

## SAFEGUARDS FOR STEAMBOATS.

An exchange says that the many disasters which occur in steamboat navigation have awakened much attention to the subject or providing proper safeguards for life on such occurrences. A writer in the *National Intelligencer* suggests that each vessel be provided with pieces of dry scantling, six inches square and six feet long, having a four-inch hole bored through the middle, and carefully stopped at each end. This piece of timber will weigh about forty pounds, and displace two cubic feet, or one hundred and twenty-four pounds of water; making a difference of eighty pounds, which will be the load required to sink it. If the human head averages ten pounds in weight, this float will support eight adults with their heads out of water. For convenience of holding on, there should be a small cord fastened at the ends, along two sides of the float, and on riders, promiscuously thrown over board, several of them where the stream would carry them away. It should be attached by cords, and a line to connect with a boat, or an anchor, or to the steamer; twenty of these floats would fill but forty cubic feet, and admit of compact stowage. They might also be used for seats, &c., for the deck passengers, with no small improvement of their comfort. These might save, if each was fully loaded, one hundred and sixty lives. But, making allowances for every thing, twenty floats might be estimated to save one hundred persons from drowning.—*Detroit Advertiser*.

**BRIDGE BETWEEN ENGLAND AND FRANCE.**—The British Academy of Sciences has at present under consideration a plan of a most extraordinary character, being neither more nor less than a suspension bridge between France and England. M. Ferdinand Lemaire proposes to establish an aërostatic bridge between Calais and Dover. For this purpose he would construct strong abutments, to which the platform would be attached. At a distance of 100 yards across the channel, he would sink four barges heavily laden, to which would be fixed a double iron chain of peculiar construction. A formidable apparatus of balloons of an elliptical form, and firmly secured, would support in the air the extremities of these chains, which would be strongly fastened to the abutments on the shore by other chains. Each section of 100 yards would cost about 300,000 francs, which would make 84 millions for the whole distance across. These chains, supported in the air at stated distances, would become the point of support of this fairy bridge, on which the inventor proposes to establish an atmospheric railway. The project has been developed at great length by the inventor.

**POWER OF A BUSHEL OF COALS.**—It is well known to engineers that there is a virtue in a bushel of coals, properly consumed, to raise seventy millions of pounds weight a foot high. This is actually the average effect of an engine at this moment working at Huel Town, in Cornwall. Let us pause a moment, and consider what this is equivalent to in matters of practice.

The ascent of Mount Blanc, from the valley of Chamonix, is considered, and with justice, as the most toilsome feat that a strong man can execute in two days. The combustion of two pounds of coal would place him on the summit.

The Menai bridge, one of the most stupendous works of art that has been raised by man in modern ages, consists of a mass of iron, not less than four millions of pounds in weight, suspended at a medium height of 170 feet above the sea. The combustion of seven

bushels of coal would suffice to raise it to the place where it hangs. The pyramid of Egypt is composed of granite. It is seven hundred feet in the side of the base, and 500 in perpendicular height, and stands on 11 acres of ground. Its weight is therefore 12,760 millions of pounds, at a medium height of 126 feet; consequently it would be raised by the effort of about 360 chaldrons of coal—a quantity consumed in some foundries in a week. The annual consumption of coal in London is estimated at 1,500,000 chaldrons.

The effort of this quantity would suffice to raise a cubical block of marble, 2200 feet in the side through a space equal to its own height, or to pile one such mountain upon another. The Monte Nuovo, near Puzzoli, which was erupted in a single night by a volcanic fire, might have been raised by such an effort, from a depth of 50,000 feet or about 8 miles.—[*Working Men's Friend*.]

## SUBMARINE TELEGRAPH BETWEEN ENGLAND AND IRELAND.

Negotiations are being entered into with the Lords of the Admiralty and government authorities for the establishment, across St. George's Channel, of a subaqueous telegraph, upon a similar though much more extensive scale to that now being undertaken between England and France, the promoters of which have, it is understood, after considerable interviews and treaty, come to terms this week with the French government for the exclusive possession of the proposed electric line from the French coast to Calais.—Preliminary surveys have been made for this proposed oceanic communication across the Irish Channel, and the coasts on either side, combined with the submarine site ascertained by soundings for the sinking of the wires, are found, owing to the foundation being comparatively free from rocks and shoals as compared with the Straits of Dover, and with treble the extent of channel, to be favorable. Notices of the intention of the promoters to apply to Parliament next session for an authorization to lay down the line will be given. The precise points at which telegraphic stations on the English and Irish coasts can be established will depend on the results of the government commission now pursuing its inquiry into the best place for the establishment, on the west of Ireland, of a great transatlantic packet station. At present, two telegraphic routes are proposed; the one of sixty-four miles across the Channel, from Holyhead to Kingstown and Dublin, and thence by the Great Southern and Western Railway on to Cork and Galway—the other from St. David's Head, on the Welsh coast, and on to Wexford, Waterford, and the extreme western points of Ireland to Berehaven and Crookhaven, the latter being the last points touched at by vessels outward-bound for the Atlantic. From this point, on the extreme western coast of Ireland to Halifax, the nearest telegraphic station on the American side, the distance is 2,155 miles, and as this might be accomplished by the steamers in five or six days, England, by means of the network of telegraphic communication in existence on the Atlantic seaboard on the one side, and the lake frontiers on the other, may be put in possession of all political and commercial intelligence from the American and European continents in six days, instead of, as now, in twelve or fourteen. The project, though it is asserted it might be done with safety, does not contemplate anything like the immense enterprise of a wire under the Atlantic.

**THE INTERIOR OF AFRICA.**—Becroft, a daring and intelligent English voyager, has years ago dissipated the delusion, that the interior of Africa is a desert