

(No Model.)

P. E. FROSTAD.  
RUDDER FOR BOATS.

No. 453,338.

Patented June 2, 1891.

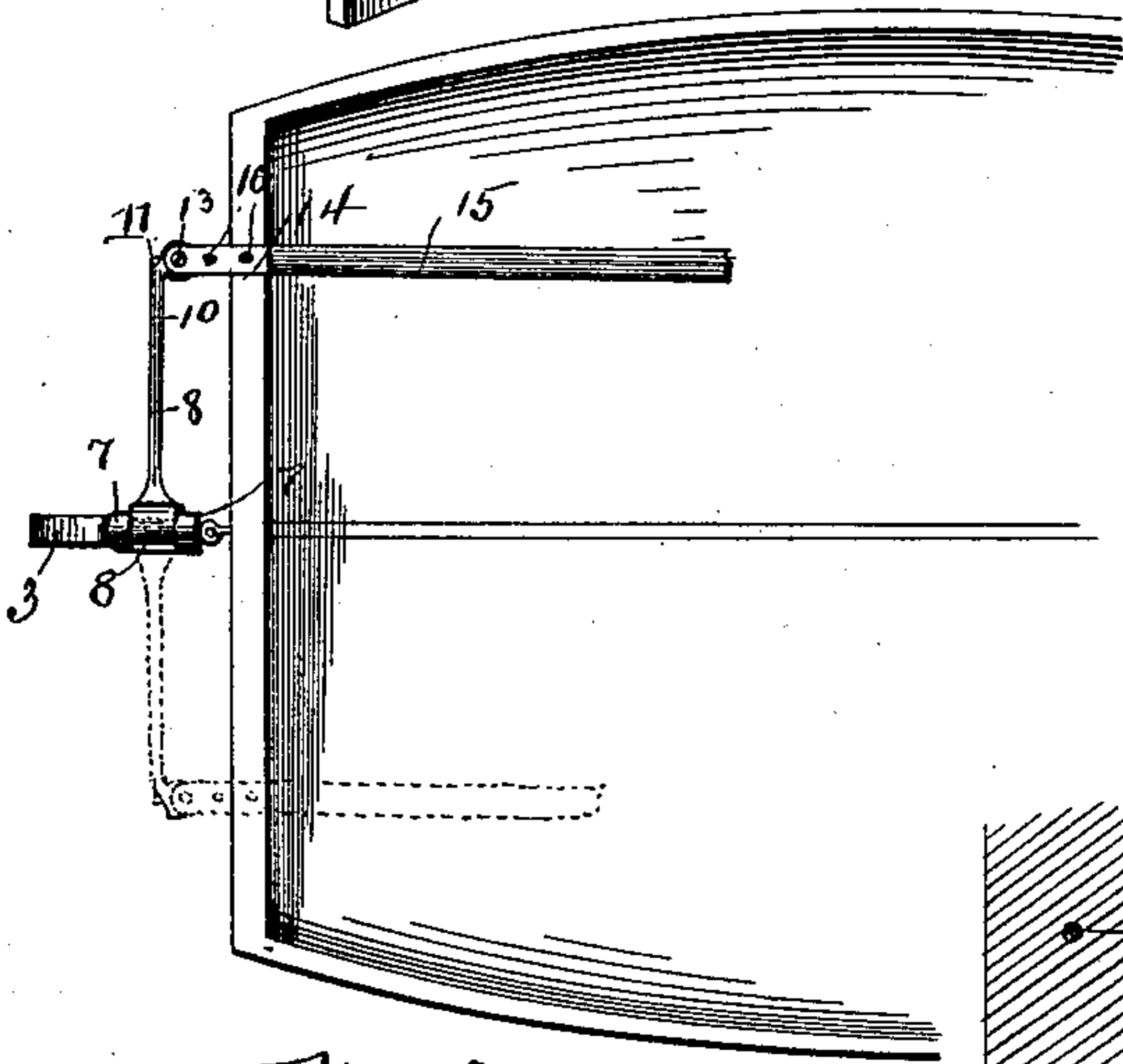
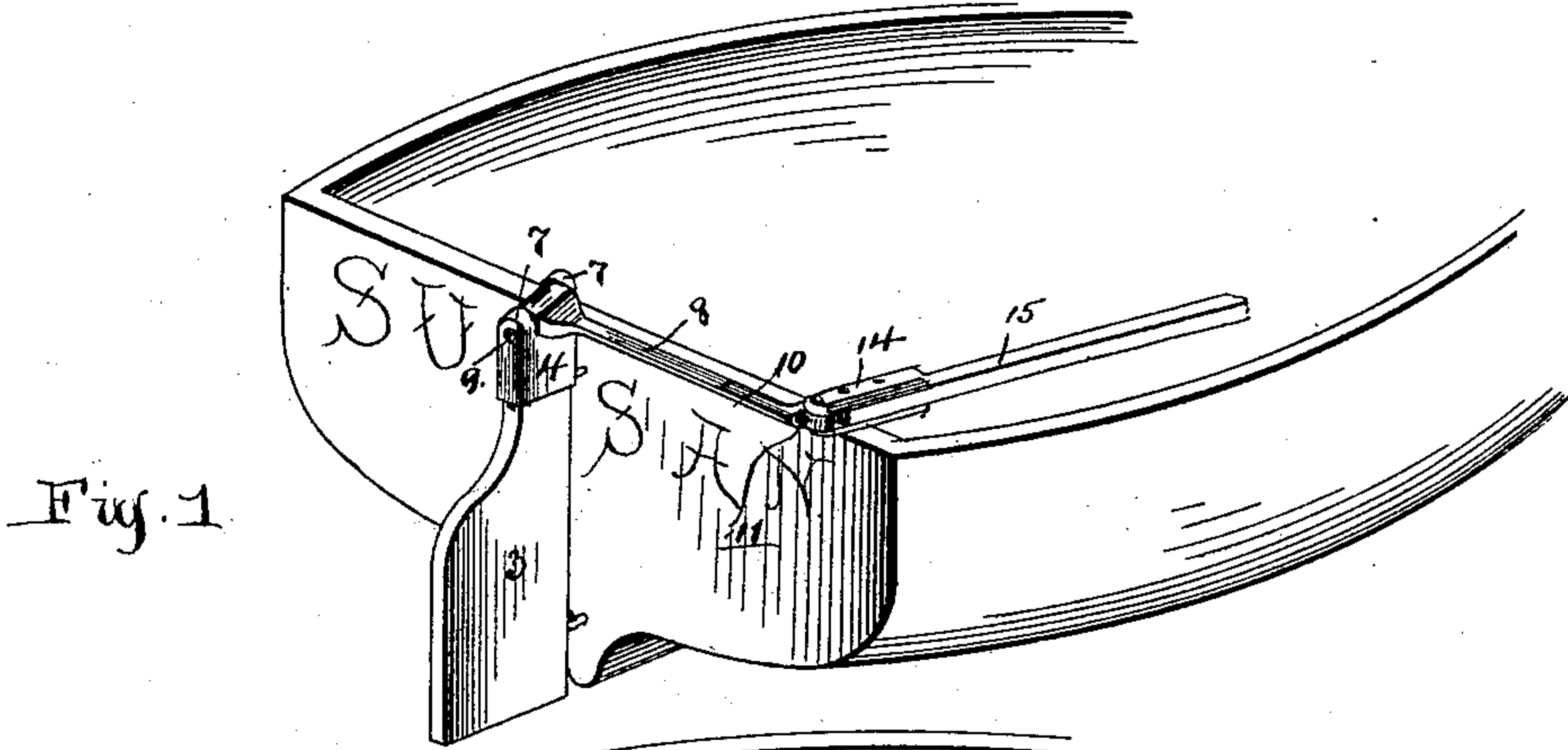


