm. A more imposing movement of the waters is sometimes produced by volcanic or other violent disturbance of the bed of the sea, causing waves of sudden and destructive force. Of some notable examples we shall presently speak, but refer first to the ordinary waves produced by the action of the wind.

Except when the gale is strong and continuous, there is in a succession of waves very little actual removal or propulsion of the water, but merely alternate rise and fall. This is evident from watching any object afloat upon the surface, when no other force is in action; a boat or a bird, or any buoyant material in passive condition, will ride on the top of the waves, rising and falling with their heaving, but not carried onward, without the power of wind or tide or some other propelling force. In close or narrow seas the waves are frequently short and abrupt, or what is termed "choppy," but the waves of the great ocean usually form magnificent rolling billows of immense volume.

Many careful observations have been made as to the size, speed, and force of waves, in the same and in different seas. Appearances are extremely deceptive, and language is very vague on these points, especially as to the altitude of waves, which are sometimes spoken of as being "mountain high." It is believed by careful observers that no wave, even in the roughest parts of the deep, and in the most fearful storms, rises much above the height of fifty feet. Most of the attempts at actual measurement fall much short of this maximum. Captain Stanley, of H.M.S. *Rattlesnake*, measured twenty-two feet in a strong wind and in heavy sea. Captain Scoresby, in a violent north-west gale in the Atlantic, when he could scarcely hold on to the ship's rails, estimated the highest altitude to be forty-three feet. Waves

like this, seen by landmen from the lowest trough of the sea, may pardonably be spoken of in somewhat exaggerated terms.

The distance of waves from crest to crest is also very various, accord-



TIDES AND WAVES.

ing to the strength of the wind, as well as the nature of the sea. Captain Stanley, in the observations already quoted, found the distance between two waves vary from about 200 to 300 feet, being largest

when the waves were highest. This was near the Cape of Good Hope. Commander Wilkes, of the United States Navy, sailing off Cape Horn, found that the waves, of 32 feet in height, and moving at 26 or 27 miles an hour, had a space of 380 feet, between each crest. In Captain Scoresby's Atlantic observation, the altitude of each wave being 43 feet, the velocity per hour  $32\frac{1}{2}$  miles, and the interval of time between each wave 16 seconds, the width from crest to crest was found to be as much as 600 feet. The long wave-like swells in the Atlantic, which may continue in the calmest weather, are said to be sometimes a quarter or half a mile apart. The waves caused by winds are comparatively superficial disturbances of equilibrium, the deep water remaining still, no surface motion having any effect beyond a depth of 500 or 600 feet.

The velocity of a wave is retarded as it advances in shallowing water towards the shore, and when the depth of the water equals the height of the wave it "breaks." Hence the indication given by breakers of the presence of rocks or shoals.

The enormous force of rolling waves is seen upon every coast, and the hardest rocks are worn by them. Geological formations of less compactness are easily disintegrated and carried away, so that the waves of the sea are amongst the most efficient and constant causes of change upon the surface of the land. The terrible effects witnessed of the destructive force of waves upon the works of man are more striking illustrations than the natural results on the sea-coasts. At Plymouth breakwater, for instance, and in constructing the new pier at Dover, huge masses of stone, weighing several tons, have been washed out of their places in the solid structure, and rolled along or dashed up as if they were mere pebbles. Every country and every coast has memorable records of the force and the destructiveness of the waves of the sea.

There are abnormal waves caused by disturbances below the bed of the sea. . . . These movements and perturbations of the ocean, whether from volcanic eruptions or from earthquakes, are not unfrequent, though they are less frequently subjected to scientific observation. But the destructive and disastrous effects are too well known both in older and recent history. The wild sweep of the sudden and unexpected wave is often more fatal than the earthquake which causes it. It has often been so in the West Indies, but the most fearful

example on record is that of the great earthquake of Lisbon in the year 1755. . . .

The subject of storms belongs more strictly to Meteorology than to Hydrography, to the study of the atmosphere than that of the ocean. But the effects of storms are felt at sea more than on land, and the "winds and waves" are naturally associated together, when we think of tempests, and of dangers and disasters caused by them. . . .

A storm is the time for deepening the sense of human weakness and helplessness, and for strengthening the feeling of dependence on



ALMOST GONE.

Him who is "mightier than the waves of the sea." Some of the best and bravest sea captains that ever trod the quarter-deck have been the most God-fearing men and truest Christian heroes. . . .

A whole library could be filled with narratives of storms and disasters at sea. There are many books especially on the subject, and every history of maritime discovery and adventure, and every book of voyages, abounds in such records. There is a strange fascination in reading these narratives, although there is necessarily much sameness of incident and of description, and although there is often a



monotony of what is painful and tragic in them. In our school library I remember that no book was in greater demand than one which related to "shipwrecks and disasters at sea." There is some variety of interest in the different causes and circumstances of the wrecks, but much of that sort of reading must have either a very softening or a hardening effect on the mind. I wonder how the constant converse with thoughts and reports of calamities at sea affects underwriters at Lloyd's or marine insurance brokers! Some of them, no doubt, have tender hearts towards the men that are lost, as well as business thoughts about the ships and the freights. In the narratives of shipwrecks prepared for the general reader, little account is made of the money side of such subjects, but the interest chiefly attaches to the living occupants of the vessel. The ship has little interest for the readers of Defoe's romance of the sea, except as the wreck supplies useful materials for Robinson Crusoe's life on the island. And it is the same in most true records of shipwreck, the part of the history most exciting is what tells of the hardship and trials, the endurance and adventures of the saved though shipwrecked sailors. At the same time, the narrative of what passes in a ship during a storm has its own elements of thrilling interest and influence on readers, whether landmen or seamen. . . .

If the records could be given of the wrecks upon one little region of our home seas, the Goodwin Sands, what a huge volume of woe and of death they would make! The numbers of those that perished in the great storm of 1703 may be exaggerated, but it is a sadly true fact that every year many hundreds of lives are lost off our British coasts. Still more sad is it to think that in times not very remote, at least on some parts of our coasts, little was done for trying to save lives in peril, but that ships were even lured to destruction by false lights and signals, for the sake of wrecking and plunder! . . .

\* \* \* \*





## GREAT GALES.

(BY A FELLOW OF THE METEOROLOGICAL SOCIETY.)



. . . . . "The depths! what wealth untold,  
Far down, and shining through their stillness, lies!  
Thou hast the starry gems, the burning gold,  
Won from ten thousand royal Argosies,  
Sweep o'er thy spoils, thou wild and wrathful main!"

HEMANS.



### VIII.

(Continued from page 190.)



IN the progress of our record, upon this important topic, we come next to the events of the following years:—

**1750.** On February 10 a S.W. gale experienced in south-west of England; severe at Bristol; it was preceded by heavy rain and hail; much damage done, and the land flooded for miles around; also on Nov. 30 at Gravesend and on Dec. 3 felt in Somersetshire; it caused high tides and much damage.

**1751.** Feb. 26. The steeple of St. Mary's Church, Oxford, was damaged, also the cathedral of Lichfield; great damage at Worcester; damage to the extent of £500 to York Minster; at Nottingham many trees destroyed and houses unroofed; at Limerick, Dublin, London, there were many wrecks.

March 7. A gale at Nantes, when 66 vessels and 800 seamen were lost.

Aug. 10. A storm in Jamaica caused damage to the vast extent of £300,000.

Sept. 2. A hurricane in Jamaica; and on Nov. 1, a gale at Whitby.

**1752.** March. Several gales recorded at Dublin between 8th and 30th of this month; also on April 10, on Aug. 14 and 26, on Sept. 1 and 19 to 21, on Oct. 10 and 11, on Nov. 4, 8, and 10, on Dec. 12, 14, 18, 19, 23, and 26. (Lowe.)

Aug. 24 to 26. Heavy gales felt in east and south of England. "The Tyne so swelled that the like cannot be remembered by the oldest man living. The flat ground round Newburgh laid under water. Gale violent." The river Wear laid all the flat country under water, ruining the corn, and where cut, sweeping it away by the torrent, together with sheep and swine. Thousands of hop poles were blown down in Kent, and much land flooded in Essex.

Many vessels wrecked on the coasts of England, Scotland, and Ireland, and especially in the English Channel and on the coast of Cornwall.\*

**1756.** Oct. 7. About one in the morning a heavy gale commenced, and the effects were felt over the British Isles. In the "Old Passage," across the Severn from Wales, twelve passengers and twelve horses were lost. At Penrith, Cumberland, the barometer fell a quarter of an inch in three-quarters of an hour. The church was damaged; a battlement fell from the tower of a house, and killed a young lady in bed; almost every house was damaged.

At Sunderland forty keels were missing, and several ships damaged and driven to sea; the bodies of twelve men were picked up the next morning.

At Newcastle many houses were blown down, and scarcely a chimney left standing; above forty keels and several vessels from London were sunk or driven to sea. Many men on board perished.

At Greenock, Port Glasgow, Dumfries, and other places the common effects of such a storm were felt.

At Belfast several vessels were driven to sea, and drifted as far as the Giant's Causeway.

On the coast of Holland the storm was very violent; above 60 ships were stranded there.

**1757.** March 6. A great storm on the western coast. At Liver-

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\* These are the last of such records given in Lowe's "Chronology of the Seasons."

pool it began about 9 a.m. from S.W., at 10 it blew a hurricane, at 11 veered to W.N.W. attended by heavy squalls, so that the oldest inhabitant did not remember the like. Several vessels were stranded or sunk opposite the town. A pilot-boat and a Dutch vessel sank with all hands.

The damage to the town was considerable; the streets were rendered impassable; forty-two feet of the lofty spire of St. Thomas's blown down, falling upon the body of the church, causing great



THE CITY OF CHESTER.

destruction. Considerable damage was done at Knowsley Hall, the seat of the Earl of Derby.

At Chester more than 100 chimneys thrown down, most houses stripped, the windows on one side of the Minster blown to pieces.

The wind veered to N.N.W. and N., and abated at noon.

At Worcester a stack of chimneys was blown down at the Town Hall, and fell into the Nisi Prius Court. Mr. Justice Willmot was on the bench; four barristers were hurt, and six or seven persons lost their lives. Many were injured by the rush from the Court.

1760. Feb. 15. Much destruction of buildings and trees in London. Many ships in the Thames were driven from their moor-

ings, and damaged each other. "The papers from the country were filled with the terrible effects of this storm."

At sea there was incredible disaster among the shipping; in many harbours persons perished in boats and ships, but the greatest misfortune was the loss of the *Ramillies*, Captain Taylor, with 734 men on board. The ship was embayed near Bolt Head, which had been mistaken for Ram Head, and it was supposed the ship was running into Plymouth Sound. When the mistake was discovered, anchors were let go and masts cut away, but the gale increased at 5 p.m.; the ship parted from her anchor, and only one midshipman and 25 men, out of the 734, were saved by jumping on the rocks.

1761. Oct. 12. Violent gale at Copenhagen.—Oct. 14. Great gale and thunderstorm at Malvern.—Oct. 16 to 21. Violent N.E. gales in Ireland, with great floods.—Oct. 19. Gale at Aberdeen.—Oct. 22. In Spain.—Oct. 23. Great gale from N.E. at Boston, U.S.; the most violent known here for thirty years.

1762. Oct. 26. Fearful gale and flood about London. At Norwich three thousand houses were laid under water; very great floods at Cambridge. ("Symons' Met. Mag.," vol. iii.)

1763. Aug. 19. At noon the sky was so overcast around London that the darkness was greater than during the eclipse in 1748, and as the appearance of the elements was like that which preceded the great earthquake at Lisbon in 1755, a similar catastrophe was apprehended.

At Chatham the darkness was accompanied by continuous thunder for forty minutes. "At Twickenham large trees were blown down, and other damage done by the hurricane that accompanied the darkness." At Brighton the storm was awful, and the oldest fishermen said nothing had been like it in their memories.

In Kent the hops suffered considerably; but the most remarkable circumstance was the sudden flux and reflux of the tide at Plymouth.

At Sheerness the windows exposed to the fury of the storm were crushed to pieces.

Oct. 1. Violent gale in England and Scotland.—Oct. 7. Great flood in Lincolnshire.

Dec. 2. A violent storm of wind and rain. In London houses were blown down, some people killed, many wounded, chimneys fell, roofs stripped, the streets rendered impassable, and business was interrupted. Part of the walls of Hyde Park and Sadler's Wells gave

way, trees were uprooted, the Thames rose high and flooded many parts, filling cellars; much damage to shipping below Bridge.

At Oxford the battlements of the north side of a quadrangle thrown down; many houses stripped. At Trompington, near Cambridge, a house blown down, killing a woman and her child. But the seaports felt the storm most. At Chatham several boats were sunk, and the sea-walls beaten down.



A STORM-BEATEN COAST.

At Wells, near Lynn, the quays and adjacent streets were covered with wreck (boats, cables, rafts, planks, blocks), and were utterly impassable. Between that place and Lynn 1,500 sheep were drowned.

At Lynn people's beds floated under them—the town was almost drowned; 3,000 cattle lost near it. All Marshland was overflowed, and fresh water was scarcely to be had for money.

At Spalding the pastures were flooded, and more than 3,000 sheep perished.

At Wisbech the river overflowed, and laid the land under water for many miles; 10,000 sheep drowned.

At Whitby the wind raged furiously and the tide rose high. The land-floods rushed down the Eske, carrying away or damaging many houses; when the storm abated nothing was to be seen but desolation.

At Scarborough there was much damage to buildings; ships broke loose, and were dashed against the rocks; many lives were lost.

At Newcastle the swell of the river was three feet higher than had ever been known, and shops and warehouses were flooded; in parts the water was three feet deep in the streets, and the consternation of the people was lamentable.

At Margate the sea beat down the light, threw down the battery, and carried the guns into the sea; houses were washed away, and many small craft dashed to pieces; a great number of wrecks along the east coast.

Near Falmouth the Hanover packet from Lisbon was lost, and nearly fifty persons perished. There was great treasure on board.

**1764.** Jan. 13. A great storm, doing irreparable damage at sea. In Yorkshire much damage was done by the breaking of the Ouse banks. Yarm was inundated, as it was also in 1763. The land adjacent to Hull was under water for many miles.

In the Isle of Ely several thousand acres were overflowed; the same was the case by the Nar in Norfolk.

Twenty thousand acres were laid under water between Wisbech and Peterborough by the breaking of the Thorney bank.

At Oundle, Northamptonshire, the north stone bridge was broken in three places.

The Thames overflowed its banks, and the inland navigation was obstructed.

The inundations, in fact, were general in England; and the low countries of the Continent suffered greatly, especially South Holland.

“The damage done at Frankfort by the waters was computed at £40,000. Seventy-two villages in the neighbourhood of Münster (Upper Rhine) were overflowed, and it is said 12,000 souls perished.”

**1765.** We have no record of gales for this date, but in passing are reminded that on November 28 of this year, Captain George William Manby was born at Hilgay, in Norfolk. He was a school-fellow of the great Nelson. It was during his residence on Great

Yarmouth beach, in the early part of the following century, that he invented and successfully carried out the working of one of the earliest apparatus for saving the lives of shipwrecked persons. The dreadful disaster which led to this invention will be noted hereafter.

1767. Jan. 6. A violent N.W. gale felt severely in the S.E. of the country.

At Margate the pier suffered to the extent of £1,000. The jetties



SURVIVORS OF THE GALE.

were much damaged. Buildings were swept away, and many people removed their effects from the houses on the Parade.

Broadstairs felt the full force of the storm. The pier was utterly destroyed. The harbour blocked up, enclosing twelve ships belonging to the Iceland cod fishery, to the great detriment of the inhabitants, *at that time engaged in that fishery*. It is related that this gale caused such distress here as was inexpressible.

Jan. 10. A heavy gale and a great fall of snow did considerable mischief at Newcastle, Shields, and at the then new harbour of Hartley-pans, five miles north of Shields. All the new ships were



sunk in the harbour to prevent their running foul of each other, or being driven out to sea. Disasters occurred also at Staithes, Hartlepool, and other places. At Great Yarmouth 100 feet of the jetty were carried away. (Nall.)

1770. Yarmouth Roads. During a gale thirty vessels and two hundred men were lost.\*

Oct. 17. Great gale and thunderstorm in Great Britain. ("Met. Mag.," vol. iii. p. 5.)

1772. Oct. 25. N.E. gale at Borrowstounness (Bo'ness); on 29th at Great Yarmouth.

1773. Oct. 10. Hurricane, with fearful thunderstorm, at Bawtry and York.

1775. Oct. 19, 20. Great gale at Nottingham, and great floods in Yorkshire and Cheshire.

1780. Three great storms occurred in the West-Indies, in October of this year.

Oct. 3. Savanna-lar-Mar, Jamaica, was destroyed. All small vessels were driven ashore and dashed to pieces.

Eight English men-of-war were lost: *The Phoenix* (commanded by Sir Hyde Parker), *Thunderer*, *Stirling Castle*, *Barbadoes*, *Deal Castle*, *Endeavour*, *Scarborough*, and *Victor*; the two last were never heard of.

Oct. 10, 11. A storm passed over Barbadoes, Martinique, Porto Rico, Hayti, and Bermuda. "The evening preceding this storm, the 9th ult., was remarkably calm, but the sky surprisingly red and fiery. During the night much rain fell; on 10th, a.m., much rain and wind from N.W." ("Gentleman's Mag.," 1780.) This hurricane proved fatal to six ships of the British Squadron under Sir G. Rodney. At Martinique 9,000 persons perished.

The third storm, which commenced at night on October 17, with torrents of rain, dispersed and disabled the Spanish fleet, under Admiral Solano. This fleet had sailed from Havannah on 15th with the design of attacking Pensacola. Nineteen vessels were missing.†

S. H. M.

\* "Chapter on the East-Anglian Coast," By Nall. (Longman.)

