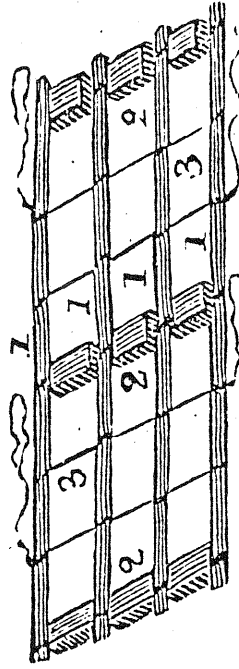


To the Editor of the *Whitehaven Gazette*.

SIR,—At the desire of some friends who feel deeply interested for the preservation of the lives of poor sailors when placed in the awful situation of shipwreck, such as was witnessed the other day in the loss of the *Dove*, Capt. Wilson, wrecked within pistol-shot of the shore, and in sight of hundreds of spectators (myself amongst the rest).—I am induced again to trouble you with a description of the Raft mentioned in the *Gazette* some time ago. I would ask the survivors of the crew of the *Dove*, whether a Raft, constructed on the model of the annexed figure, would not have been a most desirable means of reaching the shore, after the failure of the attempt in the *Life-boat*, and of the other means tried from the shore, to render them that wished-for assistance their awful situation required? It is my humble opinion, that if there had been a Raft on board when the vessel first struck on the rocks, every one of the crew would have been saved. The plan of sending a line ashore from the ship by means of a buoy, if the shore be rocky, is, at best, an uncertain way of attaining that point; for it is two to one but the rope gets entangled amongst the rocks, in which case the buoy can neither reach the shore, nor, perhaps, be drawn back to the vessel for a second attempt: this had nearly been the case with the *Dove*.—Although her buoy reached the shore and was the means of saving two of the crew, yet a great deal of time was lost by the rope getting entangled in the way I have mentioned;—so much, indeed, that if she had not been an uncommon stout vessel she must have gone to pieces long before the rope was got at, when every soul on board must have perished amongst the breakers, as they did not set direct in-shore.

The raft is so simple that it needs only few words to explain it. Take four fir spars, each 12 feet long by 5 inches square, place them at the distance of 16 inches asunder, and at each end lash firmly a piece of spar of the same thickness as the rest, reaching to the two outside spars, to preserve the frame steady, and in proper form: at equal distances are five raddlings of rope, reeved through holes in the four spars; these are strung with as much corkwood, 9 inches square, as can be packed in between each spar, as represented in the following imperfect sketch. Upon this construction, 5 men would float like sea-gulls on the water, for a considerable distance in any sea; and, instead of the tedious delay of dragging people to land with a rope, fastened round their bodies one by one, perhaps half drowned, or half killed by sharp rocks, they would all reach the shore, supposing ten in number, at two trips upon a raft of this size. The Raft could neither sustain damage by the force of the sea throwing it against the rocks, nor be so liable to break away from a ship's side as is the case with boats; and as for swamping, that is altogether out of the question.

To those who dislike the idea of embarking on a thing of this sort, I would say, then furnish yourselves with a stout *yawl*, capable of containing the crew of a small vessel, and answering the purposes of a jolly-boat; make her at once a life-boat too, by binding her round the bends, from stem to stern, with corkwood, 18 inches deep from the gunwale downwards, and the same inside; thus you would be provided against any emergency, to land on a lee shore through breakers. Still the Raft appears to me to have advantages beyond what any boat can possess; for it neither can be upset, stove, nor washed overboard the vessel,—considerations deserving the attention of seamen and owners of vessels.



1. The four spars placed parallel to each other, and 16 inches asunder.
2. Corkwood, 9 inches square, strung between each of the spars.
3. The raddlings reeved across, upon which the corkwood is strung.

I am, Sir,

Your very humble Servant,

AN OLD SEAMAN.

Whitehaven, 14th March, 1822.

28 OCT 1822

LIFE BOAT.—We understand Mr. Cowan, boat-builder, of this town, has completed the model of a *Life-Boat*, which has been highly approved by several nautical gentlemen, who have offered to subscribe towards the building of a Boat on the same construction.—The length of the keel is 26 feet, and of the beam 6 feet.—We believe Mr. C. will commence building a Boat of this description this week, the expenses to be defrayed by subscription.

