

(No Model.)

3 Sheets—Sheet 1.

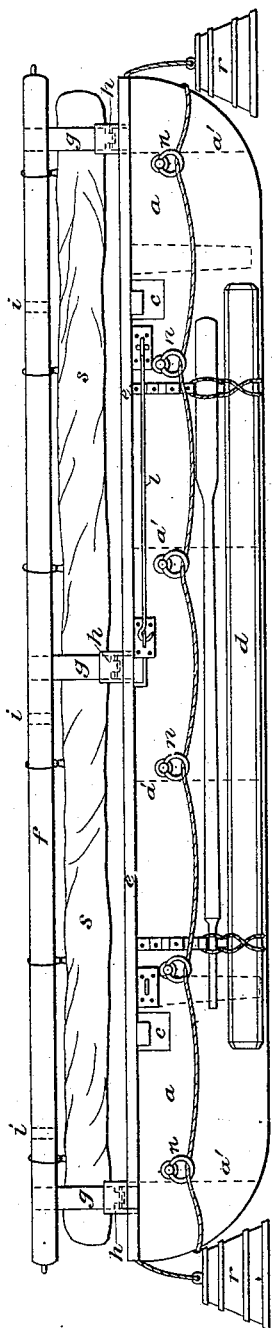
E. S. COPEMAN.

LIFE RAFT.

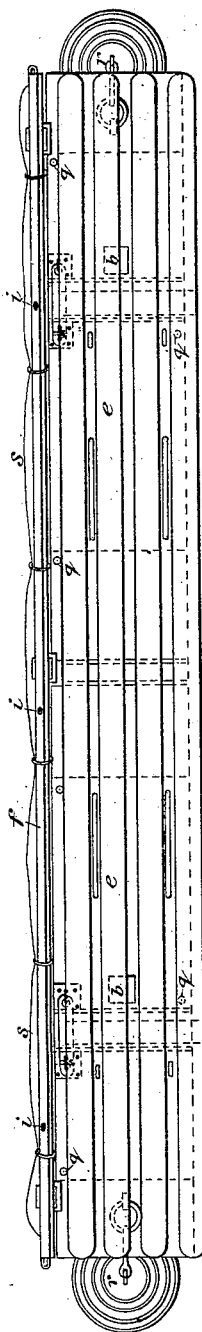
No. 266,349.

Patented Oct. 24, 1882.

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LIFE RAFT.

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Fig. 2.

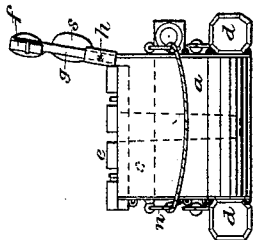


Fig. 6. Fig. 7.

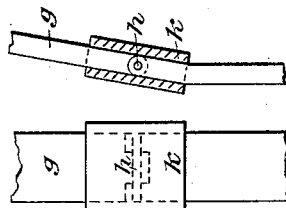


Fig. 8.

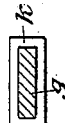
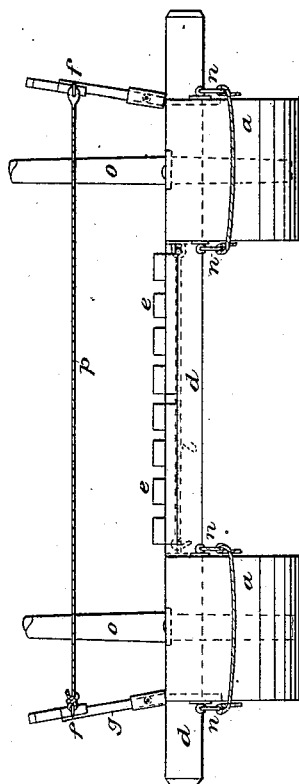


Fig. 5.



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(No Model.)

