No. 670,007. Patented Mar. 19, 1901.

N. SALVESEN.

TEMPORARY RUDDER.

(Application filed Mar. 14, 1900.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1

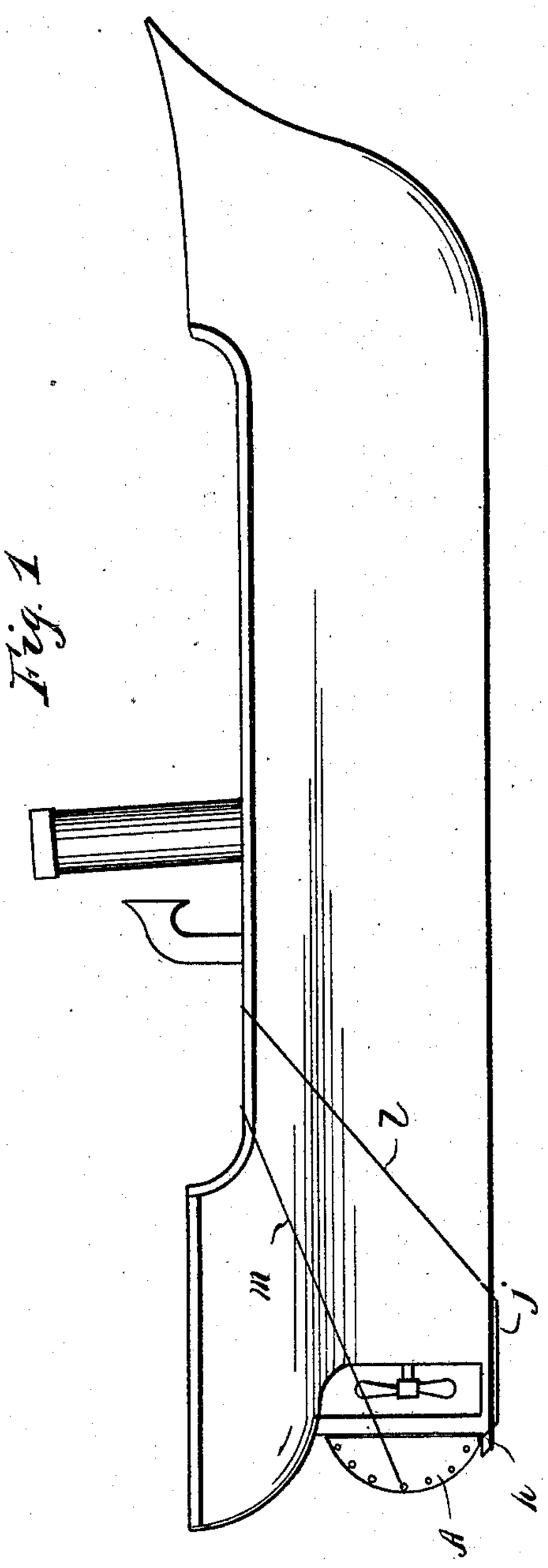
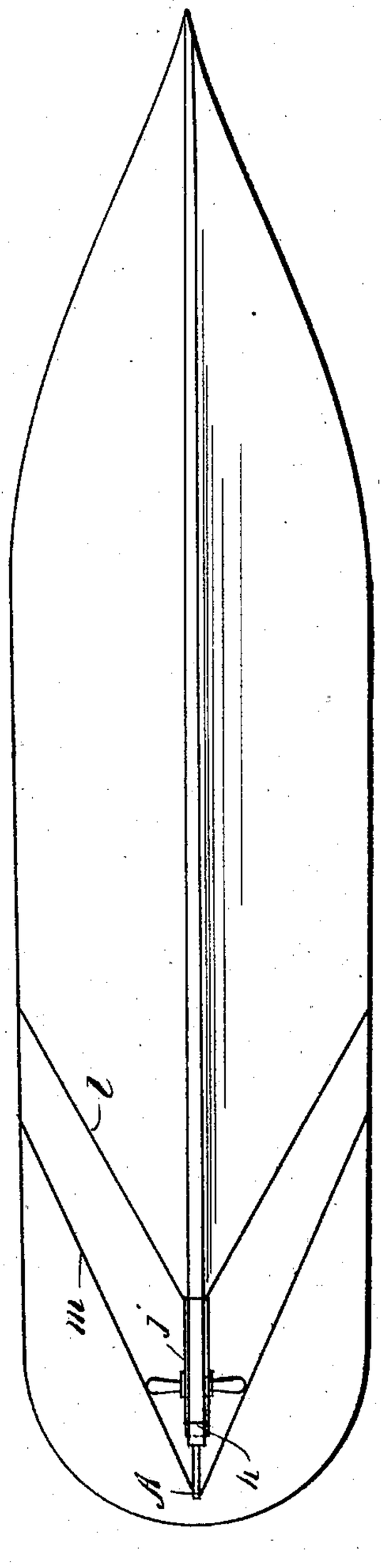