3 FEB 1823

NEW LIFE BOAT.—Mr. Cowan has constructed a *Life-boat* upon principles highly approved of by Ship-builders, and other competent judges; she is planked with Quebec Oak, copper nailed, and measures in length 26 feet, 4 inches, Beam, 7 ft. 2 in. depth 2 ft. 6 in. We recommend the Trustees of the Harbour to inspect this *Life-boat*, as it is well known that the old one is good for nothing at all.

IRON LIFE BOAT.

The following letter was recently addressed to a respectable house in this town, and to whom we are indebted for the copy of the *Kaleidoscope* (a little work published at the *Mercury* Office, Liverpool,) containing the plan and accompanying letter of the inventor.

GENTLEMEN,—I inclose you an account of an Iron Boat which I have constructed. As I have nothing in view but the good of the public, I should be very glad to hear of their being built in Whitehaven, and if you think well of the scheme, you are perfectly at liberty to build them. Should you not think of such a thing, and yet think well of the boat, perhaps you would get it made public by inserting this in your Newspaper. The Editor is at liberty to do so, provided he acknowledges the source from which he copies the letter; should he not like to go to the expense of the whole engraving, he might only put in the Fig. 2. which will sufficiently explain my meaning.—I remain, Sirs,

(Signed) THOS. JEVONS.

To the Editor of the *Liverpool Kaleidoscope*.

SIR,—Accounts of shipwrecks and abandonments at sea have come before us very frequently of late.—The suffering and loss of life, occasioned by such misfortunes, must be lamented by all; and will, no doubt, insure a favourable reception to every attempt that may be made to remedy the evil. The most obvious method that presents itself to the mind, of accomplishing this desirable object, is that of providing a *Life-Boat* for every vessel that goes to sea. The neglect of this practice must have arisen from the general unfitness of such boats for common use.—To remove this obstacle, I have constructed a *Life-Boat* of a different description, which I beg leave to submit to the judgement of the public. I believe it will be found to possess all the essential properties of a *Life-Boat*, and to be capable, at the same time, of answering the common purposes of a Ship's Boat. Should the adoption of this Boat be the means of lessening the number of victims, who annually fall a prey to the devouring waves, and of abridging thereby the sum of human misery, I shall not consider the time I have devoted to the subject as spent in vain.

The description of the *Life-Boat* which I recommend, is as follows:—It is made of wrought iron plates, and furnished with a number of air-tight cavities, the buoyancy of which renders it impossible that it should sink. The plates are rivetted together, somewhat in the manner of steam-engine boilers, but so as to present no obstruction to the passage of the boat through the water. Some of the cavities are formed in the spaces underneath the seats, and two others are formed at the stem and stern of the boat. The principal use of these particular cavities is to prevent the boat upsetting, which they will do, even should the gunnel or side of the boat be forced considerably under water. Another, and much larger buoyant space is formed between the bottom of the boat and the false bottom or floor on which the feet of the passengers rest: this floor is fixed a little higher than the level of the water, even when the boat is "set down" with a moderate load. A pipe or well is made to pass directly down through both bottoms and through the cavity between them, so as to allow the water a free passage without admitting it into the cavity. The effect of this construction is, that, besides the buoyancy acquired, the Boat will discharge itself of any quantity of water it may happen to ship in a rough sea. Should the Boat be loaded deeper than the level of the floor, the water is prevented from rising into the interior of the Boat by means of a valve.

