

A Valuable Invention for Saving Life at Sea.—The *Belfast (Ireland) News Letters* says a public trial of "Dolby's Water-Bottle Lifebuoy" took place recently in the harbour, near the Queen's Bridge, in the presence of a large concourse of people. At two o'clock precisely a full-grown labouring man jumped into the river with his boots and clothes on, and with nothing more to float him than a tin water-can, known by the name of "Dolby's Patent Water-Bottle Lifebuoy." The effect of this water-can was that, although the man was offered money by some of the bystanders if he could sink himself for a few seconds, he found it utterly impossible to do so. The next experiment tried was still more startling, for the man, having secured an additional water-can to his back, again went into the water with a 14 lb. weight in one hand and a 7 lb. weight in the other, and, notwithstanding this, he was enabled to carry his head high out of the water. At the termination of the trial the inventor, who was present, was congratulated on the successful result of the experiments. This new lifebuoy is made in the form of a parallelogram, about three inches deep, with rounded edges, and slightly curved to fit the body, to which it can be strapped. It is a simple tin water-bottle, capable of containing five or six quarts. It is convertible at a moment's notice into a lifebuoy of the best description. The cost of this useful bottle is only a little beyond that of the ordinary bottle which the emigrant is compelled to have amongst his equipments. We learn with satisfaction that Mr. Henry Gowan has become agent for this patent lifebuoy, in order that it may be supplied to all emigrants leaving the port.

Rendering Wood Uninflammable.—The late fire at the *Pantechnicon* gives interest to any invention having for its object the prevention of similar disasters. A few days since experiments were made at Woolwich to test a process discovered by Dr. Thomas Jones for rendering wood uninflammable. The first experiment was with some shavings, which, after being soaked in the preparation, were thrown on a bright fire. Instead of blazing they were merely charred, without emitting flame. On a match being applied to a heap of prepared shavings they refused to ignite. A large pile of prepared wood, being saturated with paraffin, remained unburnt, although the oil on its surface gave forth fierce flames. When a similar test was applied to a heap of unprepared wood the greater part was consumed in a quarter of an hour. But the most crucial experiment was the last. A quantity of gunpowder, packed in a wrapper of prepared brown paper, was inserted in a cask previously saturated with Dr. Jones's solution. This barrel being turned on its end, paraffin was lighted on the top, with no effect either on the wood or inclosed powder. The barrel being reversed, lighted shavings were dropped upon the packet of powder, but they burnt out without causing any explosion. In fact, the powder, on being taken out and submitted to experiment, retained all its strength. Dr. Jones does not claim for his invention that it renders substances incombustible. All he maintains is, that by employing his process the progress of a fire would be greatly delayed, since substances saturated would give off no flame. The late Woolwich experiments prove that, under certain conditions, this very desirable result can be attained. Until more extensive trial it is impossible to decide upon the exact merits of this invention, and we are therefore glad to see that the experiment will be repeated on a larger scale. Should these prove equally successful with the last, one influence leading to the rapid spread of fires will disappear. At one time the flames at the *Pantechnicon* threatened to seize *Belgravia*, although the building was completely detached. No one who saw the fiery tongues leaping over *Lowndes square* will doubt the great importance of any invention claiming to prevent their emission.

Influence of the Moon on the Weather.—*Wierzbicki*, Assistant at the *Observatory at Cracow*, has made use of forty-five years of continuous observations on the climate of that station to investigate the influence of the moon. The first person who made any practical investigation of this subject appears to have been *Laplace*, who studied the influence of the moon upon the height of the barometer. In the same direction also *Bouvard* laboured, basing his investigation on twelve years of observations at *Paris*, and he proved that the influence of the moon upon our atmosphere was so inconsiderable, at least for the latitude of *Paris*, that it might be considered as not existing at all. *Wierzbicki* divides his investigation into two sections; studying first the influence of the synodic revolution of the moon, or the time that the moon occupies in passing through all its phases, and