Fig. 2



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TEMPORARY RUDDER.

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(No Model.) 3 Sheets—Sheet 2.

Fig. 4

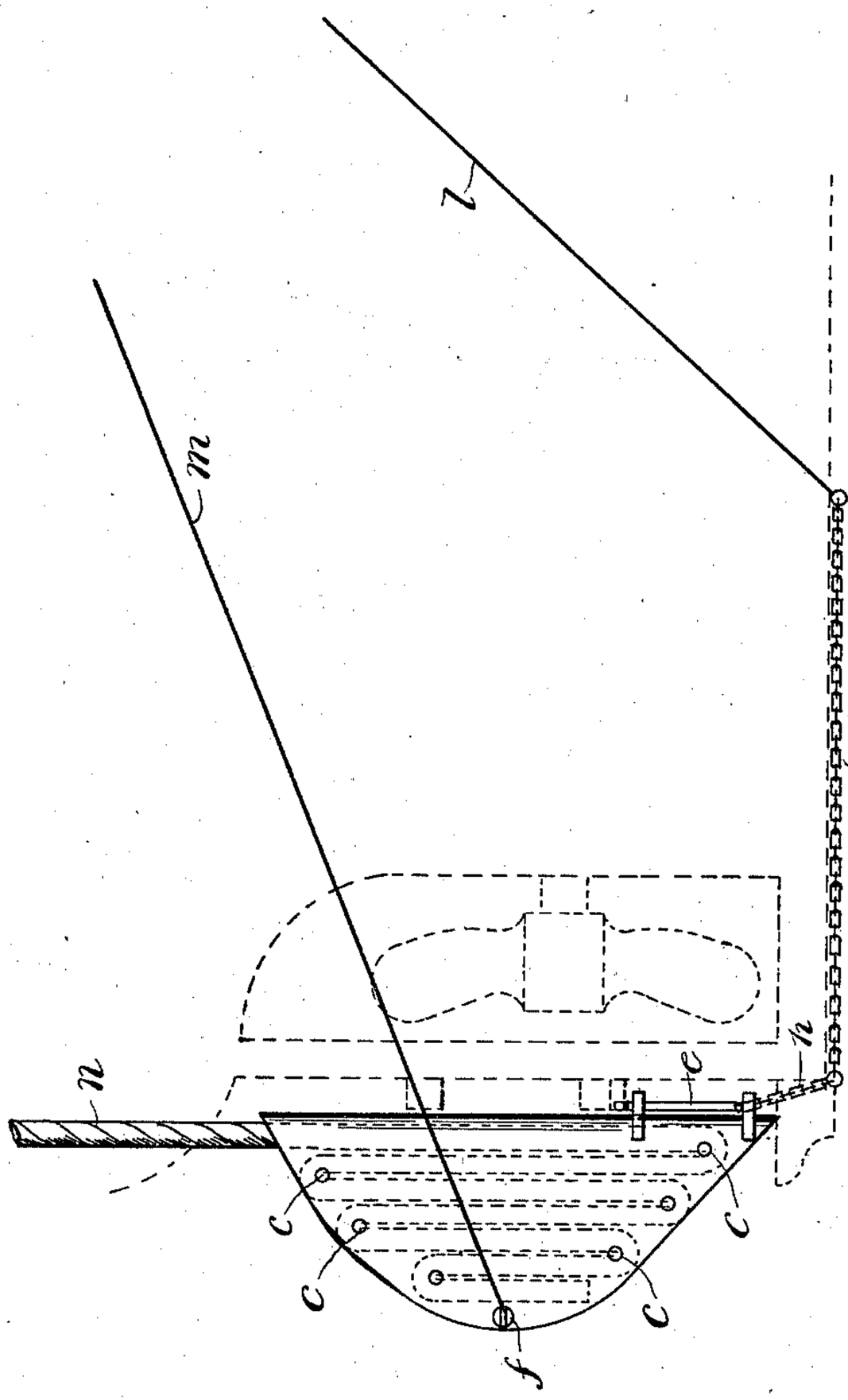