Fig. 3.

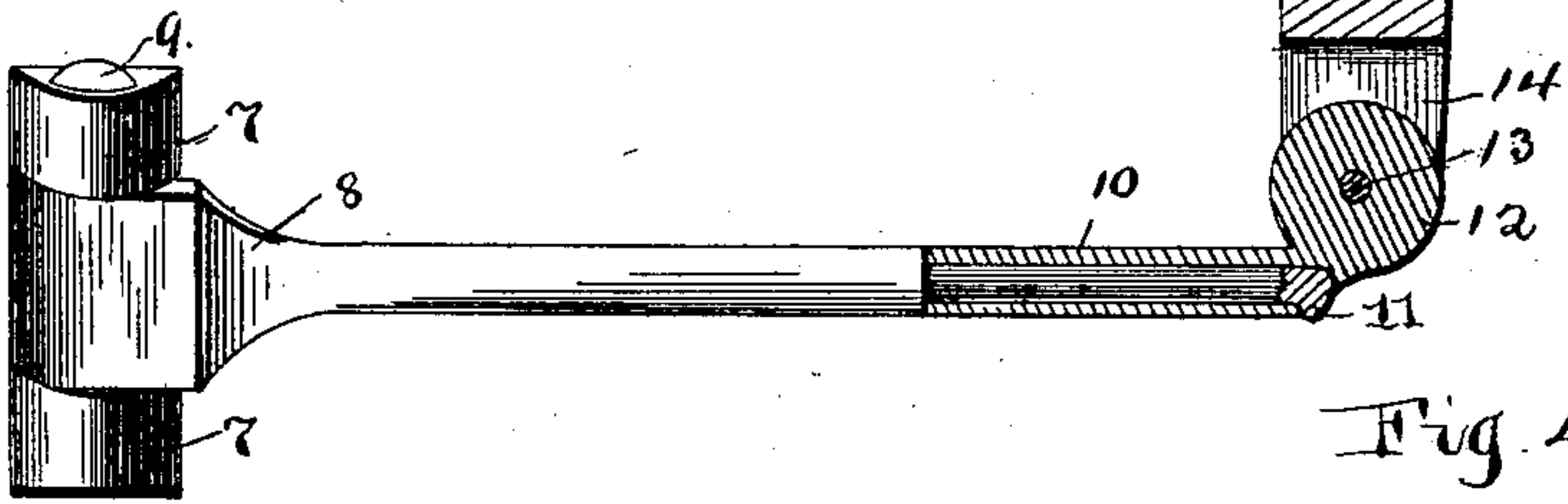
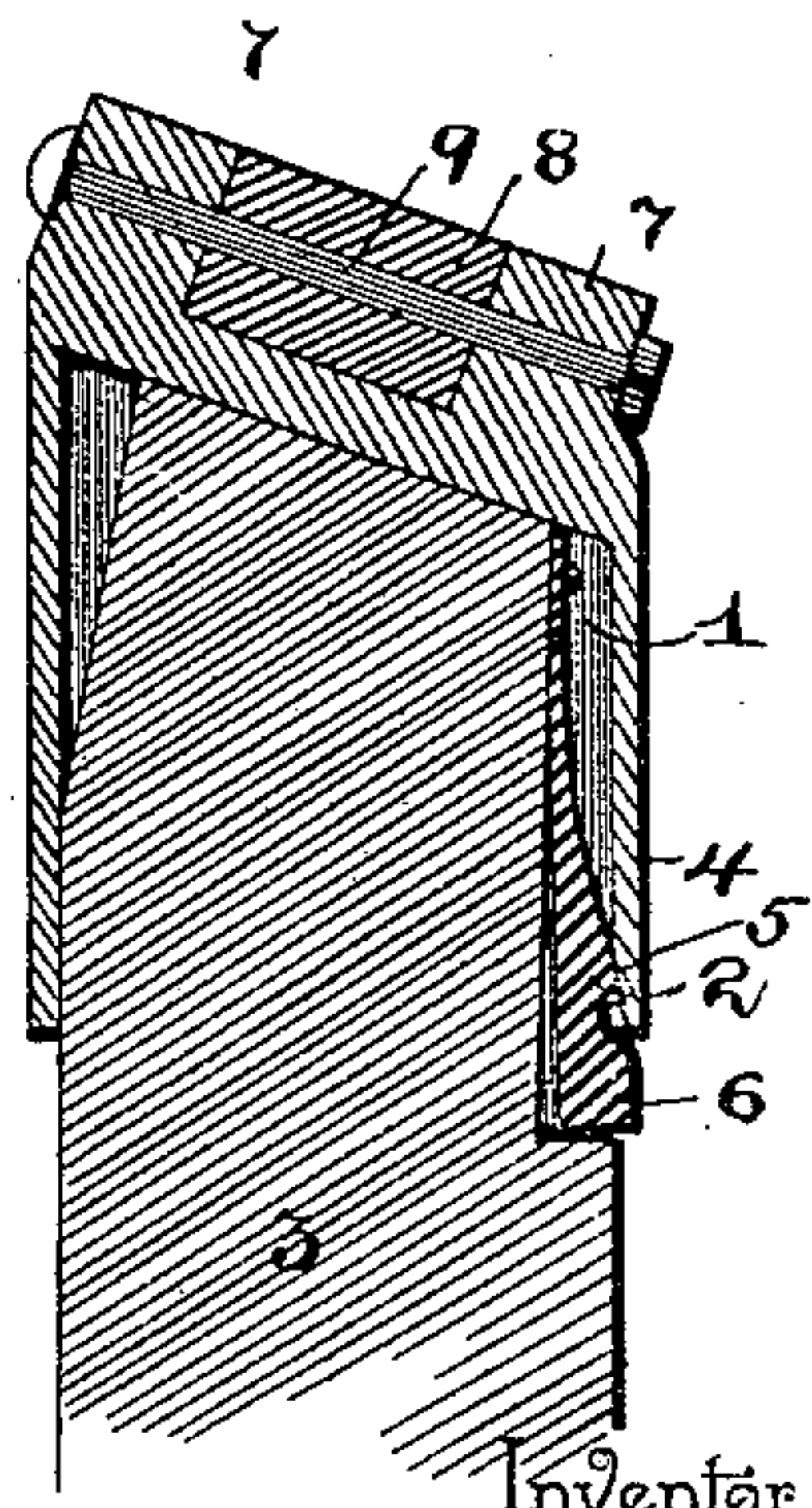


Fig. 4.