† For details of these storms, see Colonel Reid on "The Law of Storms." (Weale, 1850.)



## THE SEA AND ITS PERILS.



“Oh, many a bark, to that breast grappled fast,  
Has gone down to the fearful and fathomless grave;  
Again, crash'd together the keel and the mast,  
To be seen tost aloft in the glee of the wave!”

SCHILLER.



## A GALE IN THE ATLANTIC.



**T**HE barque *Lennie*, of Yarmouth, Nova Scotia, and bound from that place to Dover with a cargo of timber, was recently towed into that port from the Downs, after encountering extraordinary weather in the Atlantic, and having altogether had a remarkable voyage, to which her crippled condition, on arrival, bore ample testimony. The vessel is 984 tons burthen, and it was on this ship that Captain Hatfield and the first and second officers were cruelly murdered about six years ago by the crew, composed of Greek seamen, who were subsequently hanged in England.

The *Lennie*, commanded by Captain Harris, left Yarmouth, Nova Scotia, for her destination on the 28th of June last, with a crew of fifteen hands, and all went well until the 31st of August, when they were overtaken by a heavy gale from west-south-west, accompanied by rain, and the sea running very high. By midday the gale had increased very considerably, the wind coming in violent squalls. This continued throughout the day with quite a deluge of rain. Towards evening the lower topsails and foretopsails were carried away, and by midnight the gale had increased to a hurricane, the violence of which both the captain and his officers say they

have never before witnessed in the Atlantic. The sea rose to an extraordinary height, the vessel being at times quite engulfed, as it were, between the huge waves. At this time the barometer had fallen to 28·84 deg. The captain describes it as a tremendous, high combing sea, the ship scudding along under bare poles, labouring and straining heavily, and constantly shipping vast quantities of water. All the hatches were battened down, but water found its way into the hold. For some time it was found impossible to reach the pumps, but this was ultimately done under great difficulty, the men being lashed fast to prevent their being washed overboard. A large quantity of timber, casks, &c., were washed about the deck, and the men narrowly escaped being struck several times.

Shortly after midnight, a tremendous sea swept over the poop, and it was some time before the ship recovered herself. The binnacle, compass, and ventilators were smashed, the cabins flooded with water, and the whole of the provisions on board destroyed. Captain Harris, who did everything to encourage his men to keep to the pumps, then found it impossible to run any longer, and brought the ship to on the starboard tack. An hour later the wind veered round to the north-west, the sea making a clean breach over her, washing the deck-load,—much of it consisting of huge baulks of timber—adrift, and a large portion of it overboard. The poop rail was torn away on the port side, and a part of the planking started from the main to the mizzen rigging, some being started on the starboard also. The boats were smashed, a clean sweep was made of the bulwarks, and the doors of the forward deck-house and a part of the structure carried away, the deck-load washing from side to side in the greatest confusion, drawing ring-bolts out of the deck in all directions, besides chafing the water-ways, and starting the bitts. Had it not been a question of pump or sink, the captain says, the men could never have remained at the pumps as they did, it being almost impossible to stand against the vast quantity of water which swept over the vessel.

At daylight the gale slightly abated, and Captain Harris descended the pump well, being unable to get a correct sounding, and found the water 4 ft. above the keelson. He then turned his attention to the poop, where the breaches made by the sea were patched with canvas. In the course of the morning the gale freshened, and a fearfully high sea continued to run, the ship's lee-rail being seldom above water. Captain Harris says that had not his vessel been timber laden she could not have lived in such a sea. The fury of the gale continued throughout the morning, and a further examination being made at two p.m., it was found that the water had risen to within a foot below the between-deck beams, the ship getting very low in the water. As a

last effort to save both vessel and cargo, she was got round on the other tack, and in doing so, her jib, flying jib, staysails, &c., were carried away. The foretopmast was then cut away, and in doing this, the yards on the foremast, with the jibboom, were carried away, with all the gear attached to it. This considerably relieved the vessel, and she managed to struggle against the gale, which continued with unabated violence throughout the night.

Next morning a sail was sighted, and the crew, who had suffered great hardships, having been at the pumps without food or rest for forty-eight hours, and being in a very exhausted state, desired to abandon the vessel as being in a hopeless condition, she having then 13 ft. of water in her hold. Captain Harris, however, said he would never consent to leave the ship while there was any chance of keeping her afloat, and induced the men to return to the pumps. As the morning wore on the hurricane abated, and the water in the hold was reduced by 4 in. per hour. The vessel which was sighted was hailed, and a supply of food obtained from her, their offer to take the crew from their perilous position being refused.

Ultimately all available sail was set on the *Lennie*, and as a reward for his courageous perseverance, Captain Harris had the pleasure of reaching his destination without putting into any intermediate port in the Channel, having been seventy-two days on the passage.

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### DEEP SEA TRAWL FISHING.

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HE Report of the Board of Trade on the system of deep sea trawl fishing, as conducted in the North Sea, has been published. The conclusions arrived at are based principally on information obtained during the progress of the nineteen official investigations held at Hull, between May 30 and June 16, 1883, respecting the losses and casualties which occurred to a number of vessels during a gale on March 6, 1883, the particulars of which investigations are set forth in separate reports that are given as appendices. Trawl fishing in the North Sea is principally conducted by vessels from Yarmouth, Hull, and Grimsby, and the trade is increasing; and practised, though to a less extent, from Hartlepool and other ports. The construction and working of the boats are fully described in the Report, from which we extract the following:—

“There are two separate and distinct systems adopted by the smacks in pursuit of their avocations, one of which is called the ‘single boating,’ the other the ‘fleeing’ system. In the ‘single boating’ system each vessel

" goes to sea and fishes presumably by herself, and in whatever waters the  
 " skipper in command deems most suitable. They carry ice for the purpose  
 " of preserving the fish, which is stowed below in the hold of the vessel until  
 " her return to port, which is usually at the expiration of a period varying  
 " from eight to twenty days. In the 'fleeting' system a number of vessels  
 " arrange together to fish in company, forming themselves into 'fleets,' and  
 " having one of the skippers appointed *pro tem.* as an 'admiral,' who decides  
 " on the positions in the sea where the 'fleets' shall from time to time work,  
 " and who, by signals, conducts the operations and movements of the other  
 " smacks. All the smacks, as a rule, let down or shoot their trawls together  
 " by signal from him, and sail together on one and the same tack. In con-  
 " nection with each of the fleets there are several steam vessels, called steam  
 " cutters, which ply to and fro between the fleet and the port where the fish  
 " has to be discharged, generally London, Hull, or Grimsby. One of these  
 " cutters is generally arriving every day at the fleet, and the fish which has  
 " been caught by the smacks, and has on board of them been packed in  
 " boxes, is transferred or 'boarded' in the smack's boats to the steam cutter,  
 " with which she goes back to her port of discharge. 'Single boats' are also  
 " in the habit of transferring their fish to these cutters if they chance to fall  
 " in with them, and cutter has room, which is usually the case, the steam  
 " cutter charging so much per box for carriage. The smacks engaged in  
 " 'fleeting' remain at sea for periods varying from six to eight or ten weeks,  
 " when they return to their port to refit. From Yarmouth there are about  
 " 670 smacks engaged in 'fleeting,' and thirty in 'single boating' all the  
 " winter and summer; from Hull 150 to 200 are engaged in 'fleeting,' and  
 " from 200 to 250 in 'single boating' in the winter, and in the summer  
 " nearly all are engaged in 'fleeting;' and from Grimsby there are about 300  
 " engaged in 'fleeting,' and 100 in 'single boating' in summer, but none of  
 " them go 'fleeting' in the winter. The principal objections to 'fleeting' on the  
 " part of the fishermen are three—the much longer time they are obliged to  
 " be at sea and away from their homes, the greater amount of hard work  
 " entailed on them by having to 'board' the fish from day to day, and a  
 " certain amount of risk attached to this last-named operation as at present  
 " conducted. To sum up the advantages or otherwise of these two systems:  
 " The 'single boating' system, whilst insuring to the men less hardship, and  
 " possibly conducing to instruct them in a more perfect knowledge of their  
 " business as fishermen, is also productive of a great waste of fish. The  
 " 'fleeting' system, on the contrary, is calculated to secure a more regular  
 " and continuous supply in a fresher state."

On two points there was a remarkable consensus of opinion. The crews of these smacks are not now so efficient as formerly, more especially the hands in the three inferior grades, and this deterioration dates from a time soon after the Merchant Seamen (Payment of Wages and Rating) Act, 1880, came into operation, whereby the owners allege they cease to possess a control over their apprentices. The risks to vessels engaged in the fishing trade, as compared with other merchant vessels, do not appear to be excessive. The payments made by the

Hull and Grimsby and the Three Crowns Mutual Insurance Companies, during the six years 1877 to 1882, inclusive, for total loss and casualties to fishing vessels, amounted to a percentage on the insured values of £3 1s. 7d. and £2 16s. 2d., respectively. It is concluded that, notwithstanding the special danger of the Doggerbank, it is useless to place any restrictions on the fishing vessels, for, in any case, the fishermen will always follow the fish wherever these are to be found; only it is suggested that their prudence might be increased through an additional insurance charge for this exceptional risk.

A list of British fishing vessels reported as lost or damaged in the North Sea, during the gale of the 6th of March last, is appended to the Report, showing that 50 vessels were then totally lost, and 89 were more or less damaged, involving the loss of 255 lives. The total number of British fishing vessels lost during 1881-82 was 164, with 536 lives; 54 more lives being lost in connection with vessels sustaining damage.

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MISSING.

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**M**ER mighty sails the breezes swell,  
 And fast she leaves the lessening land,  
 And from the shore the last farewell  
 Is wav'd by many a snowy hand;  
 And weeping eyes are on the main,  
 Until its verge she wanders o'er;  
 But, from the hour of parting pain,  
 That bark was never heard of more!

In her was many a mother's joy,  
 And love of many a weeping fair;  
 For her was wafted in its sigh  
 The lonely heart's unceasing prayer;  
 And, oh! the thousand hopes untold  
 Of ardent youth that vessel bore;  
 Say, were they quench'd in waters cold?  
 For she was never heard of more!

When on her wide and trackless path  
 Of desolation, doom'd to flee,  
 Say, sank she 'midst the blending wrath  
 Of racking cloud and rolling sea?  
 Or where the land but mocks the eye,  
 When drifting on a fatal shore?  
 Vain guesses all,—her destiny  
 Is dark,—she ne'er was heard of more!

The moon hath twelve times chang'd her form,  
 From glowing orb to crescent wan ;  
 'Mid skies of calm and scowl of storm,  
 Since from her port that ship hath gone ;  
 But ocean keeps its secret well,  
 And though we know that all is o'er,  
 No eye hath seen,—no tongue can tell  
 Her fate,—she ne'er was heard of more !

Oh ! were her tale of sorrow known,  
 'Twere something to the broken heart ;  
 The pangs of doubt would then be gone,  
 And Fancy's endless dreams depart !  
 It may not be !—there is no ray  
 By which we may her doom explore ;  
 We only know she sailed away,  
 And ne'er was seen or heard of more !

JOHN MALCOMB.

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THE STORMS OF THE PAST QUARTER.

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**A**MONG the numerous storms experienced on various parts of our coasts during the past quarter, two were especially distinguished on account of their unusual violence, and the disastrous effects they occasioned not only at sea but also on land. Of the peculiar characteristics of these gales we shall presently have occasion to speak in further detail ; suffice it for the present to say, that one sad result of their occurrence has been, that the number of wrecks reported up to the close of September is considerably above the average of recent years.

Taking the storms of the last three months in chronological order, it appears that July proceeded quietly until the 11th, when a slight south-westerly gale blew on the more exposed parts of the English and Irish coasts. This gale was occasioned by a depression which advanced from the Atlantic, and passed in a north-easterly direction across Scotland. As the disturbance travelled away the wind veered to the north-westward, and cool, but fairly quiet, weather was experienced for some few days. On the 17th, however, a large depression moved downward from the far north to Scandinavia, and the north-westerly winds increased to the force of a gale on several parts of our northern coasts. After this, nothing of importance occurred until the night of the 20th, when a small depression formed over the midland and northern counties of England.

With respect to the causes which lead to the birth of these low pressure systems, it is humiliating to confess that very little is known, even by the wisest of the weather-wise, and we are therefore unable to say why this particular depression should so suddenly have been bred over us. Its entrance upon the scene appears to have been attended by a good deal of atmospherical disturbance in the shape of severe thunderstorms and heavy rains, the largest amounts being one inch and a half at Durham, and one inch and eight-tenths at North Shields. By the time that the system had reached maturity a fresh north-easterly gale sprang up at the mouth of the Tyne, while the westerly winds in the Channel increased to the force of a strong breeze. One other feature of the disturbance was the unusual lowness of temperature which accompanied its existence. At one time the thermometer sank so low that everyone began to doubt whether in the shuffling of the seasons which sometimes seems to go on we had not been served with a March or April in place of a July. On the 22nd, however, the depression left us for the east, and matters began to regain their normal condition. The favourable change, which was very gradual, was subjected to two interruptions. The first of these, which took place during the latter part of the 22nd, was occasioned by a small depression which passed over the Shetlands, and travelled down the North Sea. As it skirted the Scotch coasts a fresh north-westerly gale was felt at Aberdeen. The second interruption was brought about by the appearance of a large depression over Denmark. This system seems to have advanced from the eastward, and as it approached the North Sea the westerly winds along our east coasts increased to a slight gale. Before its centre had reached our shores, however, the effects of the disturbance were entirely neutralised by the arrival of another depression on our western coasts, and under the antagonistic influences of the two, the wind soon subsided. The remainder of July was unsettled with respect to weather, but fairly quiet.

The month of August opened with tolerably fine weather, which lasted until the 7th, when a complete break-up took place. The change was occasioned by the rapid passage of a deep depression along the western coasts of Ireland and Scotland on the night of the 7th, when fresh southerly to south-westerly gales blew on most parts of the Irish and Scotch coasts. By the following evening the centre of the storm had reached the north of Scotland, and matters began to look quieter, but in the course of a few hours a second and deeper disturbance advanced from the westward, and the two systems uniting, skirted the Scotch coasts, and ultimately passed away over the North Sea. As the double disturbance passed by our northern districts the wind rose to a gale from west in all parts of the country, while on the 10th, when



the centre had travelled to the east, a fresh gale from north was experienced in the east of Scotland. On the night of the 13th another large depression advanced from the Atlantic, crossed Scotland, and disappeared over the North Sea, its approach being attended by south-westerly gales on the more exposed parts of the western coasts, and a westerly gale in the Channel. The only other storm experienced during the month of August was a slight one from the southward, in the western parts of Ireland and Scotland, on the 20th. This was occasioned by the passage northward of a low pressure system, the centre of which lay far out in the Atlantic.

If the early days of July and August were fair and quiet, so much could certainly not be said for September. No sooner had the month opened than a storm of the utmost violence was seen to be approaching the south of Ireland, and in the course of the ensuing forty-eight hours a depression of unusual intensity passed slowly, in a north-easterly direction, right across the country. The effects of this disturbance were very widespread. In the extreme north pressure had previously been rather low, and the easterly winds to the northward of the storm centre, although strong, did not reach any very great force. In the south matters were vastly different. With a large high pressure system lying over the south of France, the arrival of the depression soon occasioned very steep gradients, and on the evening and night of the 1st a terrific gale from south-west was experienced on the south-west coasts of England, as well as in the west of France. Within this area numerous disasters of the most appalling kind took place at sea, the most serious, perhaps, of all being the loss of the barque *G. J. Jones*. This vessel was driven upon the rocks just outside Perran, six miles from Penzance, and owing to the precipitous nature of the adjacent coast no lifeboat could be launched at the scene of the wreck. Several rocket lines were sent over the ship, but the violence of the sea was so great that the crew were utterly unable to make use of them. After an interval, all too long, the lifeboat started from a safe place of departure in aid of the storm-beaten mariners, but before they could reach the vessel it had entirely broken up, and out of a crew of thirteen only two succeeded in reaching land. On other parts of the coast the services rendered by the gallant lifeboat-men were more successful, and valuable lives which would otherwise most certainly have been lost were rescued from the terrors of an untimely and miserable end. On shore the effects of the gale were, of course, much less serious, but in Ireland and the west of England a good deal of damage was done to the crops, while in Kent the hop-gardens suffered severely. In the south the storm continued with gradually diminishing energy throughout the 2nd, but on the 3rd, when the

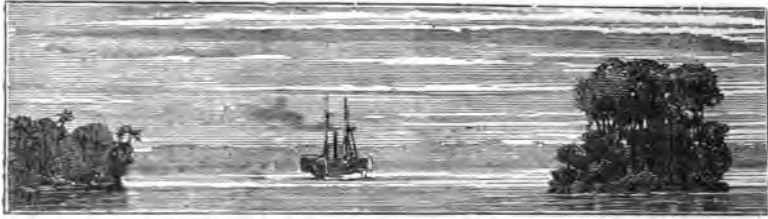
centre of the disturbance had passed on to the North Sea, the wind subsided.