3 Sheets—Sheet 3.

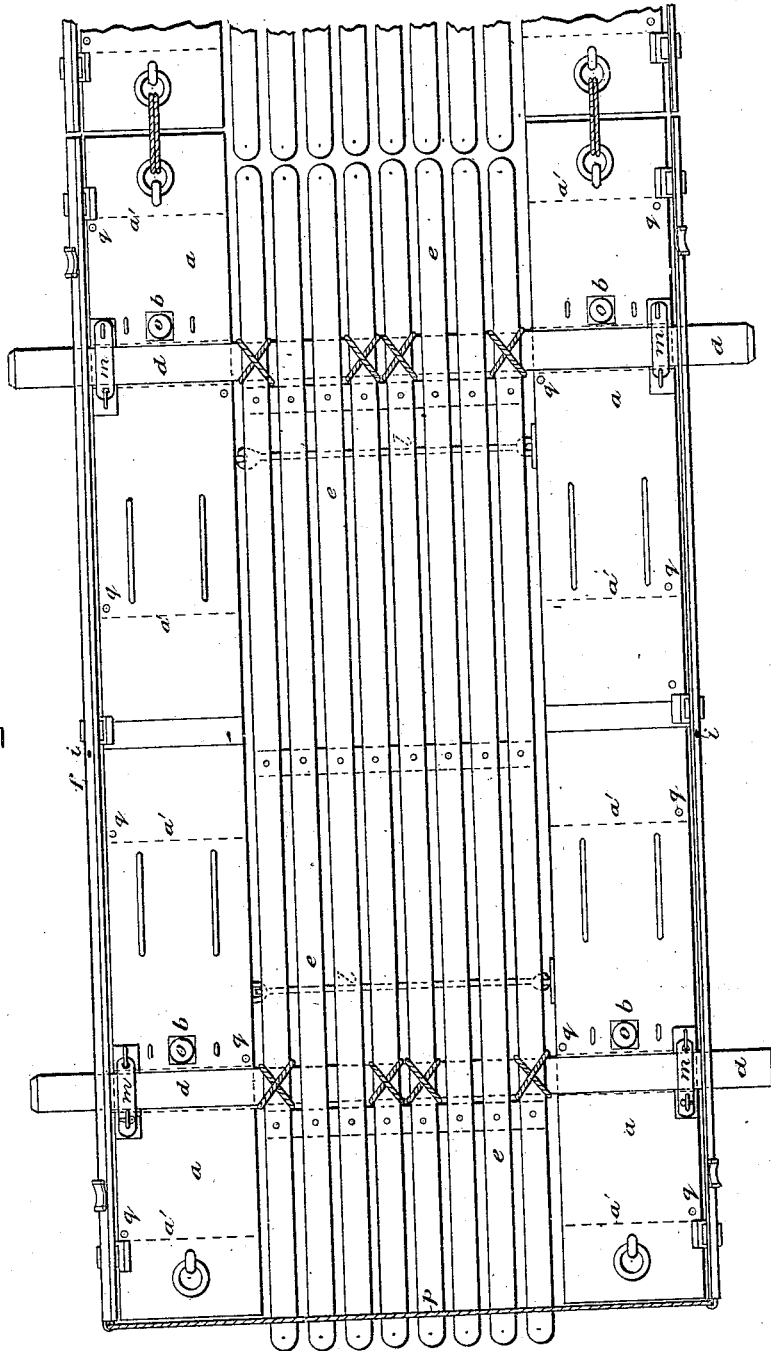
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Fig. 4.



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# UNITED STATES PATENT OFFICE.

EDWARD S. COPEMAN, OF DOWNHAM MARKET, ENGLAND.

## LIFE-RAFT.

SPECIFICATION forming part of Letters Patent No. 266,349, dated October 24, 1882.

Application filed May 8, 1882. (No model.) Patented in England January 6, 1882, No. 70; in Belgium April 15, 1882, No. 57,503, and in France June 2, 1882, No. 148,139.

*To all whom it may concern:*

Be it known that I, EDWARD STEPHENS COPEMAN, of Downham Market, England, have invented certain new and useful improvements in constructing and fitting the seats of ships and other seats to render them available as life-rafts in case of need, of which the following is a specification.

The object of my invention is to construct and fit the deck-seats and other seats of ships and also boat-seats and seats for piers and other places in such manner that they can readily be converted into life-rafts in case of need, or be used instead of a boat. For this purpose I make the body of the seats in convenient lengths—say from ten to thirty feet or more, according to circumstances; and in order to obtain the necessary buoyancy I prefer to construct them with water-tight compartments, and to make them of steel, iron, or wood lined with zinc or copper, or of other suitable material or materials. The bottom is by preference rounded off at the ends, and the whole seat-body may be likened to a narrow-decked barge or ponton. In the seat-body I make one or more sockets or bearings for masts, and across the body I form recesses or holes for the reception of horizontal spars or barks of wood or other material, as hereinafter described, when the seat is to be converted into a raft. These spars may be round or square or partly round or square. Upon the seat-body I place a light frame, formed by preference of longitudinal bars of wood, which frame forms the seat proper. It may either be loose—that is to say, capable of being lifted off the seat-body, which I prefer—or it may be connected to the seat-body by hinges at the front, which will permit of its being turned over and connected to the spars when the seat has to be converted into a raft. The back of the seat may either be permanently fixed in position to the seat-body or it may be connected to the seat-body by upright bars with hinges, arranged as hereinafter described. The spars, so long as the seat is required as a seat, may be lashed on either side of the body or in any other convenient position. The same remark applies to the masts, sails, oars, &c. In the back rail of the seat I form one or more holes to receive the row-