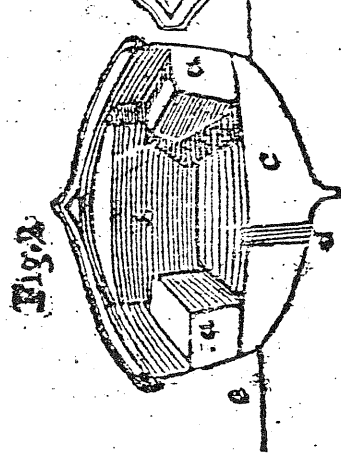


Fig. 1

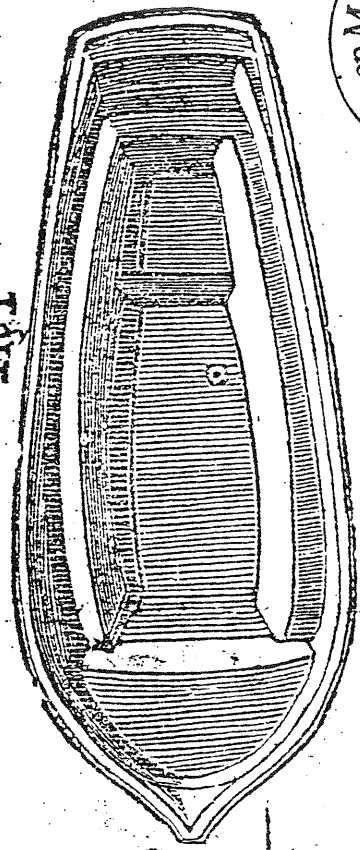


Fig. 1. View of the iron *Life-Boat* from above.
Fig. 2. Section of the same.
a. and b. Cavities under the seats and at the stem of the vessel.
c. Cavity between the floor and bottom.
d. The well.

e. Water-line of the boat.
It is evident, that if the well be left entirely open, the water cannot rise up it higher than the level of its surface without; and any water that may be taken in, over the sides, will sink down the well until it finds its proper level.

In order to show the practicability of the plan, I have built a Boat, which nearly answers to the above description. It is 17 feet 8 inches long, 6 feet wide, 5 feet deep, draws 44. The experienced seaman, on 18 cwt. 2 qrs. 20 lb. The experienced seaman, on inspection of this Boat, will, no doubt, be able to discover many defects in its shape; but I beg him not to let this circumstance prejudice his mind against iron *Life-Boats* in general. The one to which I refer was built in a great measure from written descriptions, and by a workman who never resided in a sea-port town. Objections of this nature may, therefore, be expected; but will be easily obviated in any future attempt. To meet those that may be advanced by interested persons against the material of which my *Life-Boat* is made, I request a candid consideration of the following reasons in favour of the use of iron, in the construction of boats of every description:—

I. **STRENGTH AND TIGHTNESS.**—With iron, a Boat can be built of any strength that may be required. The tenacity of the material is so great, and the Joints that can be made with it are so perfect, that boilers of considerable magnitude are in daily use, bearing a pressure of steam within, equal to 100 pounds upon every square inch of their surface; and they are commonly first proved with a pressure of 400 pounds to the square inch.* If an iron boiler can be made to resist this enormous internal pressure, we may confidently conclude, that an Iron-Boat, constructed in a similar way, will be adequate to sustain any external force, which it is likely to encounter, from the buffeting of the waves.

II. **DURABILITY.**—The considerations under the last head apply with equal force to this; but to these I would add, that an iron-Boat is not subject to injury from the effects of the Sun; nor from the still more injurious attacks of the worms in southern latitudes. The Oxidation of the iron, which will appear to some to detract much from its durability, will be found of very little moment in practice.

III. **RATE OF SAILING.**—The smooth surface of iron, and its very great elasticity, must lead to the conclusion, that a vessel, built of this material, will sail faster than one of the same size and shape built of wood.

IV. **CAPACITY FOR BURDEN.**—It is found to hold universally, with respect to Canal-boats, that those made of iron (of which there are numbers constantly in use) will carry a larger cargo than wooden-boats of the same size. The result must be the same, however you may modify the shape of the boat, or in whatever mode of navigation it may be employed.

V. **Cost.**—It will be expected that I should say something of the comparative cost of the common, and the proposed boats. This I can only speak of at present on conjecture; I think I may, however, safely state, that iron-boats, with the safety apparatus included, will not exceed the cost of wooden ones, more than about 50 per cent. Even at this rate, and considering them only in the light of common boats, they will be the cheapest in the long run. But as the facility of making them will increase by practice and by the invention of machinery, I should not be surprised to see them sold much lower than wooden ones before the lapse of many years.

Any gentleman desirous of trying my boat may put it to what proof he thinks proper, on application to Mr. Parry, boatman, who has the care of it, at the George's Dock Ferry-basin. A model on a small scale, which will show more clearly the principle on which it acts, I beg permission to lodge for inspection at the office of the *Mercury* newspaper. And any further information on the subject that is desired, I shall be happy to communicate as far as lies in my power.

I am, Sir,

Your obedient servant,

THOS. JEVONS.

Liverpool, September, 1822,

* The bursting point of high pressure boilers is from one thousand to one thousand two hundred pounds upon the square inch.