A long interval of quiet weather ensued, and not until the 20th September was any further gale reported on our coasts. Even then, nothing more serious occurred than a slight one from the eastward, which was occasioned by a shallow depression appearing over the south of Ireland. On the night of the 23rd, however, a deeper disturbance passed along outside the Irish and Scotch coasts, and a fresh to strong gale from south was experienced in the west and north. By the evening of the 25th this had passed well away to the northward, but no sooner had it disappeared than a very serious storm began to approach in from the Atlantic, and during the early morning of the 26th a violent south-westerly gale blew over the south and east of Ireland, doing great damage to property in Dublin, where houses were unroofed and trees torn up by the roots. Within the space of the ensuing twenty-four hours the storm centre passed across our northern districts in a north-easterly direction, and the gale extended with almost equal fury to the coast of Cumberland, in which locality several fishing-smacks disappeared. As the disturbance passed along a fresh westerly gale blew over the Channel, and a fresh south-easterly gale in the east of Scotland. On the night of the 28th some new and much shallower disturbances advanced over the northern parts of Ireland and England in a south-easterly direction. As they approached a strong westerly gale was felt in the south-west of England, while on the 30th, when their centres had reached Holland, a northerly gale blew on our east coasts. An interesting feature about this time was the excessively heavy rainfall which occurred over the east of England on the 29th and 30th. At Hillington, in Norfolk, the aggregate fall was 3·1 inches, while at Boston, in Lincolnshire, there was as much as 3·7 inches.

In conclusion, it will have been seen by those who have had the patience to read through our review, that the third quarter of 1883 has been distinguished by an unusually large number of gales and tempests. Whether the winter will bring us a continuation of severe storms is more than we, or, in fact, anyone else can possibly tell; but at present the prospects are not at all reassuring. F. J. B.

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\*,\* The timely aid and relief to the shipwrecked sufferers themselves, or the suddenly bereaved and distressed dependents, directly or indirectly afforded, almost without exception, by THE SHIPWRECKED MARINERS' SOCIETY in London, and its 1,200 local Honorary Representatives and Agents at Home, Abroad, and in the Colonies, will be found included in the General Statistics of the Society's Work, as given, under the Society's Heading, at the end of each Number of this Magazine.



## MARITIME NOTES.



“The Sea! the Sea! the open Sea!  
The blue, the fresh, the ever free!”

PROCTER.



“Thou glorious mirror, where the Almighty’s form  
Glasses itself in tempests!”

BYRON.



## FOG SIGNALS ON SHIPBOARD.\*



**W**Henever a more than ordinary collision takes place, accompanied with serious loss of life, a great number of well-intentioned persons rack their brains to invent systems of signalling which shall denote the courses ships are steering in foggy weather, and thus avert contact. Within a comparatively short space of time nine plans have been published in *The Shipping and Mercantile Gazette* from correspondents in the United Kingdom, Germany, Sweden, and America, which are severally intended to intimate (1) whether an approaching ship is on the port or starboard tack; (2) whether a meeting vessel intends to port or starboard her helm; (3) the compass courses. The latter supposed want has, especially, produced dozens of schemes within the past twenty years, some of them being close imitations of originals.

Many inventive geniuses seem to possess the most boundless faith in the magic of sounds for indicating the movements of ships either in rivers or at sea. In addition to the compilers of codes to meet and avert every possible contingency of danger from collision, there are several competitors for the honour of producing “roarers” or

\* From “*Mitchell’s Maritime Register*.”

“screamers” in the shape of steam whistles, or horns blown by mechanism or bellows.

We remember, when the steamers plying on the Tyne between Newcastle and Shields were running in fierce competition, that one company had steam organs fitted on board its boats, and the tunes played by those instruments could be heard in the stillness of an evening for miles, according to the direction of the wind. In the daytime their strains were partially drowned by the busy hum of the shipbuilding yards, or the noise on the water and land. That musical notion suggested the idea of employing high and low-pitched notes for signalling; and it was seriously proposed to have organ pipes near the funnel-casing to be set going by the application of steam. That happy conceit, at the end of thirty years, has made no progress. It would be quite practicable to set an organ to work to play “Rule Britannia” when a ship’s helm is to be *starboarded*, or “God save the Queen” when *ported*, and “Auld Lang Syne” when *steady*.

Lately there have been sundry proposals for utilising the steam whistle in producing bass or shrill sounds, and for sending forth long or short notes. Machines have also been invented for making hideous discordance on the horizon. Some of these howling helps to nightmares keep the crews of ships from sleeping, and disturb the quiet of the gulls on the rocks and cliffs. Emulation has produced sound emitters that one would suppose could not be surpassed. The old steam screecher has given place to the roarer, though on board a few vessels both are to be found.

These changes in the voice of whistles have set men to study how their music might be adapted to fog signals and courses. We would point out, however, to those who fancy they can ward off contact by warning sounds produced by whistles or horns, that they must not create a conflict with the law. The “Regulations for Preventing Collisions at Sea” provide that during the prevalence of fog, mist, or falling snow (Article 12)—(a) the steam whistle of a steamship under way must make a prolonged blast, at intervals of not more than two minutes, and this one prolonged blast should not be used for any other than the common fog-signal; (b) a sailing ship under way has to make with a fog-horn, at intervals of not more than two minutes, when on the starboard tack one blast, on the port tack two blasts in succession, and with the wind abaft the beam three blasts. As a matter of fact, those signals have not been long enough in use to become well known and acted upon, or they are forgotten or neglected. If the horn is blown at short intervals, that is deemed to be a sufficient compliance with the Regulations. Its period of sounding is not infrequently left to a seaman of the watch. There are many masters

and mates, however, and perhaps they may constitute the majority, who act up to the rules. The one, two, or three sailing fog-horn signals are embodied in some of the proposed codes. No interference with the Regulations can, however, be permitted.

Then, as regards the variation in length of sounds. Long and short blasts of steam-whistles are imported into the signal cards published by the amateurs or professional authors of course signals. They do not notice that, by Article 19 of the Regulations, a steamship, which is to pursue a given course by law, may indicate to another ship that she intends to comply with the rules, and one short blast means, "I am directing my course to starboard;" two short blasts, "I am directing my course to port;" and three short blasts, "I am going full speed astern."

A fog-signal, as already explained, is supposed to be, for a steamship, a prolonged blast; but the steering signals are to be short. These course signals are not generally made, and for the reason that, if the Regulations prescribe a certain mode of procedure, the master of one ship ought not to find it imperative to inform those in charge of another vessel that he intends to comply with the law. They may be made, however, and, this being so, the long fog or the short course signal must never be infringed.

The attention of signal reformers should be directed to the requirements of the Regulations, or otherwise the owners of ships may be induced to patronise these pretty and clever sound signals, with the result of finding that they are committing a breach of the law. There are difficulties enough in the way of those who are in command of ships without further complicating the Regulations by the confusion of multifarious sounds. The more a man has to remember in an emergency the less likely is he to do that which is necessary to ensure the desired security. Several vessels making long and short whistles together in a fog, at no great distance apart, would be simply bewildering. The rules already in force are sufficient for the purpose of safety, for, when followed out, no collision can happen.

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### HOLIDAYS AT SEA.\*

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**H**OLIDAY-MAKERS desirous of refreshing change will do well to take advantage of the many facilities for sea voyaging which our times afford. The air of the open sea or ocean is in all points more health-giving than that of the coast. It is un-

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\* From "*The Lancet*."

contaminated by land-smoke or effluvia; it contains more of that excellent blood-feeder, ozone; it can be had of almost any temperature by the adoption of one or other of many sea routes, from the bracing coldness of the Northern Ocean to the genial warmth of the Mediterranean or Madeira. Again, to the sailor it is always at hand, no need to pass through bustling streets to a pier-head to enjoy its freshness. The constant change of scene is another agreeable circumstance in such a mode of travelling, and brings mental relief, appreciated by men who are usually engaged in anxious and monotonous work. Food, of course, varies in quality on board ship, as it also does on shore; neither is there ready escape in the former case from dietetic discomfort. But we believe there is not, on the whole, much ground for complaint on this score on the more frequented lines. Meal times, at all events, are regular, and the fare usually wholesome, plain, and abundant. To many these are real, though, perhaps, underrated benefits.

The class of men which profits most by a sea trip consists of those whose chief trouble is exhaustion—the great multitude of the atonic, the weary refugees from city labours and perplexities, “brain workers” whose nervous energy has run down, mentally jaded, but capable of quick return to vigour under the influence of rest from work and a bracing atmosphere—in short, precisely those persons for whom the annual holiday is a physical necessity. Certain classes of invalids, also, do well with sea journeys. Among these are sufferers from various chronic nervous complaints, dyspeptics in whom want of power is the prominent feature rather than irritability of stomach, and convalescents from some acute non-infectious diseases. For all such a cool or keen northern air is better than a merely temperate or a warm subtropical climate. Other types of disease again require more heat. Inflammatory chest affections, which tend to become chronic; pleurisy, which has passed off and left an irritable lung; chronic kidney disease, lingering remains of old dysentery, chronic rheumatic disease and gout, and maladies due to cold and exposure generally, constitute this group. It must not be forgotten that the *sine qua non* for any sea sailing at all consists in a stomach and sympathetic nervous system not too readily subject to sea-sickness. For want of this qualification of immunity sufferers from hepatic disease make bad sailors. Those afflicted with vertigo are also among the disqualified.

There are many facilities now to tempt the water tourist. One may at moderate cost see the best parts of the British coasts in a week or two; in a month or six weeks he may see much of the south of Europe or of America; and if he have leisure and means he may

profitably pass six months amid the luxuriance of the West Indian Archipelago, or traverse New Zealand from end to end, and return to spend the next half year at home. But whatever the period, a vacation cannot be spent by those who are not constitutionally unfit in a way more truly refreshing than on board a comfortable passenger steamer.

**S**EAMEN AND COLOUR BLINDNESS. — In the ophthalmology section of the British Medical Association, this week, Dr. Brailey and Professor Snellen read papers on the tests for colour sense and acuteness of vision among sailors, &c., and, after a discussion, the following resolutions were passed:— “That in the opinion of this section it is of international importance that a proper system of testing the sight of seamen be adopted, and that there should be an examination by competent persons as to shortness of sight, and that the examination by the Board of Trade as to shortness of sight of officers and seamen—which is now entirely neglected—should be conducted by competent persons. That the present imperfect examination as to colour-blindness by the Board of Trade be revised, and that it be extended to able seamen as well as to officers; that pilots be also submitted to the same test in place of the present varying and unsatisfactory system of examination; and that every person failing to pass such examination should be excluded from the responsible navigation of vessels.”

Ransomes and Rapier's Engineering Works at Ipswich, to witness the trial of a steam crane of unusual size and power, built for the London and St. Katharine Docks Company, for the special service of their Royal Victoria and Albert Docks, at London. This colossal machine weighs upwards of 130 tons, and is mounted on ten wheels, the leading dimensions being as follows:— Radius of jib, 40 feet; height of jib, 60 feet; gauge of the wheels, 22 feet; clear headway under the crane, 15 feet; test load, 25 tons. The various movements of lifting, turning, travelling, and altering the radius of the jib, with the full load suspended, were gone through with the greatest care, and with a margin of 30 to 35 per cent. in excess of the specified duties. The immediate vocation of this machine is intended to be the rapid loading of coals into fast steamers, making long voyages, and requiring large supplies of that necessary commodity. The coals arrive at the docks in railway trucks direct from the collieries, and the intention is to lift the trucks entire, and swing them round over the hole or coal bunker of the ship; the truck is then, by means of an auxiliary chain, tipped sufficiently to allow the doors to open, and the coals to run out direct into the ship. By these means, it is said, the coals will arrive on board worth two shillings per ton more, by reason of the saving of breakage as

**M**OVABLE TWENTY-TON CRANE.— On the 30th August a party of gentlemen interested in fast steam shipping “lines” to distant parts of the world, assembled at Messrs.

compared with the old plan of putting the coals into lighters, then filling them into baskets, and again emptying them into the ship, two handlings of the coals being altogether saved by the machine. Besides the saving in breakage, it is anticipated that there will also be a great economy of time, which is daily becoming of more and more importance with these costly steamers. The crane will also be available for loading boilers or other heavy machinery of every description. The various movements are made by a pair of engines which, on the occasion of the trial, developed a power of 70 horses actual. The boiler is entirely of mild steel. The whole was designed by Messrs. Ransomes and Rapier, and built at their Ipswich works, under the direction of Mr. Carr, the engineer of the Docks Company.

**CANADIAN FISHERIES.**—It appears from statistics recently issued, that the total value of the production of the fisheries of Canada in the year 1882 was \$16,824,992, being an increase over that of the preceding year of \$1,006,929, exclusive of the catch in Manitoba and the Northwest territories, of which there are no returns. The province of Nova Scotia came first, with a production valued at \$7,131,416; the next in order, though at a considerable distance, being New Brunswick with a production valued at \$3,192,388. Quebec, Prince Edward Island, and British Columbia followed in order, each with a production the value of which was somewhat under \$2,000,000. It is estimated that fish to the value of \$4,885,000 was consumed by the Indian population alone. Fish was exported to the

value of \$7,697,608, of which all but \$15,529 was made up of fish produced in Canada. The United States received the largest share of the exports, the value being \$2,454,823, though Great Britain was not far behind with a value of \$2,130,282. The next largest consumers were the British West Indies, which took fish to the value of \$1,188,819. The total value of fish imported into Canada in 1882 was \$1,231,917, and upwards of half this quantity came from the United States.

**THE FISHING INDUSTRY.**—The magnitude of the interests involved in the work of *catching* fish only will be best realised by those not thoroughly acquainted with the details of this emphatically national branch of commerce when we say, on the authority of Mr. J. W. de Caux, the well-known fish salesman of Great Yarmouth, that the capital invested in this part of the trade would farm upwards of six million acres of land! "According to the most reliable statistics," says the able author of "The Herring and the Herring Fishery," "there are fishing round the coast of this Island 30,000 vessels, of which the greater number by far is composed of herring boats. These vessels exceed by 8,000 the number of ships which form our mercantile marine. These 30,000 fishing vessels are of 280,000 tons burthen . . . and the capital employed is amply sufficient for the farming of 6,000,000 acres, or about one-sixth of the land in the United Kingdom which is now under cultivation." Then, look at the number of persons employed in manning and working those 30,000 vessels—actually



105,000 men and boys. Add to those handy lads 105,000 persons who, on shore, are directly connected with the sea fisheries, and you have 210,000 individuals, "representing a population of more than 750,000 souls, all of whom are dependent upon the sea fisheries for their daily bread." Nor is this all. "At every stage, from the building of the boat and the making of the net to the actual delivery of the fish to the consumer; intelligent manual labour is and must be employed. . . . Every season, on an average, the operation of counting the herrings landed at the fish-wharf at Great Yarmouth costs upwards of £2,200, while for simply helping to lift the herrings from the ground on to the carts which convey them from the wharf to the various curing-houses, or to the railway stations, no less a sum than £870 is paid. Other equally surprising and incontrovertible facts might be adduced to prove how important the fishing industry is to the nation at large; but these must suffice."

**FLOATING LAVA.**— Captain E. Ashdown, Commander of the Peninsular and Oriental Steamship *Siam*, states that that vessel on her voyage from King George's Sound to Colombo, on August 1, when in lat. 6 deg. S., long. 89 deg. E., passed, for upwards of four hours, through large quantities of lava, which extended as far as could be seen (the ship was going eleven knots at the time). The lava was floating in a succession of *laves* of from five to ten yards wide, and trending in a direction north-west to south-east. The nearest land was the coast of Sumatra (distant 700 miles), but as there was a current of fifteen to

thirty miles a day setting to the eastward, the lava could not have come from there, and he could only imagine it must have been an upheaval from somewhere near the spot. The soundings on the chart showed over 2,000 fathoms. Captain Ashdown adds that there was a submarine volcano near the spot in 1789.

**NEW PEARL FISHERY.**—A pearl fishery of great promise has been opened up in the Gulf of Mexico. Among many smaller gems, the fishermen have discovered several large and very valuable pearls. One taken from the shell of a pearl oyster, in December last, is believed to be the largest on record. It weighs 75 carats, and was purchased by a jeweller for \$14,000, though that sum was very far below its real value. Another of 47 carats has also been found. It is perfect in form and finely tinted, and is valued at \$5,000. A third very beautiful pearl of 40 carats has been exhibited at La Paz, where a bid of \$3,000 for it was declined. It is thought from these and other examples that there are extensive deposits of pearl-bearing oysters, and there is great excitement on the shores of the Gulf.

**JAPANESE MERCANTILE MARINE.**— The Kiado Unyu Kaishu (Union Steam Navigation Company) of Japan has been recently established at Tokio by charter from the Imperial Government, with a capital of £1,200,000, of which £520,000 has been subscribed by the Government, there being no subsidy, and the remainder, £680,000, by the Japanese public. This Company now possesses

a fleet of steamers and sailing vessels, which are all under the Japanese flag, and intended for the Japanese coasting trade. The paid-up capital of the Company (£600,000) has already been invested in the purchase and construction of nineteen steamers of a deadweight-carrying capacity of over 20,000 tons, and twenty-two sailing vessels of 7,000 tons. Some of these have been contracted for with Messrs Napier, Shanks & Bell, and other well-known shipbuilders on the Clyde, and others with Sir W. G. Armstrong, Mitchell & Co. (Limited), on the Tyne—all the steamers being first-class passenger and cargo steamers, built under Lloyd's special survey and classed 100 A1.

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**E**LECTRICAL SHIP.—A launch propelled by stored electricity made a trial trip between the Temple and Greenwich recently, being one of the first instances of the use of this motive power thus applied. The launch, which is only 40 feet in length, was built of galvanised steel by Messrs. Yarrow & Co., of Poplar, and the propelling power is found by Messrs. Siemens' dynamos, placed under the flooring at the stern of the boat, which is raised there about eight inches. The electricity for giving motion to the dynamo is obtained from Faure-Sellon-Volckmar accumulator cells, supplied by the Electric Power Storage Company, placed under the flooring, where they not only do not occupy space available for passengers, but are useful in forming ballast. There is storage sufficient to give very high speed for six hours, or a longer time with a medium speed. On the ordinary launches the machinery and attendants occupy the larger and

better part of the vessel; but on the one tried on Tuesday the only machinery seen was the steering gear, and one man steered and managed the whole, there being room for more than forty persons. There was in the travelling no noticeable vibration, and the absence of smoke was not only apparent to the travellers, but to the workers on ships in the pool, who hailed the little craft with the query as to where the funnel was. The boat arrived at Greenwich in three-quarters of an hour. The makers present the craft as possessing qualities especially adapted for warfare, for she is noiseless, is ready in a moment when the accumulators are once charged; and the electrical power is easily obtainable on board ship from the engine or from water wheels. The trial was quite successful, and the builders and the Electrical Power Storage Company, were congratulated on the result of the day.

