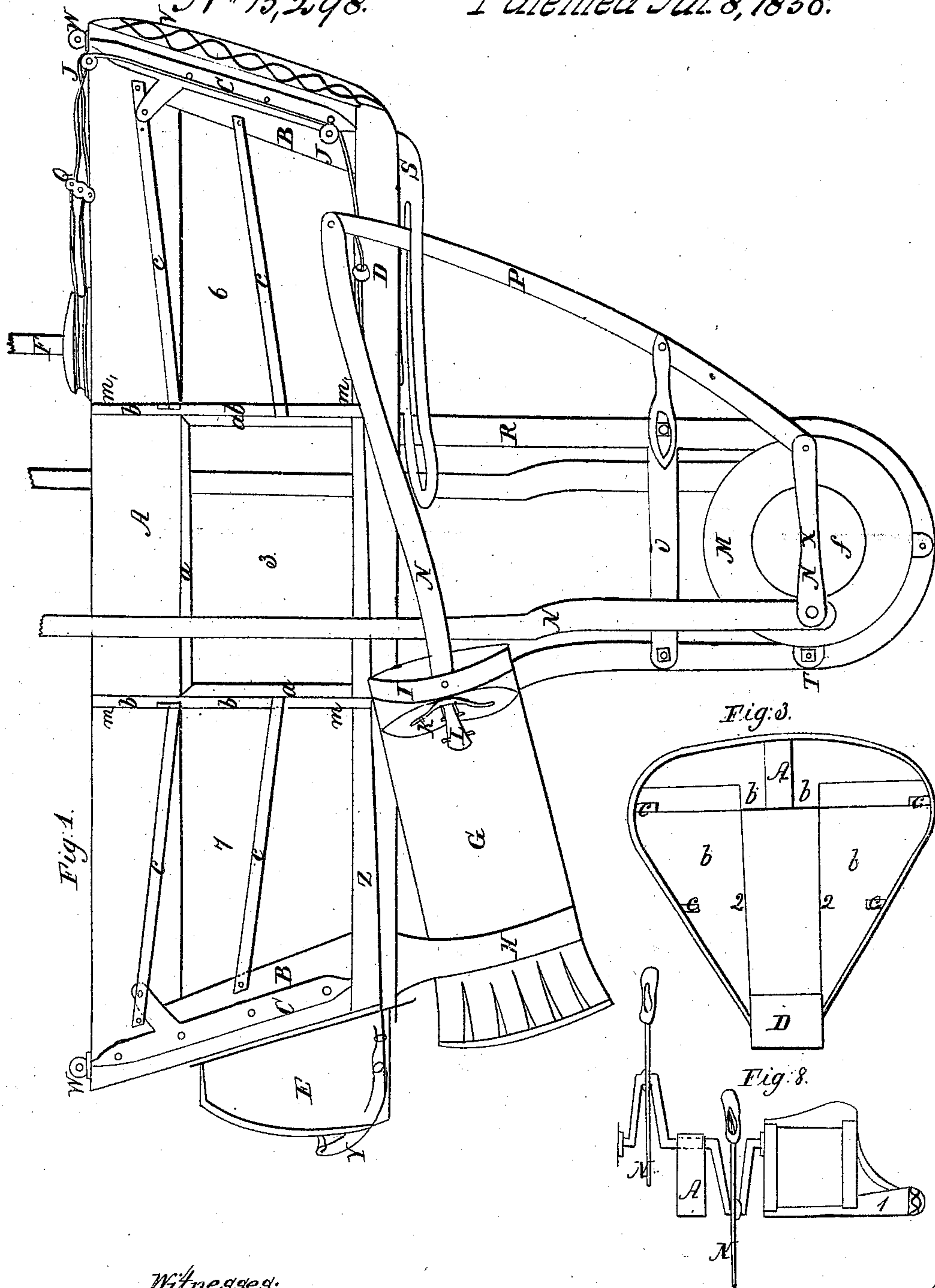


J. Minifie. Sheet 1, 2 Sheets.
Hydraulic Propeller.

Nº 15,298.