Fig. 5

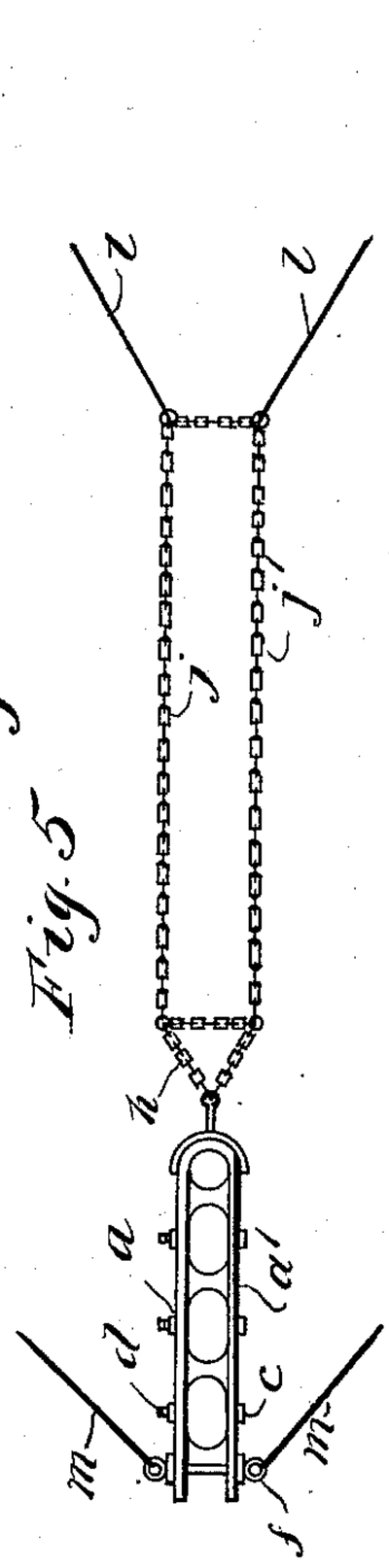
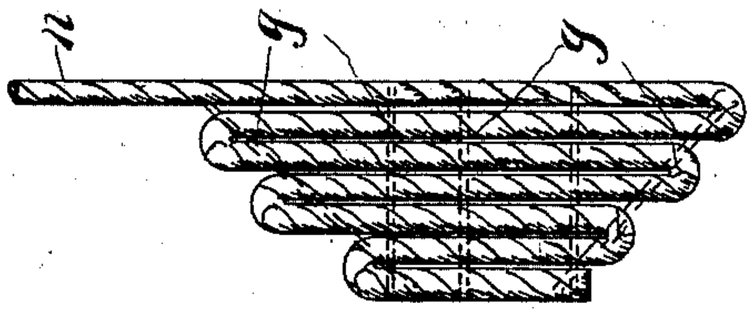


Fig. 3



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No. 670,007. Patented Mar. 19, 1901.