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**I**NGENUITY AT SEA.—There has lately come under our notice two instances on steamers where the skill and energy of the officers in charge have substituted ingenious contrivances to overcome the difficulties occasioned by accidents to rudder and machinery. To the landsman they will be found most extraordinary, and will bring from him a tribute to the men who are able to respond so quickly to demands which call for a special class of talent. These cases are another evidence of the versatility of the sailor. The first is that of the British steamship *Amethyst*, Captain Bennington, which arrived at Havana, February 14, from Cardiff, with the loss of her rudder and outer stern-post broken, having run aground on

Dry Salt Bank. She was steered safely into the port of Havana by the ingenious jury rudder, constructed by Captain Bennington. This rudder was composed of two large cargo derricks, 30 and 29 feet in length respectively, fastened together much in the form of a triangle. The apex of the angle, or where the ends met, were fastened with iron bunker doors screwed fast to the wood. To these derricks were then fastened crosswise, with chains, planks, and shifting boards; and the whole then set upright with the broad end outward, and made fast by the apex or small end with two ends of mooring chains, run through the rudder trunk to the stern of the vessel immediately above the broken rudder-post. To prevent the rudder from sinking and to keep it in an upright position, a wire rope was made fast to the base of the triangle or outer uppermost end, then run through a block fastened to the mizentop, and subsequently to the deck of the vessel. Guys were then fastened to this span to keep it amidship. Better to control the rudder and to decrease its buoyancy, 30 fathoms of mooring chain were fastened to the outer bottom part of it. The steering of this improvised rudder was apparently done with great ease. At about three-quarter distance of the length of the rudder, on the starboard and port sides of it, were fastened wire ropes which passed through blocks fastened to

outriggers on each side of the stern of the vessel, and thence through blocks placed in the mizenhead, from which they descended to their respective steam winches on the deck. The second case was that of the British steamer *Ardanrigh*, the propeller blades of which were broken at sea. This steamer left Fernandina, Florida, on May 19, for Falmouth, England, under command of Captain Ewer. When about 150 miles out she broke her propeller blades, rendering her motive power unavailable. There was no wind, and her sails were useless. In the dilemma, Captain Ewer set about arranging a plan by which he could reach land, and succeeded in constructing one of the most novel devices ever used in propelling a vessel. Openings were made in the iron sides of the vessel immediately above the forward decks, through which a wooden shaft, made from hoisting spars, was placed. On each end of the shaft, paddles of heavy plank were fastened, and the whole was then connected with the donkey engine by means of cog-wheels and bands. The engine was started, and to the great gratification of officers and men, the improvised side-wheels revolved, and the vessel moved off. The vessel had, however, to be taken in tow, but the rudely-constructed paddle-wheels were an advantage for a time, and demonstrated what could be done with such contrivances on an emergency.





## MISCELLANEOUS JOTTINGS.



“Here a little, there a little.”

—◆—◆—◆—  
“O Reader! had you in your mind  
Such stores as silent thought can bring,  
O gentle Reader! you would find  
A tale in everything.”

WORDSWORTH.



## “SEASONABLE WEATHER.”



WITHOUT going so far as that classical verse that tells how the minds of men “do in the weather share,” and that they “grow dark or serene, as the day’s foul or fair,” it may be said that not only does the weather affect the mind and the temper of mankind, but that there is set up some idea of what weather is “seasonable” for given periods of the year, and to it the laws that rule the winds and the waves are expected to conform. We know little more than Horace did—

“What governs swelling tides, what rules the year?  
Whether of force, or will, the planets err?”

What wax and wane to Cynthia’s dark orb brings?”

But poets and play-writers have described, and the experience of philosophic observers has shown the seasons in certain dresses and phases, and we look to them to bud into green, to fade into brown, to be whitened with snow, just as they have in the past.

And especially is this the case in regard to the winter season. Poets scarcely paint it without its white flaky accompaniment. Scott talks of the “snow-impeded wains,” and of “our snow-encircled homes;”

Tennyson, in his saddest poem, tells how the "silent snow possessed the earth, and calmly fell" on the evening which he associates with his dead friend; Milton describes the "winter wild" when the manger received its occupant at a time when nature had thrown "a saintly veil of maiden white" over the earth; and Shakespeare gathers into a wonderful song the characteristics of winter. And when, some winter morning, our first glance from the window shows a changed and whitened world, we recognise the "seasonable" character of the weather, and mark the changes on land or sea that are wrought by the two great wizards, wind and snow. For these are the forces that are unconquerable. The snowflake that falls so lightly, and in a moment is "lost for ever," becomes in its myriads invincible, checks the marches of armies, scatters navies, stops communication, distances neighbours, blots out landscapes, and in avalanches may sweep out villages, baffles conquerors, clogs the wheels of trade, and noiselessly but still heavily falling, it bears down the fine wires that girdle the earth. And its comrade, the wind, that erewhile toyed with the leaves that lingered late on the trees, sweeps in gusts and gales over heaped-up seas, strews the coasts with wrecks, tears into ribands the vessels, and dashes the proudest sea palace into pieces on the rocks of some lee shore. Together, they whirl big mounds on bleak moors, block deep country lanes, drift up lonely roads, and spread a wide white waste where were fields, and glens, and forests. And looking over a purity unsullied that pains the eye, the beauty that accompanies "seasonable weather" is noticed before its inconveniences are felt or its dangers learned on sea and shore.

To the rich, "seasonable weather" presents its pleasantest front, for the sleigh that glides over the crisp snow bears a "world of merriment" in the melody of the bells that Poe has portrayed; the snow is seen in its beauty when it streaks the sides of stately firs, and gives a glistening to the olive and the holly leaf, and has through its whiteness only the scorings of distant park roads; whilst the frost and the cold that are outside have the charm of change that need not be long endured by those who can take refuge, when skating grows tiring or driving weary, in rooms that are curtained and close and comfortable. That is the pleasant side of the "seasonable weather" that we long for in the time when the days are at their shortest. But there is another aspect—that of the poor of the town, of the streets, and of the discomforts and losses that are known.

"Seasonable weather" shows itself on the shore where, "like a sheeted ghost, the vessel swept," through whistling sleet and snow; it shows itself in the streets, in the compound of slush and dirt that is deep on the pavement, and that trebles the task of the patient horses;

and it shows itself in the drifted trains, where the power of steam is of naught against the irresistible masses of millions of flakes firmly wedged on the line. And, amid industries, "seasonable weather" plays strange havoc, making idlers, hindering work, and bringing penury near. It brings into the streets scores who, like Spenser's January, are numbed, and do "quake and quiver" with the cold.

There are homes in all our great towns to whose inmates prolonged cold is a calamity, and a "seasonable" winter a bread thief; and those who linger in the lap of luxury and look across a winter waste to mark its poetic beauty, should bear the poor in mind, who, ever present with us, are especially needful of help in that time that commemorates the coming of the lowly-born Child. For it needs all the aid of the rich to enable the poor to pass the wintry trials through until the words of old shall again be true, "For lo! the winter is over and gone."

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BEAUTIFUL RAIN.

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"How beautiful is the rain  
After the dust and heat!"

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**I**N the country, on every side,  
Where far and wide,  
Like a leopard's tawny and spotted hide  
Stretches the plain,  
To the dry grass and the drier grain  
How welcome is the rain!  
In the furrowed land  
The toilsome and patient oxen stand;  
Lifting the yoke-encumbered head,  
With their dilated nostrils spread,  
They silently inhale  
The clover-scented gale,  
And the vapours that arise  
From the well-watered and smoking soil.  
For this rest in the furrow after toil  
Their large and lustrous eyes  
Seem to thank the Lord,  
More than man's spoken word.

LONGFELLOW.

### EMIGRATION AND IMMIGRATION.



PARLIAMENTARY paper has been issued containing Mr. Giffen's report to the Secretary of the Board of Trade on the statistics of emigration and immigration from and into the United Kingdom for the year 1882.

In respect to the emigration statistics, Mr. Giffen calls attention to the fact that, while for the last three years the figures have been very large, the year 1882 shows the largest total yet recorded:—"The total number of emigrants, including foreigners, amounted last year to 418,288, an increase of 20,774 as compared with 1881. In this total the number of emigrants of British and Irish origin only was 279,366—an increase of 86,864 compared with 1881. It was noticed in last year's report that the emigration of persons of British and Irish origin only, in 1881, was somewhat higher than the highest year of the previous decade—viz, 1873, when the figure 228,345 was reached, and had only been exceeded in two years since 1853, these years being 1853 and 1854, when the corresponding figures were 278,129 and 267,047. It will now be observed that the figure of 1882—viz., 279,366—is absolutely the largest in any one year since 1853, when the nationality of emigrants began to be distinguished. In proportion to the population, the emigration is less important than it was thirty years ago, but the actual numbers are larger than they were then. The character of the emigration has changed, being now much more largely English and Scotch, and less Irish, than it was thirty years ago. It follows from the above figures that the number of foreign emigrants passing through the United Kingdom in 1882, must have diminished, as compared with 1881, by about 15,000."

The immigration in 1882 was much the same as in the previous year, showing a total of 78,268 (including foreigners), as against 77,105 in 1881, and a decrease of 2,108 in the number of British and Irish immigrants.

As to the excess of emigrants over immigrants, Mr. Giffen says:—"The excess of emigrants last year, whether we compare the total emigration and immigration, or the emigration and immigration of persons of British and Irish origin only, was unprecedentedly large. The excess of total emigrants is 335,000, or very nearly 1,000 per day, and the excess of emigrants of British and Irish origin only is 228,767, which is 88,000 more than in the previous year, and enormously greater than the figures in some of the years before that, when a correct balance between emigrants and immigrants in this form was first struck. As was remarked in last year's report, it is impossible

to carry the comparison further back than 1876, but there can be little doubt that the above excess of emigrants was probably as large as in any year since 1853 and 1854, if not larger.

“The loss of population to the United Kingdom last year was very large indeed, being nearly one-half the total excess of births over deaths. The loss must be more largely than it was thirty years ago, a loss of English and Scotch as distinguished from Irish population. It appears that while the number of Irish persons emigrating, which showed a decline of about 17,000 in 1881, from the large total of 93,000 in 1880, increased last year to 84,000, yet the proportion of Irish to the total emigration from the United Kingdom is rather less than it was in 1881, being nearly 80 as compared with 81 per cent.; it appears, in fact, that the increased emigration of persons of English origin amounts to 23,000, the total being 163,000, and the increased emigration of persons of Scotch origin is about 5,400, the total being 32,000, so that last year there were about 195,000 English and Scotch persons emigrating as compared with 84,000 Irish. The circumstances promoting emigration from the United Kingdom must thus be considered to have been very general, and not very specially connected with the condition of Ireland.”

**R**ADIANT HEAT.—Some interesting experiments have recently been made in connection with this subject by Professor S. P. Langley, of the Alleghany Observatory. He finds, as one of the results of these experiments carried on at Mount Whitney, that the true solar constant or amount of heat sent to the earth is one-half greater than that determined by Pouillet and by Herschel near the sea level, and even greater than the latest values assigned by M. Violle. But the temperature of space, on the other hand, is lower than that assigned by Pouillet. If the atmosphere of the earth were withdrawn the temperature of the latter would greatly fall even though the sun's radiant heat were materially greater than it is. Mr. Langley believes that this temperature under such circumstances would be 50 deg. Fahr.—that

is, that mercury would remain a solid under the vertical rays of a tropical sun if radiation into space were wholly unchecked, or even if, the atmosphere existing, it let radiations of all wave-lengths pass out as easily as they come in. It is not merely by the absorption of the air, but by the selective quality of this absorption that the actual surface temperature of the earth is maintained. Without this comparatively little known function, it appears doubtful whether, even though the air supported respiration and combustion as now, life could be maintained on this planet. The temperature of a planet, consequently, probably depends far less on its neighbourhood to or remoteness from the sun than upon the constitution of its gaseous envelope, and it is perhaps not too much to say that we



could approximately indicate already the constitution of an atmosphere which could make Mercury a colder planet than the earth, or Neptune as warm and habitable a one.

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**DISTRIBUTION OF WEALTH.**—At the late meeting of the British Association, in Southport, Professor Leone Levi contributed a paper on recent changes in the distribution of wealth in their relation to the income of the labouring classes. The average income of certified teachers had increased from £88 6s. per annum in 1855 to £115 in 1881, while the average of Board school teachers' salaries was £125 18s. Considerable increase had taken place in the income of curates and ministers of religion; the income of commercial clerks might be taken to have increased 15 per cent. The average income of this class, which in 1851 was about £90, could now be taken at £110 a family. As to the labouring class, not only the direct wages had greatly increased, but with the extension of piece work their earnings generally had been much greater, while the income of women and children had also much increased. If the income of a working man's family in 1850 could fairly be estimated at 20s. a week, or £52 a year, their income in 1881 could confidently be taken at 32s. per week, or £88 per annum, in both cases, of course, including all the earners in a family. While the average income of all income-tax payers of £150 and upwards had decreased from £824 to £544, the average income of the lower middle classes had increased from £80 to £110, or 37 per cent., and the income of the labouring classes from £52 to £88, or 59 per cent. Clearly, then,

the labouring classes had participated to the full in the tide of prosperity which the nation had enjoyed for the last thirty years, while the financial administration of late years had been altogether in their favour. The relative condition of classes was by no means immutable. Wealth was attainable by labour and economy, and no class was shut out from competition.

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**ORIGIN OF AMBER.**—Some very interesting researches have recently been made on the flora of the amber-bearing formations of East Prussia by Messrs. Goeppert and Menge. In ancient times there must have been in this part of Europe a group of conifers comprising specimens from almost all parts of the world. Among the splendid specimens of the Californian coniferæ were the red wood, the sugar pine, and the Douglas spruce; and of the examples of the Eastern States were the bald cypress, red cedar, thuya, and the *Pinus rigida*; from the eastern coasts of Asia were the Chilian incense cedar, the parasol fir, the arbor vitæ, the glyptostrobus, and the thuyopsis; and the Scotch fir, the spruce, and the cypress of Europe, and the callitris of Southern Africa. It appears that the deposits of amber for which the Baltic is noted are the product of generations of these resin-bearing trees. The richest deposits are situate along a strip of coast between Memel and Dantsic, though the real home of amber has been supposed to lie in the bed of the Baltic between Bornholm and the mainland. It rests upon cretaceous rocks and consists chiefly of their *débris*, forming a popular mixture known as blue earth, which appears to exist throughout the

province of Samland at a depth of 80ft. to 100 ft., and to contain an almost inexhaustible supply of amber. Immense quantities of amber are washed out to sea from the coast or brought down by rivulets and cast up again during storms or in certain winds. The actual yield by quarrying is 200,000 lb. to 300,000 lb. a year, or five times the quantity estimated to be cast up by the waves on the strip of coast above mentioned.

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**H**ARVEST CALENDAR OF THE WORLD.—We are all taught that, by reason of the inclination of the earth's axis, the several seasons happen at different times in different portions of our globe, so that seed times and harvests do not correspond in the various zones. But probably few persons realise that if all the harvest periods of the world were grouped together they would be found to occupy altogether more than three-fourths of the whole year. As a fact, leaving out of sight altogether the equatorial and neighbouring regions, in which different seasons are actually contemporaneous, there are, perhaps, only two months out of the twelve in which the harvest is not being actually gathered somewhere on the face of the earth. Thus, in the greater part of Chili, portions of the Argentine Republic, Australia, and New Zealand, January is the harvest month. It begins in February in the East Indies, going on into March as we come north. Mexico, Egypt, Persia, and Syria reap in April; while Japan, China, Northern Asia Minor, Tunis, Algiers, and Morocco, and also Texas, do so in May. California, Spain, Portugal, Italy, Sicily, Greece, and some of the southern departments of France

gather the harvest in June. July is the harvest month for the greater part of France, for Austria, South Russia, and the greater part of the United States of America; Germany reaps in August with England, Belgium, the Netherlands, part of Russia, Denmark, part of Canada, and the north-eastern States of America; September is the time for Scotland, the greater part of Canada, Sweden, Norway, and the northern midlands of Russia; while the harvest drags on slowly throughout October in the most northern parts of Russia and the Scandinavian peninsula. I would thus seem that November and December are the only months which have not a place in the harvest calendar of the world.

