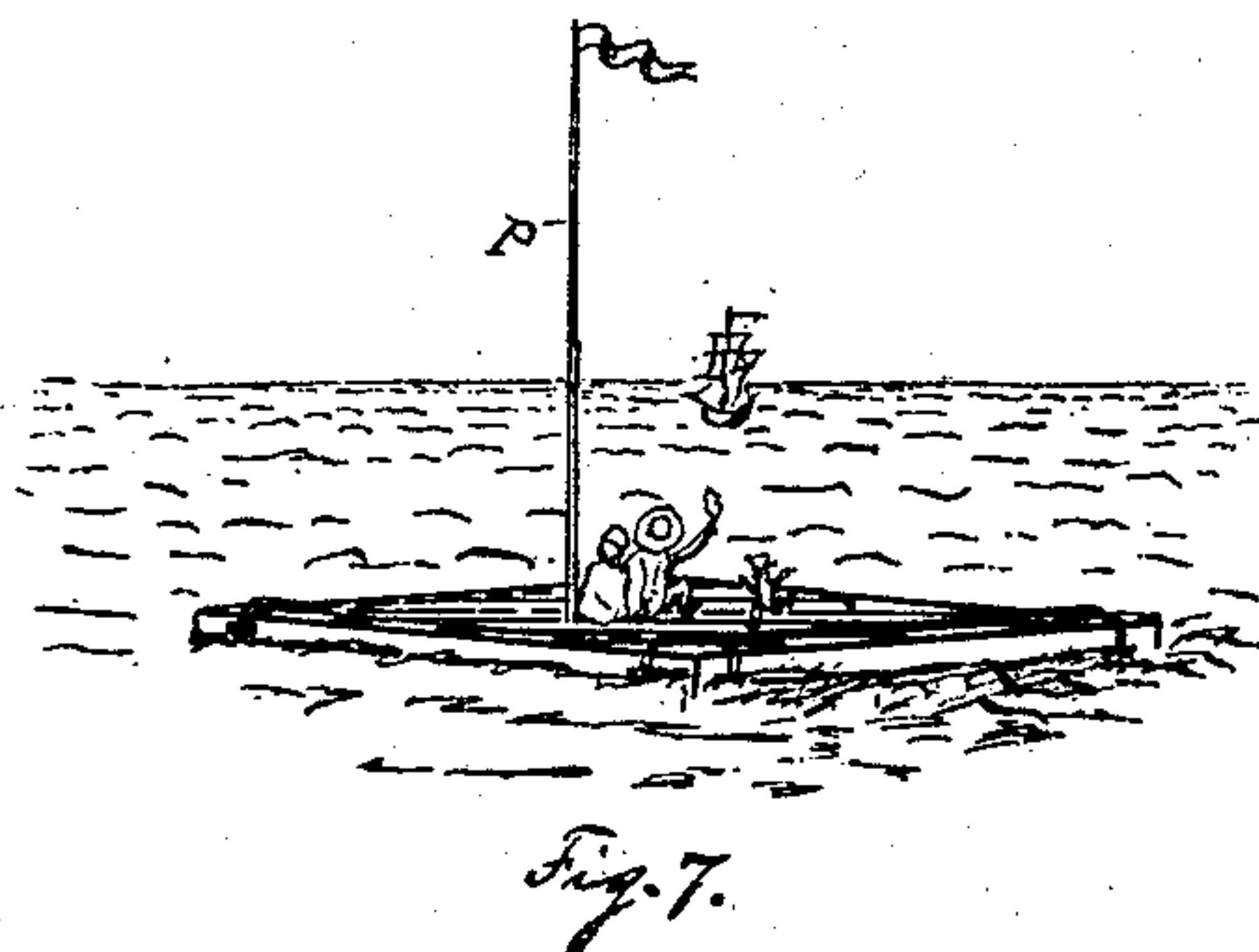
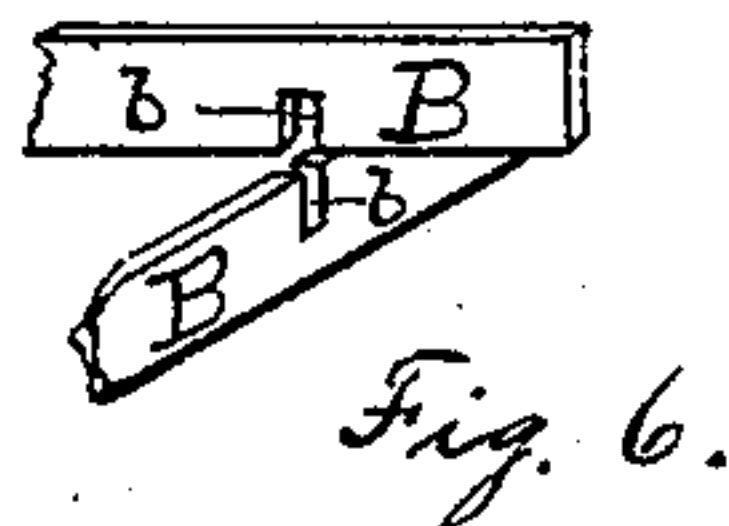