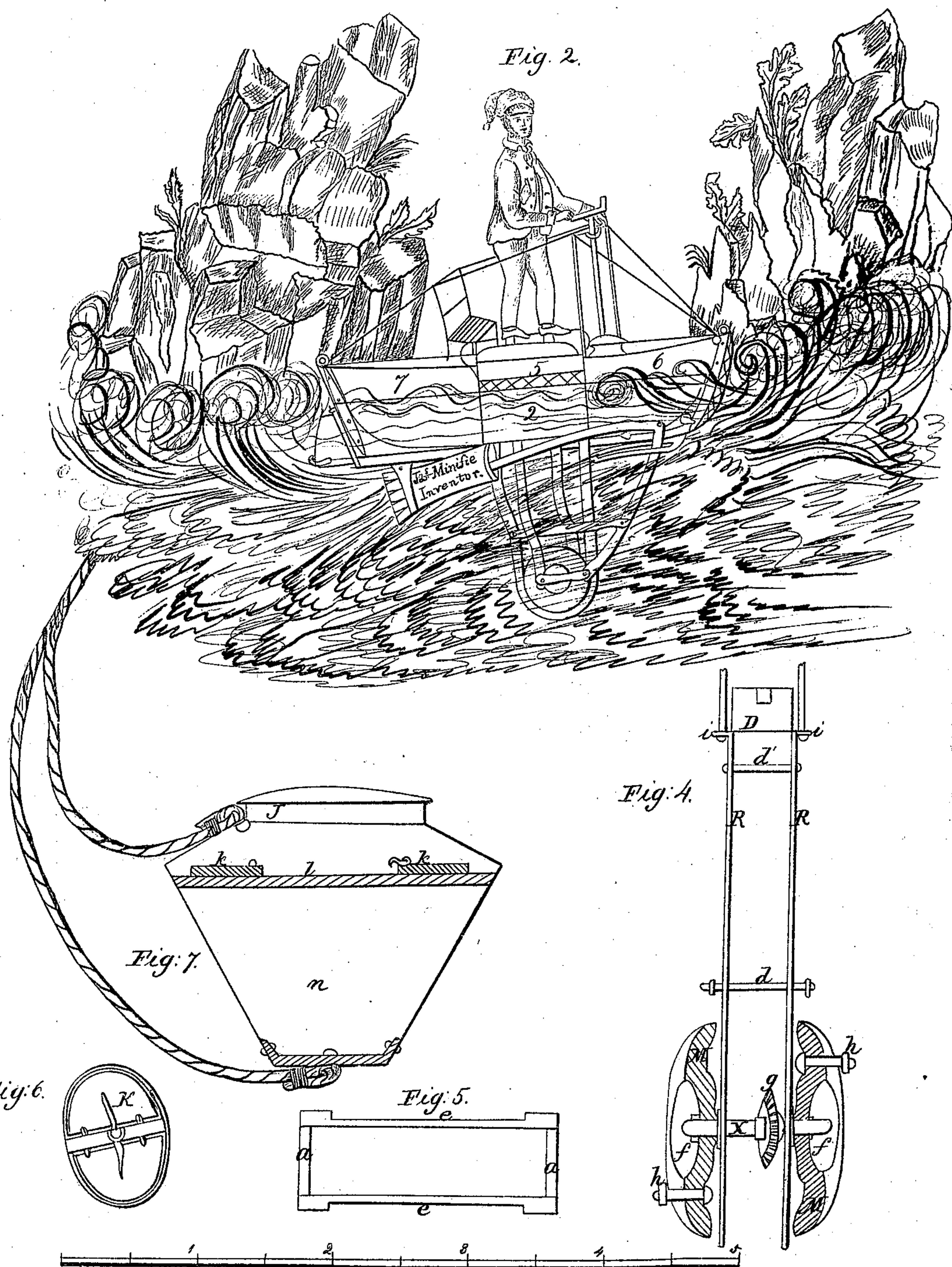
Patented Jul. 8, 1856.



Witnesses;
Prudencio de Murguiondo
John Cooper

Inventor;
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UNITED STATES PATENT OFFICE.

JAMES MINIFIE, OF BALTIMORE, MARYLAND.

ARRANGEMENT OF MEANS FOR BALANCING AND PROPELLING LIFE AND PROPERTY SAVING VESSELS.