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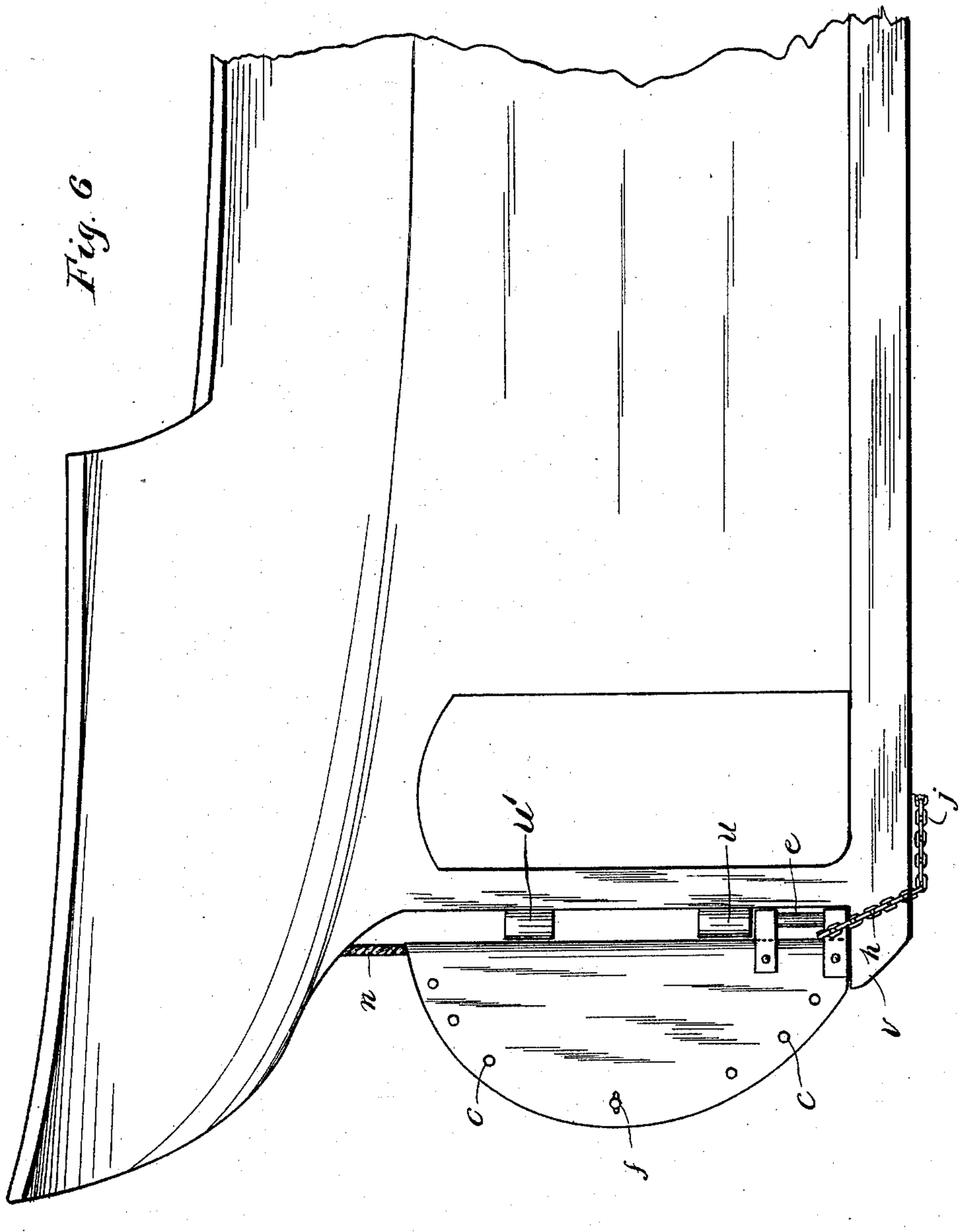
(Application filed Mar. 14, 1900.)

(No Model.) 3 Sheets—Sheet 3.

Fig. 6



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UNITED STATES PATENT OFFICE.

NILS SALVESEN, OF GRIMSTAD, NORWAY.

TEMPORARY RUDDER.

SPECIFICATION forming part of Letters Patent No. 670,007, dated March 19, 1901.

Application filed March 14, 1900. Serial No. 8,649. (No model.)

To all whom it may concern:

Be it known that I, NILS SALVESEN, a subject of the King of Sweden and Norway, residing at Grimstad, Norway, have invented certain new and useful Improvements in Temporary Rudders for Ships, of which the following is a specification.

My invention relates to an improved means for temporarily supplying the place of the rudder on ships when the same has been lost on the high sea. It is an accident which very often happens that a ship loses its rudder, and as the ship in such a state cannot be worked it will in most cases be driven off by the wind and the currents and get lost, and to obviate this danger I have devised the temporary rudder hereinafter described, which may be readily assembled and when slung will place the master in a position to work the ship and either continue the route to the place of destination or at least seek the nearest harbor. For the building of such temporary rudder it is only necessary that the ship should be provided with a casing of such a form and with such outfit, as will be specified hereinafter, so as to be able by means of ropes, wire, chains, and the like, which are always to be found on every ship, to furnish what is otherwise wanted for the building of the temporary rudder, its fastening, and turning.