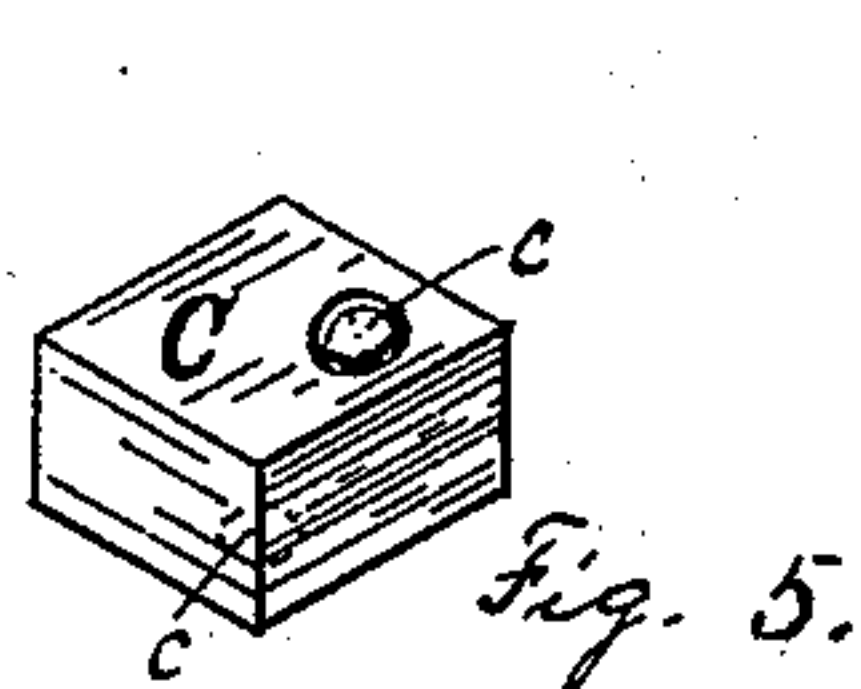