Specification of Letters Patent No. 15,298, dated July 8, 1856.

To all whom it may concern:

Be it known that I, JAMES MINIFIE, of Baltimore city, State of Maryland, have invented certain improvements in vessels for saving life and property by walking on or over the water, &c., and the same I denominate a "life and property rescuer," which for simplicity's sake in the present drawings accompanying this I have assumed the form of a boat; and I do hereby declare that the following is a clear and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, as also the same letters referring to like parts.

The nature of my invention, consists in providing the upper float or buoyant part which is made of any of the known forms with seven water and air tight compartments so arranged and closed up with metallic coverings, giving great strength, security, and buoyancy to said machine; it must be of such sufficient buoyant power, so as to support a leverage counterpoised weight of about three hundred pounds in driving wheels and other parts, which give it its vertical position, and great steadiness in rough weather exclusive of operator, and the two persons designed to be saved each trip, the whole of which has to be allowed for in the power of float, keeping it as small as possible, so as to offer as little resistance to the water. The manner of saving the property is by placing it in a buoy, so constructed that it is towed to shore by the operator, which is designed also, in cases of emergency, to have a rope passed through eyes affixed around to give persons in the water an opportunity to lay hold of and be towed ashore.

Figure 1, is a longitudinal elevation, showing most of the inside frame woodwork, also one side of the counterpoise driving wheel, steel and iron unto connections. Letter A, is a two inch thick bed or bridgepiece the whole length of float (of wood). B, B, are two inclined standards same thickness, also of wood. C, C, are two very thin iron plates. There are two on the other side, opposite to those, riveted or bolted through as shown on drafts, with screw bolts, top and bottom to each plate, which brings the bed or bridgepiece, well secured to standards B,

B, and keel D, which is six inches wide. E, is the tiller. F, is the wheel, with a portion of guidebar attached to work the tiller by. G, is one of the cylinder plunge pumps, or propellers with their appliances shown through as operated. H, is a connecting piece for securing the two cylinders to keel D, by bolts coming through on plates C, C, fastening the cylinders at their conical extremities. I, is a band which secures the mouth of cylinders by being riveted to parallel connections *d'*, as shown on Fig. 4. J, J, are pulleys for tiller rope to travel through (there are two on the other side also. K, shows the valves or propellers, as also in Fig. 6, showing the form of cylinders, traveling, grooved piece on the flanges, spring stops, &c., as ready for a plunge stroke. L, is the grooved traveling piece inside of cylinders in its place. M, is one of the driving wheels, also shown in Fig. 4. N, N, N, are connecting rods; there are two vertical positioned ones shown on drafts, the one on this side only being noticed or lettered, which pass up through aperture *e, e*, as shown in Fig. 5, then connected to cranks and shoes, as shown in Fig. 8. O, is one of two steel stay pieces, with cast iron ogee goosenecks sharp in front, to receive the steel levers P, to operate the pumps, or propellers with. Q, is a double pulley which vibrates on its center, to receive the two tiller ropes, and conduct them to the wheel. R, is one of two steel foundation pieces; it is forged in one piece of three eighths thickness, by two and a quarter inches wide; they are securely bolted up through the machine, as shown in Fig. 4, at D. S, is one of two thin inclined guide pieces one on each side for levers P, to travel in, and keep them snug when in the water. T, is a triangular stay piece forged out of three eighths thickness of iron, fitted with boxes in their centers (there being two of them) for journal of shaft X, to run in. V, is a packing of gum, or cork lashed over with rope to protect it, used as a fender. W, W, are two strong eyes, well secured with bolts on plates C, C, C, C; as before observed there are two opposite on the other side designed to lift the apparatus in and out of the water when required. X, as before observed, is the shaft of driving wheels M, M. Y, is a lever to govern the tiller by.

Z, is the tiller iron rod continued up to letter D, as shown on draft, where it is connected to the rope. 3, is a compartment midway between the two vertical rods; it is made of pine, three sides *a, a, a*, dovetailed together; the lower ends are partially tenoned; through the keel piece D, then closed up as shown on drafts, Fig. 5, leaving spaces *e, e*, for vertical rods to pass through. *b, b, b, b*, are cut off pieces to divide the compartments 6 and 7 to give the form, strength, as also the foundation for one end of the ribs C, C, C, C, to be secured to, as shown on drafts, Fig. 3 before closing the outside with the metallic covering.