Witnesses

H. G. Suter

Wm. Bagger

By his Attorneys,

C. A. Snow & Co.

Peter E. Frostad,

Inventor



# UNITED STATES PATENT OFFICE.

PETER ERIKSEN FROSTAD, OF LA CONNER, WASHINGTON.

## RUDDER FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 453,338, dated June 2, 1891.

Application filed November 21, 1890. Serial No. 372,195. (No model.)

*To all whom it may concern:*

Be it known that I, PETER ERIKSEN FROSTAD, a citizen of the United States, residing at La Conner, in the county of Skagit and State of Washington, have invented a new and useful Rudder for Boats, of which the following is a specification.

This invention relates to rudders for boats; and it has for its object to provide a crank or handle for manipulating the rudder which shall be capable of being swung to either side and in an upward and downward direction, so as to be convenient to either side of the boat.

A further object of my invention is to make the steering apparatus detachable from the rudder in a convenient manner and to enable it to be readily and securely restored to operative position.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view illustrating my invention in position for operation. Fig. 2 is a plan view. Fig. 3 is a sectional view taken horizontally through the crank-arm and through the hinges which connect the latter with the tiller-arm and with the rudder-cap. Fig. 4 is a sectional view taken vertically through the rudder-cap and through the upper end of the rudder.

Like numerals of reference indicate like parts in all the figures.

The rudder in connection with which my invention is used may be firmly attached to the boat, and is provided at its upper end with a recess 1, formed in its rear edge to receive a spring-catch 2, which is suitably attached in the upper end of said recess. The upper end of the rudder, which is designated by 3, is suitably shaped to fit into a cap 4, which may be made of cast or wrought iron and which is provided in its inner side with a recess 5, to engage the spring-catch 2. The handle 6 of the latter is extended slightly beyond the cap, so that it may be readily manipulated when it shall be desired to remove the cap. The cap 4 is provided at its upper end with lugs or ears 7, between which the

crank-arm 8 is hinged upon a bolt 9. The outer end of the crank-arm is fitted in a tubular socket 10, the end of the crank-arm, which is made preferably of wrought-iron, being upset, as shown at 11, to prevent its being withdrawn from the socket 10, in which it is swiveled. The outer end of the socket 10 is provided with an ear 12, which is connected by means of a hinge-bolt 13 with a pair of straps 14, between which the tiller-rod 15 is suitably secured by means of bolts or rivets 16.

In the manufacture of my invention all the parts, except the tiller-rod, are preferably to be manufactured of iron in such a manner as to insure strength and durability. The spring-catch, of course, is to be made of steel and the tiller-rod preferably of wood.

The operation of the invention is as follows: The cap 4 is adjusted upon the upper end of the rudder, the spring-catch 2 of which will engage the recess 5 in the said cap, which latter is thus retained securely in position. The crank-arm 8 may be swung upon the hinge-bolt 9 either to the right or to the left of the rudder, and the swiveled socket 10 may turn upon the said crank-arm, so as to raise or lower to any desired extent the ends of the straps 14, between which the tiller-rod is secured. The latter may in a moment be changed from one side of the rudder to the other, thus enabling the rudder to be conveniently manipulated by a person on either side of the boat.

The apparatus which comprises my invention may in a moment's time be detached from the rudder without removing the latter by simply depressing the spring-catch 2 sufficiently to release it from the recess 5 in the cap.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a device of the class described, the combination, with a rudder having a spring-catch, of a cap adapted to be mounted detachably upon the said rudder and having a recess to engage said spring-catch and a crank-arm hinged to the upper side of said cap, substantially as set forth.

2. In a device of the class described, the combination, with a rudder, of a detachable cap, a crank-arm hinged to the upper side of

said cap, and the tiller-rod connected by the hinge-joint with the outer end of said crank-arm, substantially as and for the purpose set forth.

5 3. In a device of the class described, the combination of a rudder, a crank-arm connected by a hinge-joint with said rudder, and a tiller-rod connected by a hinge-joint with the outer end of said crank-arm, substantially  
10 as set forth.

4. In a device of the class described, the combination, with a rudder, of a detachable cap, a crank-arm hinged to the said cap, a socket swiveled at the outer end of said crank-  
15 arm, and the tiller-rod connected by a hinge-joint with the said socket, substantially as and for the purpose set forth.

5. In a device of the class described, the combination, with a rudder, of a detachable cap, a crank-arm hinged to the said cap, a 20 socket swiveled at the outer end of said crank-arm and having a perforated ear, the straps connected to the latter by a transverse bolt, and the tiller-rod secured between the said straps, substantially as and for the purpose 25 set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

PETER ERIKSEN FROSTAD.

Witnesses:

K. P. FROSTAD,

JNO. L. DAWSON.