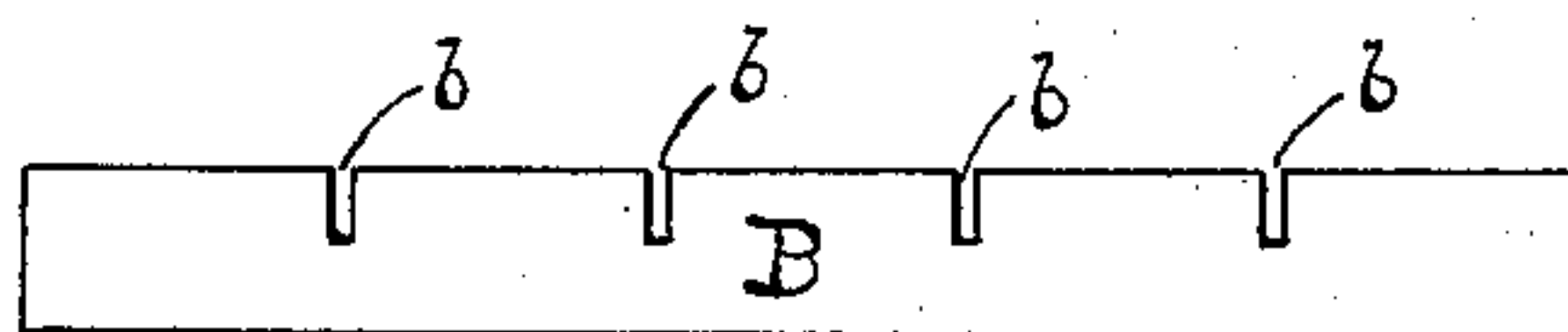
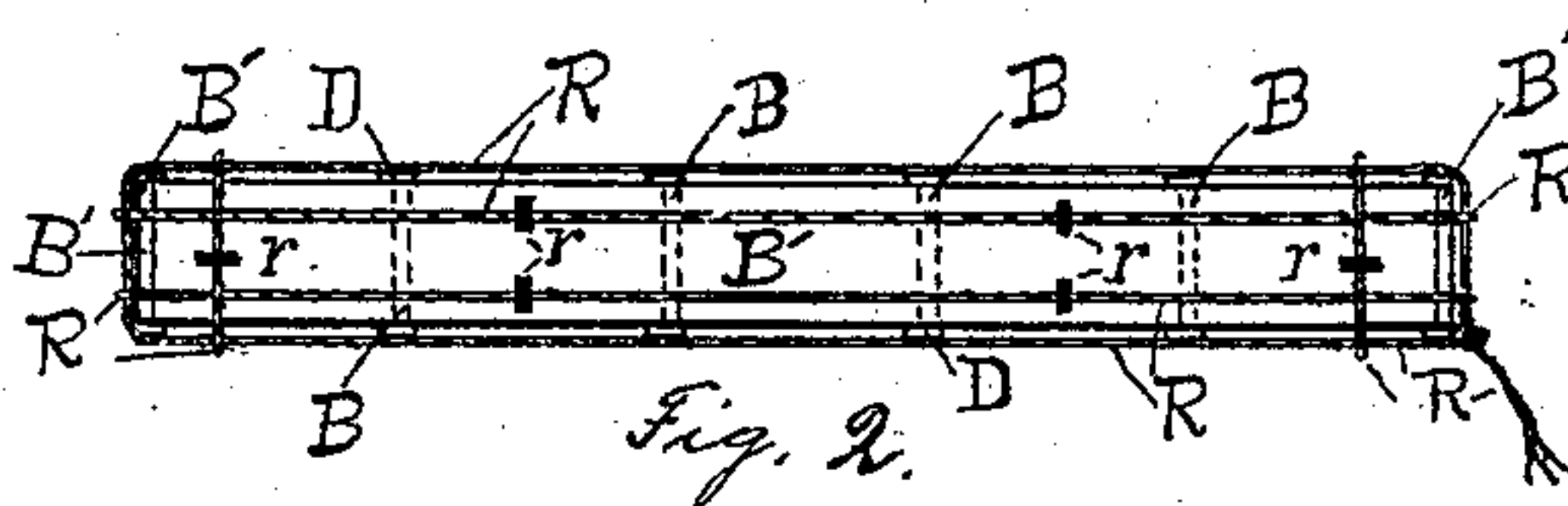