locks. When it is required to convert the seats into a raft two or the seats are placed opposite each other at a distance equal to about the width of two of the loose frames. The loose frames are lifted off, and the spars are inserted transversely of the seat-bodies into the recesses before described, each spar entering a recess in each of the two seat-bodies, so as to connect them together, and the spars may be held down by metal straps or otherwise. The two seat-bodies are also connected together by hooks or other suitable contrivances. The loose frames are then placed side by side upon the spars between the seat-bodies and lashed to the spars or otherwise secured. The two seats thus connected together, with the frames between them, now form a small raft, and may be lowered into the water; but before doing so the seat-backs should be lowered on their hinges. They should be again raised when the raft is in the water to form a protection at each side, and ropes carried from one to another make a protection at the ends. If desired, two or more of the seat-bodies may be attached together side by side to increase the buoyancy. When in the water, or before, any number of these small rafts may be lashed or connected together so as to form a large raft. The seats will of course be provided at various parts with such rings, hooks, or other like devices as may be considered desirable.

Figure 1 is a front view, Fig. 2 an end view, and Fig. 3 a top view, of a seat constructed according to my invention. Fig. 4 is a top view, and Fig. 5 an end view, showing two of these seats converted into a raft. Figs. 6, 7, and 8 are views on a larger scale of one of the hinges of the seat-back.

Referring to Figs. 1, 2, and 3, *a* is the seat-body. It is made with water-tight compartments, as indicated by dotted lines *a'*, or is otherwise made sufficiently buoyant. Each compartment has a tube, *q*, inserted at the top and extending down to within about half an inch of the bottom. A pump may be attached to this tube in case of need to pump the compartment dry. The tube is fitted with a screw-cap. The body *a* is rounded off at the ends so as to somewhat resemble a narrow-decked barge or ponton covered in at the top. One

or more of the compartments may be fitted with water-tight removable lids, so as to form receptacles for food or other purposes.

*b b* are sockets for masts.

5 *c c* are the transverse recesses to receive the spars. There may be two or more of these recesses, as thought best, according to the length of the seat; or, if preferred, the recesses may be dispensed with, in which case the spars, 10 when the seat is converted into a raft, will lie across the top of the seat-body and be attached with iron clamps or with ropes.

*d d* represent the spars, which, together with the masts, oars, &c., may be lashed to the body 15 of the seat on deck or be placed out of the way behind the seat.

*e* is a light frame, placed upon the body *a*. It may either be loose, as shown, or be hinged to the front of the body.

20 *f* is the back, which is shown as formed of a single rail supported by iron bars *g*, hinged at *h* or otherwise attached to the seat-body.

*k k* are sliding sleeves, which are moved up or down to liberate the hinges or make 25 them rigid, as required. The top rail, *f*, contains holes *i* to receive rowlocks.

*l* is a hook to connect the seat to another seat when a raft is to be formed.

30 *m m* are straps hinged to the body to hold down the spars *d d* when in place.

*n n* are rings at the back and front of the seat, through which a rope is carried, as shown, for persons to catch hold of when in the water.

*r r* are tubs for food and water.

35 *s* is a bag containing sails, &c.

Referring now to Figs. 4 and 5, it will be seen that two seat-bodies, *a a*, are placed opposite each other, and are connected by the spars *d d* and by the hooks *l*, the spars lying in the 40 recesses *c c* and being held down by the straps

*m m*. The two frames, *e e*, are placed upon the spars between the two bodies *a a*, and are lashed to the spars, as shown. Masts *o o* are inserted into the sockets *b*. Ropes *p p* are carried from rings in the ends of the back rail of 45 the one seat to the corresponding rings of the other, these ropes and the backs *f f* forming a sort of hand-rail all round.

This raft formed from two (or more) seats may be connected, as shown at the right hand 50 of Fig. 4, to another similar raft, and in the same way as many rafts may be connected together as thought desirable.

What I claim, and desire to secure by Letters Patent, is—

1. A seat having a buoyant body closed in on all sides in the form of a decked barge, and provided with cross-recesses *c c* to receive spars *d d* for connecting two seats together to form 55 a raft, substantially as set forth.

2. A seat having a buoyant body closed in on all sides in the form of a decked barge, divided into compartments, and provided with recesses *c*, mast-sockets *b*, and tubes *q*—one in 60 each compartment—extending down to near the bottom, substantially as set forth.

3. A seat having an air-tight or buoyant body constructed in the form of a decked barge and provided with mast-sockets *b*, recesses *c*, hinged straps *m*, hooks *l*, and masts *o*, in combination with the spars *d* and slotted frames *e*, all arranged substantially as and for the purposes set forth. 65 70

In witness whereof I have hereunto signed my name in the presence of two subscribing 75 witnesses.

EDWARD S. COPEMAN.

Witnesses:

GEORGE C. BACON,

HUGH P. HOUGHTON.