In the drawings, Figure 1 is an elevation of a ship supplied with a temporary rudder embodying my invention. Fig. 2 is a bottom plan view of the hull of such ship with rudder applied. Fig. 3 is an enlarged detail of the rudder; Fig. 4, an enlarged elevation of said rudder and accessory parts in position; and Fig. 5, a plan view of the parts shown in the preceding figure, omitting the dotted outlines of the ship, Fig. 6 being an enlarged detail to illustrate the hanging of the temporary rudder.

A is the casing, which should have about the size of the rudder of the ship. It is made of sheet-iron or other suitable material, and its sides *a a'* are formed by folding the said sheet and leaving a certain space between the said sides, so as to afford a place for the skeleton G, of rope, to be placed therein. The casing is along its outer edge provided with holes for the reception of bolts *c*, which are fastened by means of nuts *d* and is on the edge next to the stern provided with a suitable attachment *e*, forming a knuckle, which should be placed and dimensioned in such a way that it will fit between the two lowest irons on the stern of the ship. The casing is finally provided on its hind edge with an eyebolt *f* for the attachment of the steering-lines *m*.

The temporary rudder is built up in the following manner: If by accident I lose the rudder of my ship, I take a rope or the like and pay it out down through the rudder-hole. The rope is then hauled on deck, as much as is required, and laid in bights, as shown in Fig. 3, which bights, by seams *g* of small rope or cord, are fastened together, so as to build a skeleton G. When this is done, the rope skeleton is put into the casing A and fastened by means of the bolts *c*, Figs. 4 and 5, the bolts *c* being inserted through the bights of the rope, as shown. Then a loop *h*, preferably of small chain, is formed and fastened to the iron *e* on the casing, the loop *h* being large enough to fit around the heel of the ship. To the said loop *h*, at a suitable distance apart, about equal to the width of the keel, are attached two ropes or chains *j j'*, which should be of sufficient length so that they will reach past the screw-propeller of the ship, and here their ends are connected by a short piece *k*, which is also about equal to the width of the keel, so that the said chains *j j'* follow along the keel. To the end of the said chains are attached two lines *l*, which reach to the deck of the ship. Finally two lines *m* are fastened to the rudder by *f*. All this work is executed on the deck, and when all is ready the whole thing is thrown overboard, only retaining the ends of the lines *l* and *m*. First I haul the rope forming the head *n* of the rudder up through the rudder-hole until I get the rudder to a suitable height. Then I fix the rudder itself in place by pulling the loop *h* on the heel and drawing tight the lines *l*, whereupon the rope *n* is hauled tight, and the temporary rudder A will now have a very safe position and can be worked by the lines *m* from the deck of the ship.

For the sake of convenience the casing A should be fitted with the loop *h* and the pieces of chain *j*, *j'*, and *k*, ready for use, so that in

case of emergency I have only to put the rope skeleton into the casing and attach the lines *l* and *m*.

The arrangement of the chains *j j'* is necessary to insure that the line *l* shall not be caught by the blades of the screw-propeller. On sail-ships the said chains are not, therefore, necessary.

By reference to Fig. 6 it will be seen that the usual knuckles *u* and *u'* are not actively used, or not necessarily so, in this construction and that the knuckle *e* on the false rudder is fitted in between the permanent knuckle *u* and the heel *v*, the chain-loop *j*, with its accessories, as before described, completing the fastening.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. The combination with a temporary rudder, provided with a knuckle *e*, of the loop *h* to fit under the keel of the vessel, the holding-lines *l* connected to said loop, and the steering-lines *m* secured to the rear of the rudder.

2. The combination with a temporary rudder provided with knuckle *e*, of the loop *h*, adapted to be passed under the keel of the vessel, the chains *j* connected at their forward ends by short reach *k*, the holding-lines *l* secured to said chains at said forward end, and the steering-lines secured to the rear of the rudder.

3. The temporary rudder, constructed as described with the doubled sheet-metal casing, the convoluted rope packing, extended to form a suspensorial support, and the bolts passed through said casing and the bights of the rope.

4. The temporary rudder, constructed as described with the doubled sheet-metal casing, the knuckle secured to said casing, the convoluted rope packing extended to form a suspensorial support, and the bolts passed through the sides of said casing and the bights of the rope.

5. The temporary rudder, constructed as described, with the doubled sheet-metal casing, the knuckle and loop attached to said casing, the convoluted rope packing extended to form a suspensorial support, and the bolts passed through the sides of said casing and the bights of the rope.

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

NILS SALVESEN.

Witnesses:
N. A. STANSBERG,
HENRY BORDEWICH.