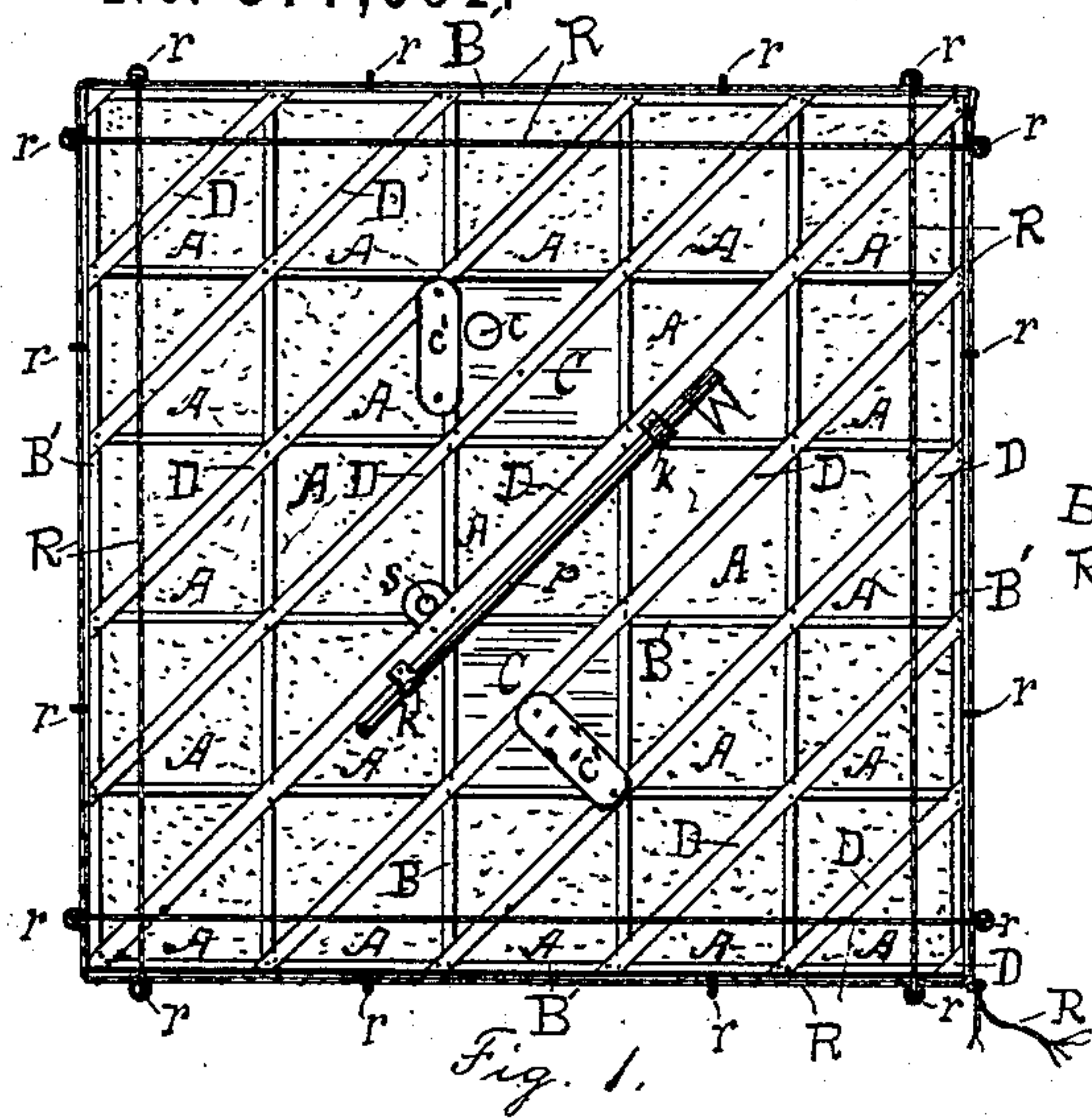