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**S**TORM SOUNDS IN A TELEPHONE.—A correspondent of *L'Ingénieur Conseil*, signing himself with the initials "E. B.," occupied himself during the violent thunderstorm which occurred at Brussels on June 30, in listening to the storm sounds in the telephonic wire. It was, of course, furnished with a good lightning conductor, and, under such circumstances, he is convinced that the experiment was not attended with danger. During the height of the storm there was a continuous noise, which could only be compared to that of frying. From time to time it would grow louder; sometimes there would be a little popping sound, like a bubble bursting; sometimes the series of cracking noises which follow the fall of a drop of grease on a red-hot iron plate. This last noise came abruptly and loud with each flash of lightning, and seemed to precede it. The observer was satisfied that his ear was surprised by the

sound, before his eye was surprised by the flash. The same noises were often produced when there was no accompanying flash, but then they were less loud. Their force seemed to have no connection with the peals of thunder. On the 600 lines of telephone wire which focus at Brussels, not one apparatus was damaged by the storm, its effects being altogether expended upon the lightning conductors and storm-warning apparatus. This security may encourage other observers to follow the example of "E.B." who considers that in this manner it is possible to obtain valuable contributions to the study of atmospheric electricity. He is of opinion that the constant noise heard in the wires proves the existence in them of a current of atmospheric electricity flowing into the earth, and that a network of telephonic lines overspreading a town would be its best possible protection against lightning.—*Engineering.*

**R**AILWAY VIADUCTS.—A list has recently been compiled of the length of principal railway viaducts in the world, the figures of which are as follows:—Parkesbury, U.S., 2,150 yards; St. Louis, over the Missouri, 1,998; Louisville, over the Ohio, 1,685; across the East River, 1,520; and the same for the Delaware at Philadelphia, and for the Victoria bridge over the St. Lawrence; the Volga bridge, near Syssran, 1,495; the Moersdyk bridge, Holland, 1,490; Pongabuda, in India, 1,148; the Dneister bridge, near Kiew, 1,090; over the Rhine at Mayence, 1,088; the Dneiper at Pultawa, 980; the Mississippi, at Quincy, 980; the Missouri, at Omaha, 860; across the Weichsel, near Dirschau, 845; the

Danube, near Stadlan, 775; the Po, near Mezzana - Corti, 765; the Tamar, at Saltash, 678; the Mississippi at Dubague, 542; the Gorai in India, 535; the Britannia bridge, 480; over the Saone at Friburg, 392; across the Theiss at Szegedin, 365.

**E**FFECT OF LIGHTNING ON TREES.—*The Times* Geneva correspondent writes:—"The frequency of thunder storms in Switzerland this summer (we have on an average two a week) has afforded Professor Colladon, of Geneva, a great authority on electricity and meteorology, ample opportunity of continuing his observations on the effect of lightning on trees and vegetation generally. He has ascertained that when lightning strikes a tree it leaves very few marks of its passage on the upper part and middle of the trunk, a peculiarity which he ascribes to the fact of those parts being more impregnated with sugar, a good conductor, than the lower part. As the electric fluid descends to the neighbourhood of the heavier branches, where there is less saccharine matter, it tears open the bark and in many instances shivers the tree. It is no uncommon thing to find the lower part of a tree literally cut by the lightning, while the upper portion and the higher branches seem to have suffered hardly at all. Oaks, however, would appear to present an exception to this rule, for they are often found with tops quite blasted and the passage of the lightning lower down marked by a gouge-like furrow. These furrows sometimes go completely round the tree like a screw, the reason of which, says Professor Colladon, is that the lightning follows the cells of which

the bark is composed lengthwise, and in certain sorts of wood these cells are disposed spirally. A curious effect of lightning on vines is that it invariably strikes a great many vine stocks at the same time over a space, for the most part circular, from 8 mètres to 25 mètres in diameter, and containing, therefore, several hundred vines. The plants most affected are those in the centre of the circle, and the number of burnt and yellowed leaves diminish in proportion to their distance from that point. In July two vineyards in this canton were struck by lightning, and the first idea of their proprietors, on seeing their shrivelled vines, was that a still more dreaded foe, phylloxera, had been at work; but when the Professor was called in, he speedily enlightened them as to the true cause of the mischief, and, in proof of his diagnosis, pointed out that the ground in the centre of the circle was strewn with torn leaves and freshly-broken twigs."



**G**REENWICH OBSERVATORY STATISTICS.—In the course of his last annual report upon the Royal Observatory, the Astronomer-Royal (Mr. W. H. M. Christie) referred to the following general matters: "The regular subjects of observation were the sun, moon, planets, and fundamental stars, with other stars from a selected list. The working catalogue of 2,500 stars down to the fifth magnitude having been cleared off, a new working list of 2,600 stars, comprising all stars down to the sixth magnitude inclusive, which had not been observed since 1860, had been prepared. About 1,200 stars were observed in 1882. The number of observations with the transit circle

made in the year ending May 20 was about 4,500, which is considerably more than in former years. Preparations were made for observing the transit of Venus on December 6, but clouds completely hid the sun from view during the time of the transit. The spectroscopic observations of Sirius during the past winter tend, on the whole, to confirm the impression that the rate of recession of this star has diminished progressively since 1877, and that the motion is now on the point of being converted into an approach. Photographs of the sun had been taken on 200 days, and 339 selected for preservation. There were seven days on which the sun's disc was observed to be free from spots. In November a group of spots of very unusual size appeared. There had been considerable magnetic activity during the year, the month of November, which was characterised by the appearance of a very large sun-spot, being particularly disturbed with remarkable magnetic storms on November 17, 19, and 20, and many interesting cases of lesser disturbance. The magnetic disturbances on October 2 and November 17 were accompanied by brilliant auroras. On the occasion of the gale of October 24, 1882, a velocity of 64 miles an hour was registered for two successive hours, being greater than any velocity hitherto recorded. The observations of temperature of the Thames have recently been resumed under the charge of the Corporation of London, being made at the end of one of the jetties of the Foreign Cattle Market, Deptford. The mean temperature of the year 1882 was 49·6 deg., being 0·1 deg. lower than the average. The highest air temperature was 81 deg., on August 6, and the lowest 22·2 deg. on December 11. The mean daily

motion for November was 449 miles, being 159 miles above the average. The greatest daily motion was 758 miles on November 4, and the least 80 miles on December 11. The number of hours of bright sunshine recorded during 1882 was 1,245, which was more than 40 hours above the average for the five preceding years. The rainfall was 25·2 in., being slightly above the average. Of the 154 chronometers 114 are the property of the Government, and are being rated after repair previous to their issue to the Navy. There has been no case of failure in the automatic-drop of the Greenwich timeball. On three days the ball was not raised on account of the violence of the wind. The Deal ball has been dropped automatically at 1 p.m. on every day throughout the year, with the exception of five days on which there was failure in the telegraphic connection, of one day when the ball was accidentally dropped 4 sec. too soon by telegraph signals, and of 14 days when the current was weak and the trigger was released by the attendant: on 12 days the ball was not raised because of the violence of the wind. The Westminster clock has maintained its high character, its errors having been under 1 sec. on 66 per cent. of the days of observation; between 1 sec. and 2 sec. on 25 per cent.; between 2 sec. and 3 sec. on 6 per cent.; and between 3 sec. and 4 sec. on 3 per cent. The error has never exceeded 4 sec."

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**M**ETEOROLOGICAL INSTRUMENTS  
WITH ELECTRIC APPARATUS.—

Amongst the many objects of surpassing interest in the Electrical Exhibition, held this year at Vienna, particularly worthy of note are Mr.

Schäffler's meteorological instruments. There is first of all a thermograph consisting of a strong spiral of steel and brass; one end of the spiral is fixed, the other carries a lever, to which a tracing-pin is attached. The registering apparatus is released by a clock which sends a current at stated intervals; the tracing-pin is pressed against an endless strip of paper, and the difference between two following registrations gives the difference of temperature according to a previously constructed scale. The direction of the wind is given by two vanes, like those of an ordinary windmill, attached to a common axis, to which is fixed a wheel gearing in with a second wheel carrying a contact. At stated intervals, say every 10 minutes, the registering apparatus is released by an electric clock, a rather complicated mechanism, whose description would lead too far, pressing a type wheel, that had previously been supplied with ink, against a strip of paper on which the direction of the wind is printed. The velocity of the wind is measured by Robinson's caps, which are, in a similar manner as the preceding instrument, in connection with a registering apparatus, which is electrically released every 10 minutes, and where another type wheel prints the velocity of the wind in kilometres on a strip of paper. When the action is finished the type wheel goes back to zero ready for another operation. The quantity of rainfall is measured by a water gauge provided with a float, which on rising makes contact and actuates a registering apparatus, consisting of a three-wheeled waggon, which for every contact makes a backward or forward movement; the different positions of this waggon are marked on a strip of paper. This

strip is divided into equal sections, each of which corresponds to a certain height of water. The barometrograph is an ordinary syphon barometer, in whose shorter limb an iron cylinder rests on the mercury. This cylinder is balanced by a brass weight in the longer limb, which is connected to the iron cylinder by a thread. This thread passes over a segment of a circle which carries the pointing needle. The segment follows the movement of the thread, and the position of the pointing needle is at stated intervals pressed into a divided strip of paper.



**W**ALK ACROSS AUSTRALIA.—Mr. Ernest Morrison, a son of Mr. George Morrison, of the Scotch College, Geelong, Victoria, is a young man whose love of exploration and adventure has led him thus early in life to undertake long rambles in the back country of the colonies. Several years ago he determined to devote his vacation to walk from Queenscliffe, some forty miles south of Melbourne, on the western shores of Port Philip, to Adelaide, the capital of the adjacent colony of South Australia. This journey he accomplished apparently without much difficulty, and, his success nerving him to greater efforts, he planned a still longer walk. He determined to cross the continent from north to south, starting from the shores of the Gulf of Carpentaria and making Melbourne his goal—a similar journey to that undertaken by Burke and Wills, except that his starting-point was the northern instead of the southern shores of the continent. He set out from Normanton, on the Gulf of Carpentaria, a week before Christmas, unaccompanied and unarmed,

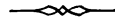
and followed down the Diamantina and Thomson rivers into Central Australia. He struck the Bulloo at Thargomindah, and the Paroo at Hungerford. North of Thargomindah he was caught by very heavy rains, and the level country thereabouts was so flooded that for a distance of some 250 miles he had nearly as much wading and swimming as walking. These central plateaux are occasionally subject to tremendous floods, which extend as far as the eye can reach, and, as a rule, put a complete stop to locomotion. Even when the waters have subsided the country is almost impassable, owing to the depth and holding character of the deposit of black mud left behind, which, however, is to a certain extent of advantage to the squatter as a fertiliser to the soil. Mr. Morrison crossed the River Darling at Wilcannia, and well known as one of the hottest places in the globe, the Lachlan at Booligal, the Murrumbidgee at Hay, and the Murray at Echuca, whence his route southward lay through well-settled country. He finally reached Melbourne in safety after an adventurous walk of some 2,000 miles, which occupied him 120 days. The fatigue he underwent and the risks he ran in the course of this long solitary excursion can be fully appreciated by those only who know Central Australia. The journey was made in the height of summer, when, at places like Wilcannia and Echuca, it is by no means uncommon for the mercury to stand at from 110 deg. to 120 deg. in the shade. North of the northern limits of Victoria the blacks are apt to show hostility to exploring parties, and a man who ventures in this country alone and unarmed must be possessed of no small amount of

hardihood. The brief report of Mr. Morrison's walk states that his rate of travelling was much impeded by the heavy weight he had to carry; but it would be interesting to learn with what store of provisions he commenced his journey, as furnishing a guide to those explorers who have to economise space and weight as far as practicable. Mr. Morrison's feat commands the admiration of all interested in exploration, and must be set down as one of the most remarkable of pedestrian achievements.



**P**ETRIFIED FOREST.—An extensive petrified forest has been discovered near Corrizo, on the Little Colorado, New Mexico. The road at a distance of ten miles from Corrizo, says a traveller who has just visited the spot, enters an immense basin, the slope being nearly a semicircle, and this is enclosed by high banks of shale and white fine clay. From the banks it required half an hour's good drive to reach the heart of the immense petrified forest, and there a wonderful phenomenon met the gaze. Petrified stumps, limbs, and, in fact, whole trees lay about on all sides, the action of the waters for centuries having gradually washed away the hills round about, and the trees which once covered the high table-lands being now embedded in the valley beneath. Immense trunks, some of which measured over 5 ft. in dia-

meter, were broken and scattered over a surface of 800 acres; limbs and twigs covered the sand in every direction. Numerous blocks or trunks of this petrified wood had the appearance of having just been cut down by the woodman's axe, the chips having been scattered upon the ground. Many of the small particles and even the whole heart of some trees had become thoroughly crystallised, and the beautifully-tinted cubes sparkled in the sunshine like so many precious stones. Every colour of the rainbow was duplicated in these crystals, and those of an amethyst tinge would have passed the eye of a novice for the real stone.



**E**UROPEAN TELEGRAPHS.—The following list shows the lengths in kilometres (1 kilometre =  $\frac{5}{8}$  mile) of telegraph lines throughout the Continent:—Germany, 260,636, of which 37,604 are underground; France 211,607; Russia, 223,538; Austria, 92,572; Italy, 89,150; Switzerland, 16,155; Hungary, 54,852; Belgium, 27,922; Sweden, 29,879; Netherlands, 14,133; Spain, 40,742; Denmark, 8,450; Norway, 15,601; Roumania, 8,662; Portugal, 10,964; Greece, 4,614. In Germany there are 4,388 inhabitants to each telegraph station; in France, 6,442; in Russia, 27,091; in Austria, 8,504; in Switzerland, 10,850; in Sweden, 5,794; in Spain, 43,358; and in Norway, 7,411.





## QUIET THOUGHTS FOR QUIET HOURS.



“Pii orant tacite.”

—◆◆—  
“The turf shall be my fragrant shrine;  
My temple, Lord! that Arch of Thine;  
My censor's breath the mountain airs,  
And silent thoughts my only prayers!  
My choir shall be the moonlit waves,  
When murm'ring homeward to their caves,  
Or when the stillness of the sea,  
Ev'n more than music, breathes of Thee!”

MOORE.



## “DRINKING LIKE A FISH.”\*



HE “International Fisheries Exhibition” has aroused a deep interest in all that relates to matters piscatorial. Some are discoursing learnedly on the habits of fish, others devote their attention to their value as food; and while an important class apply their energies to facilitating the means of catching fish, a not less valuable section of society is discussing the best means of distributing them when caught, so that the poor man may enjoy the luxury of this important article of diet—fresh, cheap, and abundant.

Mottoes and proverbs and wise sayings relating to fish are just now much in vogue “to point a moral or adorn a tale.” We wish to “point a moral” with that particular expression with which our remarks are headed. When a man drinks to excess, people often say he “drinks like a fish.” Now, we really owe an apology to the fish for the use of such an unfair and uncomplimentary allusion. As a matter of fact, the fish does not drink at all. He only eats to sustain

\* From “*The Church of England Temperance Chronicle.*”



his vitality, though, from the nature of things, all he eats is moistened by the element in which he lives. He draws in water at his mouth, and ejects it at the gills. But this is not in any sense drinking; it is, in fact, only his method of breathing. He breathes through water as we breathe through air. In the passage of the water entering at the mouth and ejected by the gills, globules of oxygen are deposited, by means of which respiration is carried on. To describe the process as "drinking" is not merely inaccurate, but unfair to the fish. How much more unjust and absurd must it be to make use of the fish as an illustration of excessive, and consequently intoxicating, tipping! It is, in fact, a libel upon him. If you will have it to be "drinking," it is only water after all, and that mostly of the purest character, that our finny friend makes use of; and it is, therefore, ludicrously inappropriate to associate the process with that of the human being when he "puts an enemy into his mouth to steal away his brains." Does the fish do anything which bears the most remote resemblance to the tippler with whom the unjust comparison is made? No, indeed! It would be intolerable, even in a fairy tale or fable, to describe a fish giving way to the propensities, or addicted to the antics, which alcohol develops in the human being. The most vivid and grotesque imagination cannot realise the idea of the lordly salmon or the glistening trout stirring up the mud and injuring their finny friends and relatives as the result of unavailing efforts to quench an insatiable thirst, which "grows by what it feeds on." The expression, therefore, "Drinks like a fish," has its origin in a defective knowledge of the nature and habits of the scaly denizens of the deep, and must consequently disappear as our acquaintance with them becomes more intimate, and more general.

This leads us naturally to the habit which is usually—although, as we have shown, unfairly—described by the expression we have quoted. Even "thirsty souls" themselves are fain to admit the evil consequences of excess. When the habit grows so strong that resistance becomes more and more difficult and the effects more and more apparent, the most obstinate must admit that it is "time to turn over a new leaf"; and the most infatuated devotee of "the rosy god" may well pause to consider the serious dangers of his position, physically as well as morally. The victim of this vice, when it has grown into a mania, and developed into a disease, presents a sickening illustration of the sad depths of degradation of which poor frail humanity is capable. Whatever doubts may exist in some minds as to the necessity for total abstinence, even for the sake of example, on the part of those who are free from temptation, or strongly capable of self-control, all must admit that, for "drinking like a fish," the

only remedy is immediate and unconditional total abstinence. When a man reaches that stage, he has lost both the will and the power to control himself; and when he once sits down to the bottle there is never any telling what may be the result of trying to extinguish that "spark in his throat," no matter how firmly resolved, when he begins, he may declare himself to be, that he will keep within reasonable bounds. The first glass makes such a man want "to wet the other eye"; and this process is repeated till not only are both his own eyes moistened, but too frequently tears are brought into the eyes of his wife, his family, his dependents, and his friends. Happy is the man who can wipe away a tear, and thus diminish the aggregate of human sorrow; but thrice happy is he who, by reclaiming his fellow-creatures from this degrading habit, can thus remove one of the leading causes of these tears, transform the dissolute and idle spendthrift into a sober, industrious, and careful workman, and introduce order, peace, and happiness to the fireside where now there is an all-pervading misery and desolation. "Am I my brother's keeper?" Then let me "work" for his reformation "while it is called to-day;" for "the night cometh when no man can work," but will have to give an account of duty left wholly or partially undone!

H. RISBOROUGH SHARMAN.

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CONTENTMENT.

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OME murmur when their sky is clear,  
 And wholly bright to view,  
 If one small speck of dark appear  
 In their great heaven of blue:  
 And some with thankful love are filled,  
 If but one streak of light,  
 One ray of God's good mercy, gild  
 The darkness of their night.