further subdividing the period of forty-five years into two periods of nineteen years each, and showing that for both of these periods, as well as for the entire periods, as well as for the entire period of forty-five years, the clear weather (*i. e.* the number of clear days) shows scarcely any trace of a connection with the phase of the moon. During the lunar month, in fact, the number of clear days increases and diminishes five times, and without any apparent regularity. With regard to the rainfall, it appears that in the first period of nineteen years the maximum rainfall occurs between the first quarter and the full moon and the least rainfall between the full moon and the last quarter. On the other hand, the last period of nineteen years leads to a different result; so that, from the whole series of observations, there results only a very slight indication of a connection with the moon—which connection, if it actually exists, would require for its demonstration a series of measurements of the rainfall numbering through a much longer period of years. The result attained by the study of the number of days on which rain fell substantially agrees with that from the study of the quantity of rain fallen, in showing that the moon has very little, if any, influence upon processes in our atmosphere. The same author, in studying the anomalous revolution of the moon, gives, by a very careful process of reasoning, two conclusions different from those advocated by *Schiaparelli*, in finding no trace of the influence of the distance of the moon from the earth upon meteorological phenomena.

Merchant Fleets.—The following interesting statement of the comparative strength of the merchant fleets of the chief maritime nations, is published in the *French Journal Officiel*. European sailing vessels under 50 tons burthen, and American under 80 tons, are not included:—

	Sailing Vessels.		Steamers.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
England.....	20,832 ...	5,320,089 ...	3,061 ...	2,624,431
America	6,786 ...	2,132,838 ...	403 ...	483,040
Germany	3,834 ...	893,953 ...	200 ...	204,894
Norway.....	3,930 ...	1,137,177 ...	88 ...	41,602
Italy.....	4,220 ...	1,126,032 ...	103 ...	85,045
France.....	3,973 ...	893,952 ...	392 ...	316,755
Spain.....	2,867 ...	540,211 ...	202 ...	138,665
Holland.....	1,447 ...	397,232 ...	95 ...	72,753
Greece.....	1,955 ...	392,294 ...	8 ...	3,390
Russia.....	1,327 ...	347,744 ...	114 ...	67,522
Sweden.....	1,827 ...	327,409 ...	143 ...	53,327
Austria.....	965 ...	336,113 ...	91 ...	84,155
Denmark....	1,226 ...	170,834 ...	71 ...	34,498
Portugal....	415 ...	93,815 ...	17 ...	14,536
Belgium....	46 ...	14,704 ...	42 ...	30,444
Turkey.....	224 ...	34,711 ...	9 ...	3,049
Various.....	407 ...	154,022 ...	109 ...	70,067
Total.....	55,281 ...	14,311,129 ...	5,148 ...	4,328,193

Mortality of British Statesmen.—It is somewhat remarkable, says the *London Telegraph*, that while, in the Parliament which has just been dissolved, only 55 members should have been removed by death from the House of Commons—an assembly numbering more than 650—the House of Lords, a body containing 200 fewer members, has witnessed the loss of 108 peers. In the first year of the existence of the Parliament—1869—the number of peers whose deaths were recorded was 32. These included men of all ages, from the venerable Bishop of Exeter, who was 91, to the Earl St. Maur, the only surviving son of the Duke of Somerset, who was only 33. Beside the Bishop of Carlisle, Manchester, and Salisbury. The Earl of Randor, a liberal before the dawn of the present century, was removed at the great age of ninety. Lords Broughton and Tanton, known to the politicians of a former generation as Sir John Cam Hobhouse and Mr. Labouchere respectively, died within a few weeks of each other, and their titles became extinct. The deaths of the Earl of Derby, three times Prime Minister, and of the Marquis of Westminster, were announced almost together. 1866 witnessed the deaths of the Earl of Glasgow, well known as a patron of the turf; Lord Stanley of Alderley, postmaster-general in the cabinet of Lord Palmerston; and the fifth and sixth Earls of Kingston. Lord Hawke also died. In 1870 the House of Lords lost twenty of its members. Amongst those were the Marquis of Cholmondeley and Lord Willoughby d'Eresby, the Bishop of Chichester, the Earl of Clarendon, the Earl of Roden, Viscount