Fig. 2, is a general view of apparatus operator, &c., when in and on the water. The two ropes seen running from the bow of machine over top to the stem are stay ropes to brace the iron rods of guide bar, and top of chair of operator, to keep them from snagging when the apparatus is tossed about. The crosshead to the guide bar is used to govern with, as will be readily seen; there are two seats at 5, on each side of operator, with an aron wire back to each. The form of seats can be seen more readily on drafts at Fig. 8, with the footboard, 1, attached, the edge of which has a fender secured, similar to V, Fig. 1. It is designed to lash the person rescued around the breast under the arms, as also across the lap, to this iron back, &c., when being conveyed to the shore, so that they may not fall or be washed out.

Fig. 3, is a transverse section at *m, m*, *m, m*, as shown on drafts. The section of Fig. 3, (marked with 2 and 2) show the compartments. Fig. 1, from *a*, to *a*; also the same letters on Fig. 5 give the length.

Fig. 4, is a vertical transverse section of the iron work. *d'* represent top parallel pieces one in front, the other at stem part, which secures the cylinders at I. *d* is another piece midway which secures the stay pieces O, O, and ogee gooseneck pieces for the levers, P, to vibrate on; there are two other parallel pieces at, T, to secure it; the bottom is simply fastened by two small bolts. *f*, is an ellipsis space in center of cast iron driving wheels to be filled with pine to prevent clogging in the water, also to give force to the outside of rim. *g*, is any ordinary bevel gear wheel that will answer fixed on shaft X, to operate a propeller which is yet I am not able to detail to you. Its design is to obviate the difficulties of some localities. Where there would not be sufficient room to turn around and come out again this propeller could be simply reversed and the object obtained. *h, h*, are steel journals or knuckle joints, for vertical rods N, N, to travel on. *i, i*, are a portion of two bolts, to secure the steel foundation pieces R R to the keel, D, through the float; there are two

more at, or under the mouth of cylinders at I, Fig. 1, affixed same way.

Fig. 5, shows No. 3, compartment, with the spaces *e, e*, for vertical connecting rods, or shafts to pass through from cranks to driving wheels below.

Fig. 6, shows the transverse section of cylinders, &c.

Fig. 7, is a conical buoy constructed as follows, of sheet iron or other metal or material that will subserve; *j*, the cover; *k, k*, two pieces which are made to slide over a hole in bulk head piece; *l*, the hook and eye secures them from opening when tossed about, thereby always keeping the leverage weight below in space, *n*. *p*, is a thick piece of iron forged with a continuous flange to rivet the sides to; in the center is securely fastened an eye, also another as shown by drafts on the top part, for the spliced end of a tow rope to be fastened to. With these means the operator may easily bring in about four hundred weight of material, or by passing a rope loosely through eyes affixed on a line with *l*, persons in the water, may lay hold, and be towed ashore by the operator.

Fig. 8, shows one of two compartments on either side of the operator, the form of seats for passengers, of wood, with footboards, 1, fender on edge prepared as before named, iron bracing each end of footboard, position of cranks, vehicle rods, shoes and bed, or bridge piece A.

Note.—I do not claim a life boat; nor do I claim a life buoy, nor a life preserver, such as have been known before; nor do I claim the use of a counterpoise weight; neither do I claim the exterior form of the float which supports all, (as I design making them of any of the known forms that will subserve); nor, the exterior form of the buoy, for conveying the property or passengers ashore, nor any of the above irrespectively, or separately understood, nor for any of the materials, any of the above are composed of.

What I claim as my invention, is—

1. The mode of operating, improved device their applications, arrangements, and combinations, or its equivalents, of the following parts in conjunction, with the manner, for the purposes substantially as herein described.

2. I claim as new and of my invention the arrangements of the driving wheels M, the steel foundation pieces R, and the rods and bars connected therewith, and with the propellers, as they are described in relation to the vessel, operating as herein set forth.

JAMES MINIFIE.

Witnesses:

JESSE ALLBRIGHT,
THOS. D. CROUCH.