In palaces are hearts that ask  
 In discontent and pride,  
 Why life is such a dreary task,  
 And all good things denied?  
 And hearts in poorest huts admire  
 How Love has in their aid  
 (Love that not ever seems to tire)  
 Such rich provision made.

ARCHBISHOP TRENCH.

**A**RE YOU SAFE?—It is a great thing to be safe. There are many dangers that beset the path of mortals in the world. We see some of them; others are no less real because they are unseen. There are dangers that lurk around us in our unconscious security, and rush upon us when we least suspect them. It is by no means certain that a man is safe because he thinks so, or because he says so. Many dying people declare that they shall get well, and many come to the gulf of bankruptcy, supposing themselves to be rich. So when I ask this question, "Are you safe?" do not answer it too hastily, or too confidently; for no man can *know* that he is safe until he knows for *himself* his actual and true present condition. Do not, therefore, conclude you are safe because you *see* no danger. Who sees the approach of the midnight assassin? Who sees the sunken rock on which the noble vessel crashes and goes down? There may be a thousand dangers which you have never seen. Do not conclude that you are safe because others think you are, or tell you that they think so. They are quite as likely to be mistaken as you are, and you cannot afford to trust to others the decision of a matter that so deeply concerns yourself. Do not, I beg you, conclude that you are safe because "there is no danger." That word has carried the sick man down to the grave—has driven the vessel on the rocks; it has overthrown the army; it has lost the battle; it has ruined the nation.

**R**ESPONSIBILITIES.—It is a high, solemn, almost awful thought for every individual man, that his earthly influence, which has a commence-

ment, will never through all ages, were he the very meanest of us, have an end! What is done, is done, has already blended itself with the boundless, ever-living, ever-working universe, and will also work there for good or evil, openly or secretly, throughout all time. But the life of every man is as the well-spring of a stream, whose small beginnings are indeed plain to all, but whose ulterior course and destination, as it winds through the expanses of infinite years, only the Omniscient can discern. Will it mingle with neighbouring rivulets as a tributary, or receive them as their sovereign? Is it to be a nameless brook, and will its tiny waters among millions of other brooks and rills increase the current of some world's river? Or is it to be itself a Rhine or Donau, whose goings forth are to the uttermost lands, its flood an everlasting boundary-line on the globe itself, the bulwark and highway of whole kingdoms and continents? We know not; only in either case we know its path is to the great ocean; its waters, were they but a handful, are here, and cannot be annihilated or permanently held back.—*Carlyle*.

**S**ILENT FORCE.—Some of the most powerful agencies in the moral and physical world are silent or invisible, — the wind, electricity, thought, love, light, heat, the eye, emotion. Oh that we realised more than we do the power and majesty of things unseen!

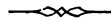
**W**AR.—To judge of war only by the miseries it inflicts, and to count all the lives taken in it and all the money spent as so much loss, is like setting one's face against

the felling of a tree, because of the birds who will be disturbed from their nests, of the harmless insects who will be crushed, and of the pretty blossoms and plants that will be torn up by the roots when the trunk falls. A great deal of false sentiment may be inspired by a prostrate oak; and the sentiment is equally false which, condemning war, puts out of account the benefits it has conferred by conquering oppression which could only be broken by force, and by ennobling individual character. This last point must not be forgotten, and it is as unkind as it is untrue to speak of any life as "lost" when it leaves behind it a great example.



**THE ETHICS OF ENJOYMENT.**—The gift of enjoying life should be ranked among the most desirable of talents. When our forefathers solemnly incorporated into their Declaration of Independence the assertion that men were entitled to life, liberty, and the pursuit of happiness, they gave official recognition and emphasis to the importance of happiness as an element of national life. As a rule, we ignore it individually. We are apt to consider happiness from the Carlylean standpoint as something that "man can do without." We are apt to have an undefined feeling that we are not doing our whole duty if we are happy; that it is a species of dilettantism or idle and childish self-indulgence. This is our Puritan inheritance, and one that still lingers perceptibly with us. Diderot, in his "Paradoxe sur le Comédien," says: "But look around you, and you will see that people of never-failing gaiety have neither great faults nor great merits; that as a rule people who lay themselves out to be agreeable are

frivolous people, without any sound principle, and that those who, like certain persons who mix in our society, have no character, excel in playing all." In this the French critic expresses a very universal sentiment, and one that is apt to be accepted *sans* analysis. But is it not true that happiness is really our normal condition, and that any failure to realise it should suggest to us a violation of laws and warn us to seek the remedy and restoration? Of course, if happiness is adjudged to be entirely dependent on things, and to require at least 10,000 a year for its support, it is a practically unattainable affair to most of us. But if we relegate it to its true place, as a spiritual condition, we hold the keys that unlock for us the gates of destiny. Happiness is moral and intellectual sanity, as health is physical sanity, and "the pursuit of happiness," which is secured to us as a constitutional right, is a very laudable and feasible occupation. Nine-tenths of our anxiety, our worry, our fancied trials, is wholly useless. Not that it is entirely without basis, but its realities consist of conditions that can be dissipated, and even ignored. Life is too short to waste on idle or unavailing regret. It is wiser to look up than down; to look forward rather than backward,—and the life that holds itself in true polarity to hope and cheerfulness and sunshine, is, in itself, the life of permanent and blessed success. "The kingdom of heaven is *within* you."—*Boston Traveller.*



**COMPANIONSHIP.**—A man is known by the company he keeps; and a man is also known by the company he keeps out of. There is a subtle affinity between different

persons, which causes men of similar character to gravitate towards each other. He who likes the company of evil men, has in him some affinity for their character, or sympathy with their practices. This hidden tendency may not be known to him; he may think that he will never imitate those with whom he associates; he may say to those who warn him of his danger, "Is thy servant a dog, that he should do this?" But time may nevertheless tell the story, and prove that that which he doubted and denied was nevertheless true. "It is better and safer to ride alone than to have a thief's company." "A few sick of the plague may infect a whole town." Let every man who seeks to follow truth and righteousness select for his companions those whom he desires to be like, and he shall prove by experience that "he that walketh with wise men shall be wise: but a companion of fools shall be destroyed." — *The Christian (American)*.

**S**UNLIGHT.—Most of us have an instinctive feeling of relief when the shortest day has passed, and the days begin to lengthen; we know that the darkness and gloom are giving place to more light and comfort, though the progress seems slow; yet the fact induces hope. The sun is a kind friend and skilful physician, constant in his attendance, giving medicine and cure without fee or reward. We ought indeed to welcome his approach, and throw open for his entrance our doors and windows, put aside curtain, shutter, and blind, to admit his healthful, life-giving beams. One writer has said that to sleep on unsunned beds, in unsunned chambers, sit in unsunned

rooms, work in unsunned attics, is an unrepented sin of half the nation. Be it so or not, there is no question that the absence of sunlight is most injurious to both mind and body. People should seek to live in houses on which the sun can shine, with healing in his beams.

**V**ELOCITY OF HUMAN LIFE.—  
 What hath pride profited us?  
 Or what good hath riches, with our  
 vaunting, brought us? All these  
 things are passed away like a  
 shadow, and as a post that hasteth  
 by; and as a ship that passeth over  
 the waves of the water, when it is  
 gone by—the trace thereof cannot be  
 found, neither the pathway of the  
 keel in the waves; or as when a bird  
 hath flown through the air, there is  
 no token of her way to be found, but  
 the light air being beaten with the  
 stroke of her wings, and parted with  
 the violent noise and motion of them,  
 is passed through, and therein after-  
 wards no sign of where she went is  
 to be found; or like as when an arrow  
 is shot at a mark, it parteth the air,  
 which immediately cometh together  
 again, so that a man cannot know  
 where it went through. Even so we  
 in like manner, as soon as we were  
 born, began to draw to our end, and  
 had no sign of virtue to show.

**S**AYINGS, AND WHO FIRST SAID  
 THEM.—Many of our common  
 sayings, so trite and pithy, are used  
 without the least idea from whose  
 mouth or pen they first originated.  
 Probably, the works of Shakespeare  
 furnish us with more of these familiar  
 maxims than any other writer, for to  
 him we owe "All is not gold that  
 glitters," "Make a virtue of neces-

sity," "Screw your courage to the sticking-place" (not point), "They laugh that win," "This is the short and long of it," "Comparisons are odious," "As merry as the day is long," "A Daniel come to judgment," "Frailty, thy name is woman," and a host of others. Washington Irving gives us "The Almighty Dollar." Thomas Morgan queried long ago, "What will Mrs. Grundy say?" while Goldsmith answers: "Ask me no questions, and I'll tell you no fibs." Charles Pinckney gives "Millions for defence, but not one cent for tribute." "First in war, first in peace, and first in the hearts of his fellow-citizens" (not countrymen) appeared in the resolutions presented to the House of Representatives in December, 1799, prepared by General Henry Lee. Thomas Tusser, a writer of the sixteenth century, gives us "It's an ill wind turns none to good," "Better late than never," "Look ere thou leap," and "The stone that is rolling can gather no moss." "All cry and no wool" is found in Butler's "Hudibras." Dryden says, "None but the brave deserve the fair," "Men are but children of a larger growth," and "Through thick and thin." "When Greeks join Greeks then was the tug of war"—Nathaniel Lee, 1692. "Of two evils I have chosen the least," and "The end must justify the means," are from

Matthew Prior. We are indebted to Colley Cibber for the agreeable intelligence that "Richard is himself again." Johnson tells us of "A good hater;" and MacIntosh, in 1781, the phrase often attributed to John Randolph, "Wise and masterly inactivity." "Variety's the very spice of life," and "Not much the worse for wear," Cowper. "Man proposes but God disposes," Thomas à Kempis. Christopher Marlowe gave forth the invitation so often repeated by his brothers in a less public way, "Love me little, love me long." Edward Coke was of the opinion that "A man's house is his castle." To Milton we owe "The paradise of fools," "A wilderness of sweets," and "Moping melancholy and moonstruck madness." Edward Young tells us "Death loves a shining mark," and "A fool at forty is a fool indeed." From Bacon comes "Knowledge is power;" and Thomas Southerne reminds us that "Pity's akin to love." Dean Swift thought that "Bread is the staff of life." Campbell found that "Coming events cast their shadows before," and "'Tis distance lends enchantment to the view." "A thing of beauty is a joy for ever" is from Keats. Franklin said, "God helps those who help themselves;" and Lawrence Sterne comforts us with the thought, "God tempers the wind to the shorn lamb."





THE  
SHIPWRECKED FISHERMEN AND MARINERS'  
ROYAL BENEVOLENT SOCIETY.

—❦—  
“There is Sorrow on the Sea.”

—❦—  
THE SOCIETY'S OBJECTS.



THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY was formally and responsibly INSTITUTED on the 21st FEBRUARY, 1839,\* and thereafter—

*[The better to carry into effect the Society's charitable and benevolent Designs, for the benefit of the Seafaring Classes for whose welfare it was originally Instituted, and—*

*Further to carry out the same by undertaking or promoting, as part of the Objects and Designs of the Society, not only the Objects and Purposes before sought and undertaken by it, but also ANY OTHER Objects, Designs, or Purposes of a benevolent character, for the benefit and welfare of all and every or any of such Classes of Men, or those dependent on them]—*

duly INCORPORATED by “THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY” ACT OF PARLIAMENT, “13TH AND 14TH

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\* The disastrous storm in the Bristol Channel, in conjunction with some fearful calamities to fishing-boats, with great loss of life, on the North coast of Devon—which happened whilst there was still vividly impressed on the mind of the whole British Nation the remembrance of the wreck of the passenger steamer *Forfarshire*, on Hawker's Rock, in the Farn Islands, Northumberland, between the night of the 6th and the morning of the 7th September, 1838 (being the occasion of “Grace Darling's” daring deed of heroic rescue, with her father, in their coble-boat, from the Longstone Lighthouse)—led to the formation of “THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY” during the ensuing winter, at a specially influential Public Meeting, held in the London Tavern, on February 21, 1839, as recorded.

VICTORIA, CAP. LXXIII.," with ROYAL ASSENT of 29th JULY, 1850, having—amongst all the Society's many other benevolent Functions and Operations, thus under Special Statute permissible to it as a Charitable Corporation—the following NATIONAL OBJECTS in view:—

I.—ASSISTANCE TO THE SHIPWRECKED.

To render Necessary Assistance, and Board, Lodge, Clothe, and Forward Home, *all* Shipwrecked Fishermen, Mariners, &c., or other Poor Persons, of all Nations, cast Destitute upon the Coasts.

II.—RELIEF TO MEMBERS.

To relieve Fishermen, Mariners, &c., *Members of the Society*, for Loss of their Boats or Clothes (by Shipwreck, Storm, or other Accidents of the Sea), and otherwise in their Need and Extremity; and also to relieve their Widows and Orphans, &c.

III.—RELIEF TO NON-MEMBERS.

To administer Relief to Others, and those Dependent on them, of the Seafaring Classes for whose benefit the Society was Instituted and Designed, *although not Members of the Society*, according to the Circumstances of the Case, &c.

IV.—REWARDS FOR SAVING LIFE.

To grant Gold and Silver Medals, and other Honorary or Pecuniary Rewards, for Heroic or Praiseworthy Exertions to Save Life, from Shipwreck, &c., on the High Seas, or Coasts of the Colonies.

The Society's foregoing National Objects, with the various other Functions and Operations devolving upon it, are carried out by the Central Executive in London, and about 1,200 Honorary Representatives and Agents of the Society, stationed on every part of the Coast of the United Kingdom, as well as Inland, Abroad, and in the Colonies—by whom, in direct co-operation with the General Committee of Management, the Society's immediate organised relief is personally extended, on an average, to between 13,000 and 14,000 individuals annually.\*

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THE SOCIETY'S PROCEEDINGS.

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HE administration by the Society, as the one National Institution existing for the purpose, of the varied charitable aid embraced within the immense scope of its several National Objects, &c., necessarily involves a most comprehensive and very

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\* See the "Annual General Statistical Return" of the Society's Operations, as given at the commencement of "The Society's Work," under this Heading of "THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY."



voluminous series of proceedings, of almost world-wide extent and bearing, fully to detail which, from time to time, would be entirely beyond the available limits of any periodical record.

Amongst many other similarly noteworthy and interesting references to the Society's Operations, however, the subjoined Announcements may here be given as having appeared in the columns of the Public Press, as shown, since the issue of the last Quarterly Number of this Magazine :—

THE ANNUAL GENERAL MEETING.\*

“THE sad event of the sudden death, only a few hours previously, of the Duke of Marlborough, for many years the President of the Institution, came specially under the notice of a large and influential meeting of the General Committee of Management of THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY, held on Friday, the 6th July, at the Society's Central Office, Hibernia Chambers, London Bridge, Captain the Hon. Francis Maude, R.N., in the chair. His Grace was to have presided at the Forty-fourth Annual Meeting of the Society, announced to take place in Fishmongers' Hall, on Wednesday, the 11th July, for arrangement of the final details of which occasion the Committee had been brought together; and the unexpected tidings of the untimely loss of their President was felt as a most keen shock by the Chairman and the whole of the Members of the Committee. A resolution of condolence, tendering to the late Duke's family the unanimous expression of the Committee's heartfelt sympathy with them in their great bereavement, was specially passed; as well as a further resolution formally postponing, under all the melancholy circumstances, the holding of the proposed Annual Meeting *sine die*.†”

THE NEPTUNE LODGE, NO. 375, ABERDEEN,  
AND THE SHIPWRECKED MARINERS' SOCIETY.‡

“ABOUT seven years ago a Masonic Auxiliary to THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY was formed in Aberdeen, since which time many of the lodges have

\* From “The Times,” &c., &c., Monday, July 9, 1883.

† See further reference to the late Duke of Marlborough, as President of the Society, under a subsequent paragraph, “The Central Honorary and Executive Staff, &c.”

‡ From “The Freemason,” Saturday, September 29, 1883.

“ given donations, or otherwise contributed to its funds, and on a  
 “ recent occasion the Neptune Lodge, No. 375, as the result of a special  
 “ effort, sent a donation of more than £120. Under the auspices of  
 “ this lodge an open-air fête and fancy fair was held at Belmont, in  
 “ the neighbourhood of Aberdeen, at which entertainments of various  
 “ kinds were provided, proving a great centre of attraction during the  
 “ afternoon and evening to a large number of persons. One of the  
 “ chief features of the entertainment was a grand display of fancy  
 “ goods, arranged after the manner of bazaars, the stalls being pre-  
 “ sided over by a number of young ladies whose blandishments  
 “ assisted to swell the receipts. A bagpipe competition, a contest for  
 “ the premium in dancing the Highland fling, and a display of bayonet  
 “ exercises, fencing, &c., by a detachment of the Gordon Highlanders,  
 “ were among the amusements, and some of the performers from Cook’s  
 “ circus gave an exhibition of their talent. But that which attracted  
 “ the greatest amount of attention was a display of the Manby life-  
 “ saving apparatus, which had been lent by the Aberdeen Harbour  
 “ Commissioners for the occasion, and was worked by the chief gun-  
 “ ner’s mate of H.M.S. *Clyde*, and a number of Naval Reserve men.