(No Model.)

W. S. PALMER.
LIFE RAFT.

No. 577,061.

Patented Feb. 16, 1897.



Witnesses:
James Donough
J. F. Gibbs.

Inventor,
H. Scott Palmer
per D. B. Replogle atty.

UNITED STATES PATENT OFFICE.

WINFIELD SCOTT PALMER, OF GLENBURN, PENNSYLVANIA.

LIFE-RAFT.

SPECIFICATION forming part of Letters Patent No. 577,061, dated February 16, 1897.

Application filed November 15, 1895. Serial No. 569,019. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD SCOTT PALMER, a citizen of the United States, residing at Glenburn, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Life-Rafts; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a life-saving raft, suitable to be carried on board of ocean-going vessels, of simpler construction and greater efficiency than those heretofore in use, one of the principal features thereof being that it is adapted to be packed in large and sufficient numbers on board of vessels with economy of space and little weight in proportion to its capacity for life-saving of shipwrecked persons.

The essential features of my device consist in the construction and combination of the several parts herein described, and illustrated in the accompanying drawings, in which—

Figure 1 is a top view of one of my rafts as it appears when packed on board of a vessel. Fig. 2 is a side or edge view of my raft. Fig. 3 shows a cork filling of one of the sections of my raft. Fig. 4 shows a method of cutting the boards which form the principal parts (or sides) of the sections constituting the body of my raft. Fig. 5 is a water-tight case or can adapted to be used in a section of my raft for the purpose of carrying and preserving provisions or water. Fig. 6 shows the method of joining the boards which cross each other at right angles in the construction of my raft. Fig. 7 shows my raft in use by shipwrecked persons.

Similar letters of reference refer to similar parts in the several views.

The fillings of the sections may be of any desired light substance which will not absorb water. They may be bags of cork shavings or volumes of cork built up in layers *aa*, &c., as shown in Fig. 3, which volumes are held together and in place by the framework of the raft. The framework of the raft is best

constructed in oblong or square by the multiplication of small squares adapted to be exactly filled by the cork volumes *AA*. The principal part of the framework is comprised in series of boards *B*, having the notches *bb*, &c., Fig. 4, running parallel with a similar series of boards crossing them at right angles, so that the notches of the second series meet those of the first series in position shown by Fig. 6, thus halving the two sets of boards. By nailing four plain boards on the ends of the other two series completing the perimeter of the oblong a group of complete squares is formed, each being adapted to receive a cork filling *A* or a can *C*, Fig. 5. The fillings or cans being placed in the squares adapted to receive them, they are held from slipping out upward or downward by means of strips *D*, running obliquely across the top and bottom of the raft, crossing each of the squares obliquely and being nailed at intersections of the boards. These strips are wide enough so that the edges of them cover the corners of all the adjacent squares at intersections, so as to more fully secure the contents from slipping out.

The bottom of the raft is an exact counterpart of the top, the oblique strips, however, running in a direction at right angles with those of the top. To one of the oblique strips a mast of flagpole *P*, which may be constructed in sections, is lashed by the straps *k*. One end of this mast is adapted to fit into a socket *s*, as shown in Fig. 1. To the other end may be attached a pennant for the purpose of giving signal of distress, as shown in Fig. 7. Two or more cans *C* should be included in every raft. One of them may be filled with fresh water for drinking purposes and others should be filled with suitable food and provisions for shipwrecked persons.

The cans *C* should have openings *cc* in top and bottom, as shown in Fig. 5. These openings should be large enough to admit the hand and may be closed by a piece of cork, secured by a top piece *c'*, which may be easily removed with the hand when contents are required.

For the purpose of holding the raft secure and also to furnish grasping-places for struggling persons in the water the ropes *R*, running through the keepers and staples *rr*, &c., secured to the side boards of the raft, are

drawn in each of the three directions around the raft near the edge thereof, as shown in the drawings.

5 The method of using my raft is readily understood. Numbers of them are stacked or stowed away on the decks of vessels and in case of need are thrown overboard. Of course one flat side or the other will float upward and both sides will be alike and equally
10 equipped and always ready for use. Persons having taken possession of the raft may remove the mast P from its keepers and join the sections thereof and set it up in the socket s, so as to be a signal to any passing vessel.
15 If they are compelled to remain any great length of time, they may remove the fastenings c' of the provision-cans and take necessary refreshments.

It will be found that a raft ten feet square
20 and one foot thick, constructed as herein described, will float above water ten to fifteen persons, while eighty or more may easily be preserved by grasping the ropes and allowing their bodies to remain in water, so that by the
25 use of my device an ocean-going vessel may easily carry enough rafts to save the lives of

all her crew and passengers without encumbering the vessel. It will also be noticed that should one of my rafts be broken into pieces from any cause the chances are in favor of
30 many of the pieces becoming good life-saving floats, as well as though they had not been broken apart.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is— 35

A life-raft comprising in combination a series of interlocked partitions B, the blocks A made up of a series of layers of cork and held in the spaces between the intersecting partitions B, the cans C, the strips D diagonally
40 disposed over the tops of the said blocks and cans, and the ropes R secured about the keepers r, all substantially as shown and for the purpose set forth. 45

In testimony whereof I affix my signature in presence of two witnesses.

W. SCOTT PALMER.

Witnesses:

FRED. C. HEND,
CHAS. W. DAWSON.