“ The suitability of this effort being initiated by the Neptune Lodge  
 “ will be recognised, as it has always been to a great extent identified  
 “ with the seafaring community, and, as was pointed out by Bro. Alex-  
 “ ander Milne, R.W.M. of the Lodge, in the absence of Bro. Dr.  
 “ Beveridge, Prov.G.M.Aberdeen, who is also president of the  
 “ auxiliary before referred to, they felt they could do nothing better  
 “ than assist an institution so closely connected with the sea as THE  
 “ SHIPWRECKED MARINERS’ SOCIETY. This Society, we understand,  
 “ annually relieves from 18,000 to 14,000 persons at the time of their  
 “ greatest extremity, clothing, feeding, and forwarding home all ship-  
 “ wrecked crews, and granting to the widows and orphans of seafaring  
 “ men substantial succour in their bereavement. From the large  
 “ extent to which Freemasonry is known to exist among the seafaring  
 “ classes in all our ports, it necessarily follows that the Society’s  
 “ funds are largely expended among the Fraternity and their de-  
 “ pendants. Under these circumstances, and calling to mind the  
 “ widespread charity of the Brotherhood, the wonder is that more  
 “ organised and sustained support as asked by the Committee is not  
 “ rendered to this very deserving National Charity, and we would  
 “ bespeak for it from the numerous lodges, especially in the seaports,  
 “ the assistance it so much requires to enable it to continue its  
 “ beneficial operations all along our sea-board.



THE CENTRAL HONORARY AND EXECUTIVE STAFF,  
AND LOCAL REPRESENTATIVES, &c.

**S**INCE the last announcement, the Society has, to the deep and lasting regret of all, been called upon to mourn the removal from its Official List, through the almost equally sudden and in each case unexpected visitation of death, of the names of two of its most prominent and most keenly interested helpers and supporters—His Grace the Duke of Marlborough, K.G., the Society's President, and Captain Vincent Budd, the Deputy Chairman of the Society's General Committee of Management, as well as Chairman of its Finance Committee—as detailed in the subjoined Obituary Notices:—

THE DUKE OF MARLBOROUGH.

**T**HE Duke of Marlborough died very suddenly early in the morning of Thursday, July 5, at his residence in Berkeley-square, from an attack of syncope. His Grace felt slightly unwell on the Wednesday morning, but did not think it necessary to seek medical aid. In the afternoon he drove with the Duchess of Marlborough in the park, returning for dinner at his usual time. He went to bed in seemingly good health, and saying that he was quite well. The following morning, however, he was found lying dead upon the floor of his room, and the result of a *post-mortem* examination of the body established conclusively the fact that the cause of death was *angina pectoris*.

John Winston Spencer Churchill, seventh Duke of Marlborough, Marquis of Blandford, Dorset, Earl of Sunderland, and of Marlborough, Wilts, Baron Spencer of Wormleighton, Warwickshire, and Churchill of Sandridge, Herts, in the peerage of England, K.G., and Prince of Mindelheim, in Suabia, of the Holy Roman Empire, was born at Garboldisham Hall, Norfolk, on June 2, 1822, and had, therefore, only recently completed his sixty-first year. His Grace was the eldest son of George, sixth Duke, by marriage with Lady Jane Stewart, eldest daughter of George, eighth Earl of Galloway. He was educated at Eton, and from Eton he went to Oriol College, Oxford. As Marquis of Blandford he sat in the House of Commons for Woodstock, from April, 1844, till April, 1845, when he accepted the Chiltern Hundreds. He was, however, again returned for that constituency, without opposition, at the general election of 1847. He stood an unsuccessful contest for Middlesex in 1852, but took his seat for Woodstock, and retained it till his accession to the family honours, on the death of his father, in July, 1857.

From the close of this same year, 1857, up to his universally lamented

decease, his Grace was the always active and sympathising President of THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY, besides fulfilling similar duties of philanthropic usefulness in connection with various other Charitable Institutions.

The Duke held a prominent position in more than one Conservative Cabinet, but perhaps his name will be held longest in remembrance as the author of the Act which he helped to pass as Lord Blandford, and which bears that name, for the purpose of strengthening the Established Church in our large towns by the subdivision of extensive parishes, and the erection of smaller vicarages and incumbencies. In 1866 his Grace was appointed Lord Steward of Her Majesty's Household, and in March of the following year he took office as Lord President of the Council in Mr. Disraeli's Administration. In 1874 he was offered but declined the Viceroyalty of Ireland. In December, 1876, however, he succeeded the Duke of Abercorn as Lord Lieutenant, which post he filled with distinction and ability down to the resignation of Lord Beaconsfield's Ministry in 1880. The part which the Duchess of Marlborough took in mitigating the distress in Ireland during this period will be fresh in the recollection of all. In 1848 the late peer was appointed a lieutenant in the 1st Oxfordshire Yeomanry, and in 1857 he succeeded his father as Lord Lieutenant of Oxfordshire. The late Duke married, in 1848, Lady Frances Anne Emily Vane, eldest daughter of Charles William, third Marquis of Londonderry, by whom he has left surviving issue two sons and six daughters. He has been succeeded by his eldest son, George Charles, Marquis of Blandford, who was born in 1844.

The remains of the late Duke were interred in the family vault at Blenheim, where the bodies of all the former Dukes of Marlborough rest.

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### CAPTAIN VINCENT BUDD.

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A MEMBER of a Somersetshire family, the late Captain Vincent Budd was born in that county in the year 1808, and early adopted the sea as his profession, for which, in conjunction with everything nautical, he entertained, all through his varied service and long and highly useful life, a strong and ardent attachment.

Captain Budd was perhaps best known in his younger days, amongst a large circle of acquaintances, as one of the most zealous and active officers, during many years, of the East Indian passenger ship *Lady Flora*, in which he served as third, second, and chief officer, respectively. On leaving the *Lady Flora*, he joined the Indian service, and commanded several vessels, of which the last was the *Teaser*, commissioned as a transport in the first China war, and afterwards further utilised

as a troopship between Madras, Rangoon, the Straits Settlements, Penang, and Malacca, &c. Subsequently coming to England, Captain Budd took command of the ss. *Caroline*, a familiar object in the harbour of Balaklava, as employed throughout nearly the whole period of the Crimean war; and he finally and appropriately completed a prolonged experience of ships and sailors as captain of the renowned *Great Eastern*, lying in Milford Haven.

While nominally retired into private life, Captain Budd was still as energetic as ever on behalf of the seaman, and all that concerned his true welfare. He joined the Committee of Management of THE SHIPWRECKED FISHERMEN AND MARINERS' ROYAL BENEVOLENT SOCIETY in 1864; was unanimously elected Chairman of its Finance Committee in 1874; and again, combined therewith, to the Deputy Chairmanship of the Committee of Management itself in 1876, and was, in 1879, presented with the Society's Special Silver Medal in recognition of the exceptionally useful services rendered by him to the Society.

Captain Budd was likewise, since its first formation in 1867, a very prominent member both of the General Committee and of the Finance and Visiting Committee of the Royal Alfred Aged Merchant Seamen's Institution; and he was, also, since 1863, a member of the Committee, and afterwards Chairman of the Finance Committee, of the *Dreadnought* Seamen's Hospital at Greenwich, in both of which Institutions he, up to the last, manifested the liveliest personal interest.

The much lamented death of Captain Budd, the very unexpected result of but a few hours' illness, took place at Taunton, during a brief visit to a recently widowed daughter, on Saturday, August 18, and his remains, being conveyed to his London residence, were interred in the Brompton Cemetery. Captain Budd had been twice married, his second wife still surviving him, to mourn, with numerous relatives and friends, his sudden and great loss.

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**A**MONGST its 1,200 stations, &c., on the Coast, Inland, Abroad, and in the Colonies, as many as ten fresh appointments of Local Honorary Representatives and Agents of the Society have, from death, change of residence, or other unavoidable cause, been rendered necessary since the previous reference to such alterations, in this Magazine. In recording their obligations, on behalf of the Society, to all those who had thus—in some instances for many years—so heartily laboured in furthering the Society's charitable work, the Committee of Management have specially had to deplore those changes occasioned by the decease of Honorary Representatives and Agents as follows: Downpatrick—John Forsythe, Esq.; Rochdale—John Harley, Esq.; and North Sunderland—Mr. John Patterson.

THE SOCIETY'S WORK.

**U**NDER the subjoined "Annual General Statistical Return," as well as "Quarterly General Summary of Relief, &c."—comprising particulars of the Society's Work, in accordance with its several specified National Objects,\* and various other Functions—will be found the interesting, and, in many respects, touching record of the Society's benevolent Operations on behalf of all the Seafaring Classes of Men, and those Dependent on them, both during the whole of the past year, 1882, with those preceding it, from the Society's first Institution in 1839, and since the issue of the last Annual or Quarterly Statements:—

ANNUAL GENERAL STATISTICAL RETURN.

ASSISTED, AND RELIEVED, &c.—UNDER "OBJECTS I., II., III."

<b>S</b> HIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS, FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—DEPENDENT WIDOWS AND ORPHANS, &c.	} Last Year (1882) 13,145 Previous Years 425,046

**T**OTAL NUMBER, FROM THE INSTITUTION OF THE SOCIETY, IN 1839 .... 338,191

LIFE-SAVING REWARDS, &c.—UNDER "OBJECT IV."

<b>H</b> ONORARY AND PECUNIARY REWARDS FOR SAVING LIFE .....	} GOLD MEDALS ..... 38 SILVER MEDALS..... 301 PECUNIARY AMOUNT, £2,358	

**L**IVES SAVED, FOR WHICH RECOGNITION HAS BEEN GRANTED ..... 7,208

MARINERS, &c., PROVIDENTLY "SELF-HELPING"—UNDER "OBJECT II."

**A**NNUAL NUMBER (1882) CONTRIBUTING THE REGULATED SMALL YEARLY PAYMENT, TO THE SOCIETY'S FUNDS, AS "MEMBERS" † ..... 53,500

QUARTERLY GENERAL SUMMARY OF RELIEF, &c.

**T**HE total Number directly succoured or otherwise relieved, &c., by the Society's Central Executive in London, and by its Honorary Representatives and Agents in all parts of the United Kingdom, as well as

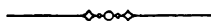
\* See the details given under "The Society's Objects," at the commencement of this Heading of "THE SHIPWRECKED FISHERMEN AND MARINERS' SOCIETY."

† This Number of Contributing "Members," here given, which is being largely added to from year to year, represents those Mariners and Fishermen, &c., of all grades, embraced within the scope of the Society's wide-spread efforts, as quoted in its published Prospectus, &c., for "Specially helping all the Fishing and Seafaring Classes providently to help themselves."

Abroad, and in the Colonies—under the Society's respective National Objects viz., I. "Assistance to the Shipwrecked;" II. "Relief to Members;" III. "Relief to Non-Members;" IV. "Rewards for Saving Life, &c."—was as follows, during the past Quarter, ending 30th June, 1883:—

SHIPWRECKED SUFFERERS—MEMBERS AND NON-MEMBERS,  
FOR LOSSES, AND IN SPECIAL DISASTERS AND DISTRESS—  
DEPENDENT WIDOWS AND ORPHANS, &c., &c. . . . . 1,908

OF the many Honorary Agencies from which the more numerous claims embraced within these figures were received, the following (appending also the names of the Society's Local Honorary Representatives), with the Amounts allotted to each, may be specially mentioned, viz.:—Aberdeen (Mr. D. Mearns), £108 12s. 6d.; Cardiff (Jas. Fraser, Esq.), £55 6s.; Dundee (Mr. Jno. Machan), £48 7s. 6d.; Hartlepool (Mr. S. Armstrong) £111 7s. 6d.; Hull (Mr. J. W. Day), £77 17s. 6d.; Liverpool (Thomas Hanmer, Esq.), £70 2s. 6d.; Maryport (J. R. Buckley, Esq.), £54 2s. 6d.; Middlesbro' (Mr. James Harris), £55 12s. 6d.; North Shields (Mr. G. French), £122 18s.; South Shields (Messrs. Crisp & Hails, and Rev. H. W. Farrar), £214 12s. 1d.; Sunderland (Messrs. R. M. Hudson & Sons), £301 19s.; Whitby (Captain J. N. Lawson), £52 8s. 9d.; Yarmouth (G. T. Watson, Esq.), £67 5s.—giving a total of £1,840 11s. 4d. (out of the Quarter's Amount of £3,273 5s. 2d., granted for these particular "Objects of the Society") as issued, during the past Quarter, at these Agencies and Seaports, &c., alone.



THE following Special Awards of the Society's Silver Medals, &c., have been lately made for heroic or praiseworthy exertions, at personal risk, to Save Life from Shipwreck at Sea (in accordance with the Society's "Object IV."), viz.:—

HULL.—In case of the Steam Fishing Cutter *Speedwell*, of that Port, for rescue, in the Cutter's boat, of the Crews of the Smacks *Harrier* and *Premier* (10 Fishermen in all), during a heavy gale, off the Dogger Bank, on the 6th March, 1883:—

To the Mate, GEORGE LYON (now Master of the Cutter); the second hand, JOHN HERRING; the third hand, THOMAS HOLT; and the Deck hand, PHILIP CHAPMAN—the Society's Silver Medal.

Also, to the Mate, GEORGE LYON, as having taken charge of the *Speedwell's* boat in both instances—one of the Society's Marine Aneroid Presentation Barometers for Fishermen.

The Committee, further, made a special record of the humane conduct, upon the occasion, of the late Master of the *Speedwell* (Reynolds), who unfortunately lost his life subsequently, through being swept overboard by a heavy sea in the same gale, while courageously keeping his post after hurriedly warning the Crew to jump below.

SPECIAL CONTRIBUTION LIST.

COLLECTIONS, DONATIONS, LEGACIES, SERMONS, &c., ON BEHALF OF THE SOCIETY, RECORDED SINCE THE ISSUE OF THE LAST QUARTERLY STATEMENT.

	£	s.	d.		£	s.	d.
<b>L</b> ONDON. — The Clothworkers' Company	21	0	0	<b>N</b> ORTH BERWICK.—Collection in new Parish Church, after Sermon by Rev. Wm. Graham, of Newhaven (per T. R. Woodrow, Esq., Hon. Agent)	11	8	2
The Drapers' Company	21	0	0				
Readers of <i>The Christian</i> , per Messrs. Morgan & Scott	5	0	0	<b>R</b> OBIN HOOD'S BAY.—Offer-tory in Parish Church of St. Stephen's, Fylingdales, near Whitby, after Sermon by Rev. R. Jermyn Cooper, M.A., Vicar of Fylingdales (Hon. Agent)	3	8	1
Collecting Boxes on board—				<b>S</b> TAITHES.—Collection in Wesleyan Chapel, after Sermon by Rev. L. Law (per Mr. Thomas Rodham, Hon. Agent)	1	5	0
SS. <i>Stirling Castle</i>	0	1	4	<b>W</b> HITBY.—Collection in Sneaton Church, after Sermon by Rev. J. B. Brodriak, M.A. (per Capt. J. N. Lawson, Hon. Agent)	2	17	6
RMS. <i>Orient</i>	10	0	0				
RMS. <i>Australia</i>	0	13	2	<b>L</b> EGACIES RECEIVED:—			
SS. <i>Rewa</i>	0	2	6	Miss Rachel Smith	449	10	0
The Orient S.N. Company, Box in Office	0	4	9	Miss Caroline Hutton	300	0	0
The Tynemouth Railway, Box at Station	1	10	5	Miss Ellen H. Outlaw	100	0	0
—							
<b>A</b> BERDEEN.—Neptune Lodge (No. 375) of Freemasons, being proceeds of Fête and Fancy Fair (per George Sangster, Esq., Treasurer)	120	5	6				
<b>C</b> ARDIGAN.—Collection in St. Dogmael's Church, after Sermon by Rev. E. T. Jones, Vicar (per Thos. Davies, Esq., Hon. Agent)	1	15	11				
<b>L</b> ONNINGSBURGH (Shetland)—Collections after Sermons by Rev. George Clark (Hon. Agent)	2	12	0				

\* See special reference to this interesting event at page 312 of the current Number of this Magazine.





# THE YEAR, AND THE MONTHS.

## 1883.

[Jewish Calendar—5643-44. Mohammedan Calendar—1300-01.]



OLDEN NUMBER—3: SOLAR CYCLE—16: DOMINICAL LETTER—G: JULIAN PERIOD—6,596: EASTER SUNDAY—MARCH 25: WHIT SUNDAY—MAY 13: ADVENT SUNDAY—DECEMBER 2.

### THE SEASONS.

“*SPRING—Showery, flowery, bowery;  
SUMMER—Hoppy, croppy, poppy.  
AUTUMN—Wheezey, sneezey, freezey;  
WINTER—Slippy, drippy, nippy.*”

Lines of French Calendar, 1788.

SPRING, March 20, Sun enters Aries, 11 P.M. | AUTUMN, Sept. 23, Sun enters Libra, 10 A.M.  
SUMMER, June 21, Sun enters Cancer, 7 P.M. | WINTER, Dec. 22, Sun enters Capricornus, 4 A.M.  
The EQUINOXES—at Spring and Autumn; and the SOLSTICES—at Summer and Winter.  
ECLIPSE OF THE MOON (PARTIAL)—April 22, invisible at Greenwich.  
ECLIPSE OF THE SUN (TOTAL)—May 6, invisible at Greenwich:  
ECLIPSE OF THE MOON (PARTIAL)—October 16, visible, partly, at Greenwich.  
ECLIPSE OF THE SUN (ANNULAR)—October 30-31, invisible at Greenwich.

### OCTOBER.

“*October—upon a dreadful Scorpion he did ride,  
The same which by Diana's doom unjust  
Slew great Orion; and eeks by his side  
He had his ploughing-share and coulter ready tyde.*”

SPENCER.

#### SUN.

1st DAY ..... Rises 6h. 2m. Sets 5h. 38m. | 15th DAY ..... Rises 6h. 25m. Sets 5h. 6m.  
6th DAY ..... Rises 6h. 14m. Sets 5h. 22m. | 22nd DAY ..... Rises 6h. 36m. Sets 4h. 52m.

#### MOON.

1st DAY ..... New Moon 5h. 54m. A.M. | 16th DAY ..... Full Moon 6h. 45m. A.M.  
9th DAY ..... First Quarter 10h. 20m. A.M. | 22nd DAY ..... Last Quarter 11h. 19m. P.M.  
30th DAY ..... New Moon 11h. 57m. P.M.  
IN APOGEE, 3rd DAY ... 6 P.M. IN PERIGEE, 16th DAY ... 5 P.M. IN APOGEE, 30th DAY ... 9 P.M.

### NOVEMBER.

“*No travelling at all—no locomotion,  
No inking of the way—no notion—  
No go’—by land or ocean—  
No mail, no post—no news from any foreign coast—  
November!*”

HOOD.

#### SUN.

1st DAY ..... Rises 6h. 55m. Sets 4h. 32m. | 15th DAY ..... Rises 7h. 20m. Sets 4h. 10m.  
6th DAY ..... Rises 7h. 8m. Sets 4h. 20m. | 22nd DAY ..... Rises 7h. 32m. Sets 4h. 1m.

#### MOON.

8th DAY ..... First Quarter 0h. 4m. A.M. | 21st DAY ..... Last Quarter 1h. 44m. P.M.  
14th DAY ..... Full Moon 4h. 37m. P.M. | 29th DAY ..... New Moon 6h. 54m. P.M.  
IN PERIGEE, 14th DAY ... 7 A.M. IN APOGEE, 27th DAY ... 0 A.M.

### DECEMBER.

“*When all aloud the wind doth blow,  
And birds sit brooding in the snow,*”

SHAKESPEARE.

#### SUN.

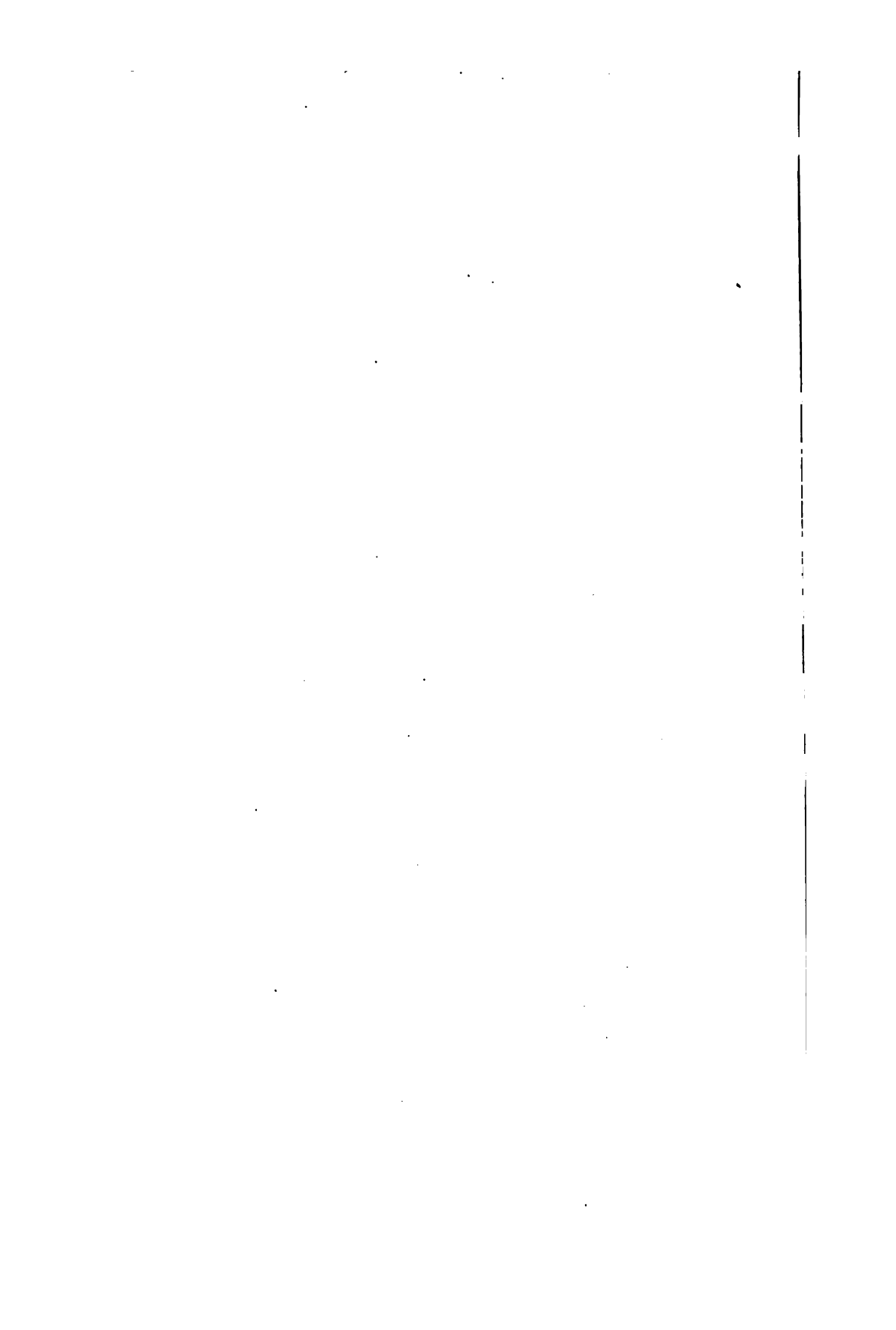
1st DAY ..... Rises 7h. 46m. Sets 3h. 53m. | 15th DAY ..... Rises 8h. 2m. Sets 3h. 49m.  
8th DAY ..... Rises 7h. 55m. Sets 3h. 49m. | 22nd DAY ..... Rises 8h. 7m. Sets 3h. 51m.

#### MOON.

7th DAY ..... First Quarter 11h. 46m. A.M. | 21st DAY ..... Last Quarter 8h. 6m. A.M.  
14th DAY ..... Full Moon 3h. 28m. A.M. | 29th DAY ..... New Moon 1h. 0m. P.M.  
IN PERIGEE, 12th DAY, 4 P.M. IN APOGEE, 24th DAY, 3 P.M.

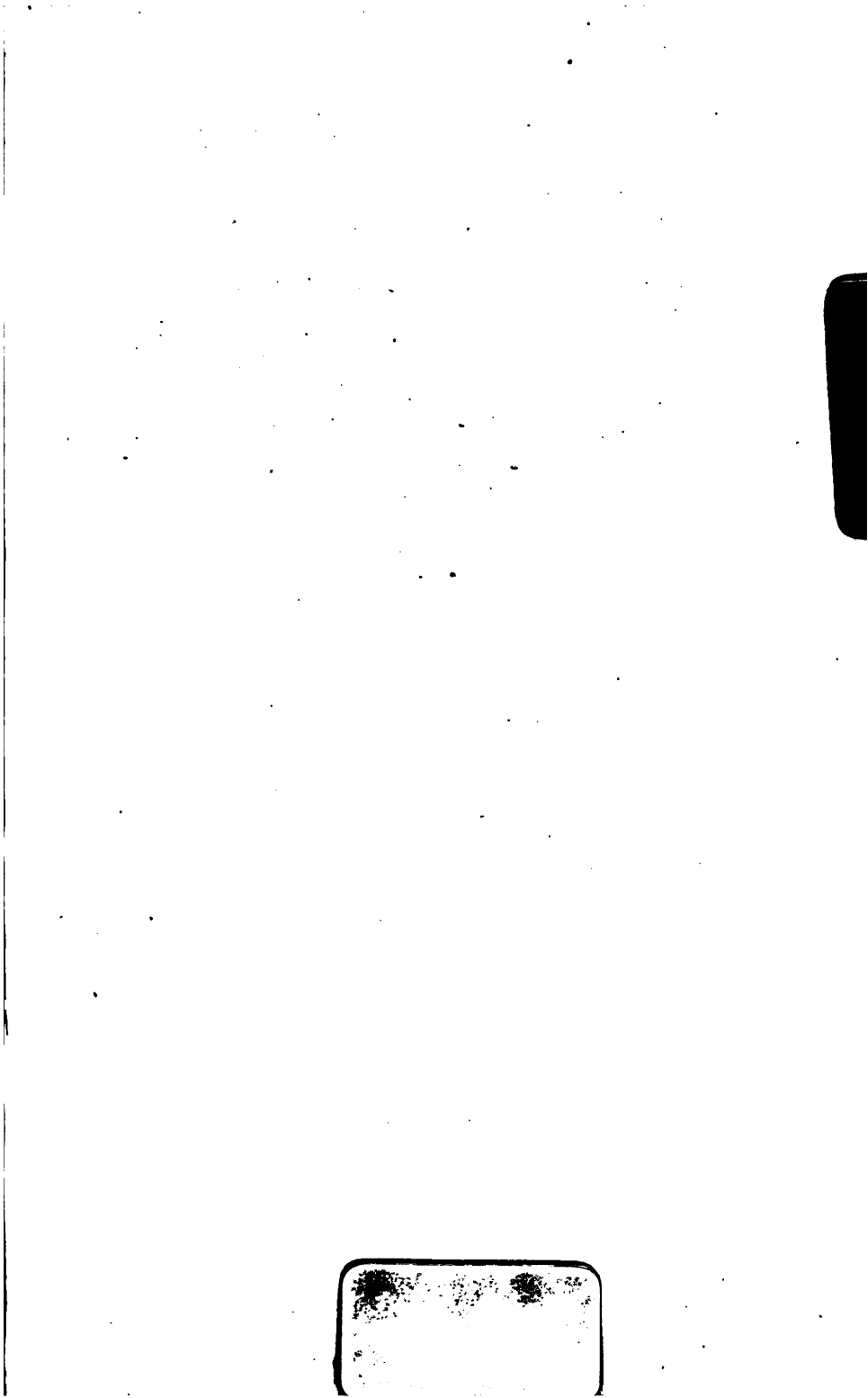
ILLUSTRATED] “The Shipwrecked Mariner.” [MAGAZINE.  
OCTOBER, 1883.

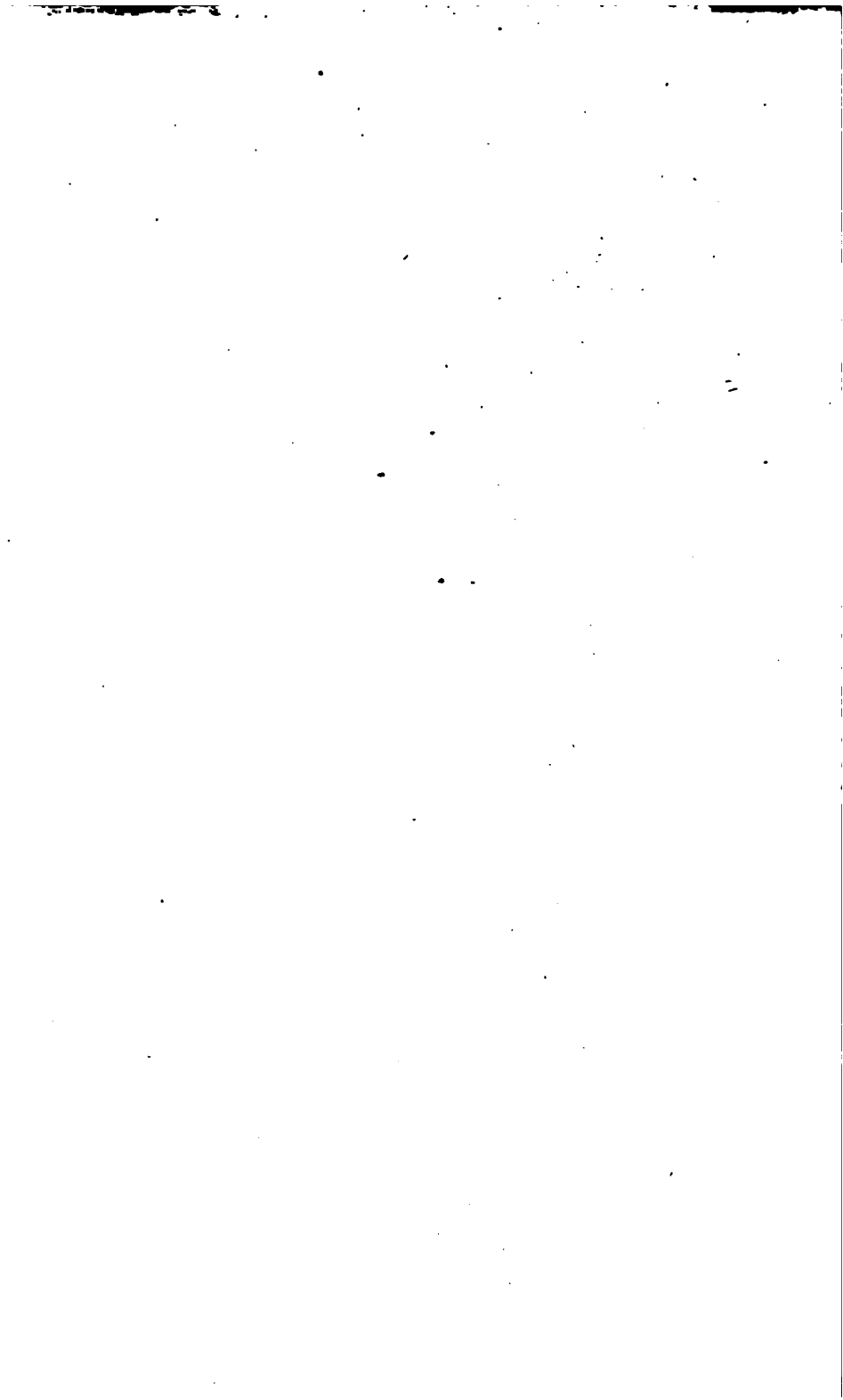


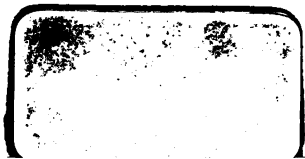




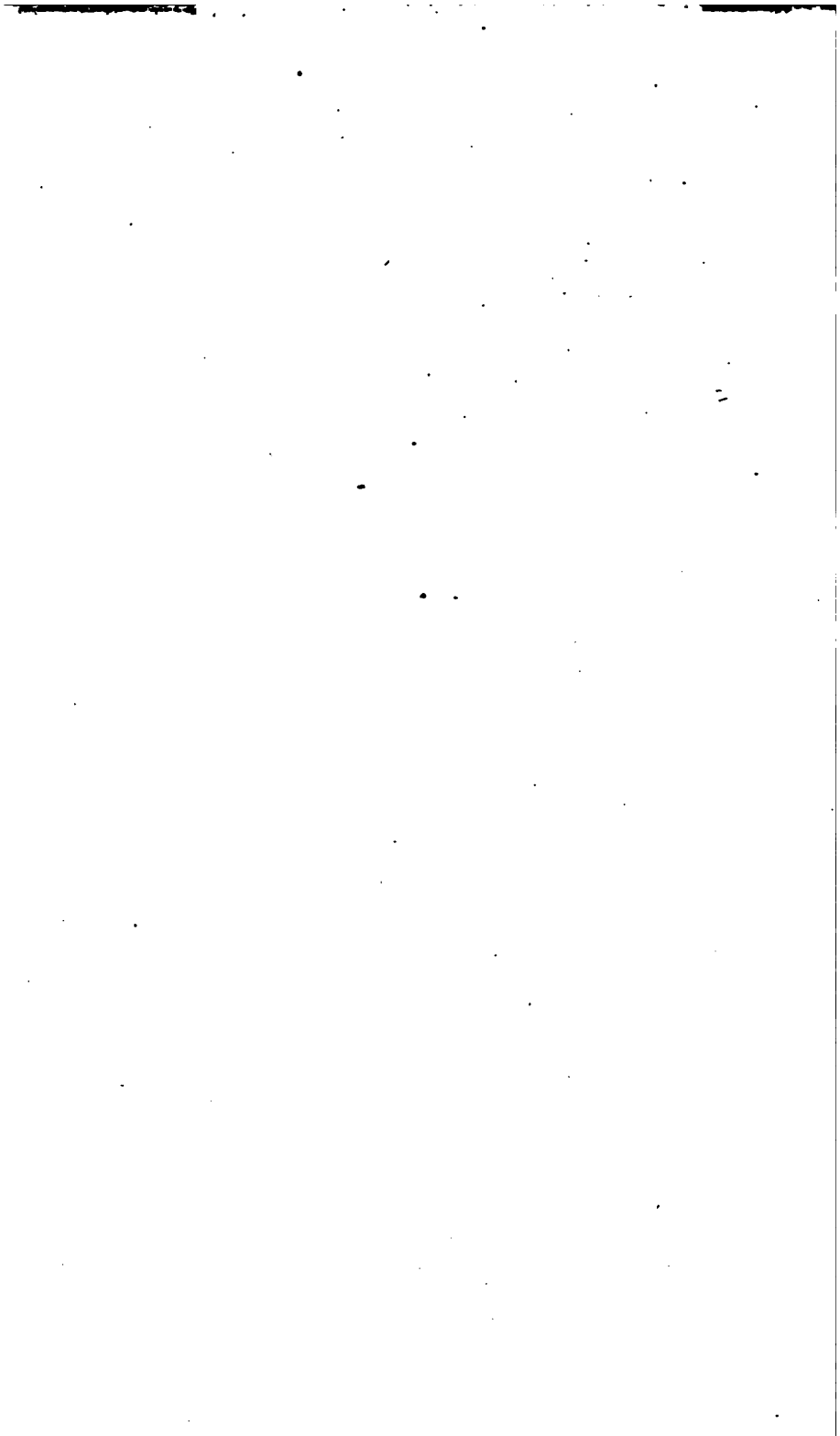












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