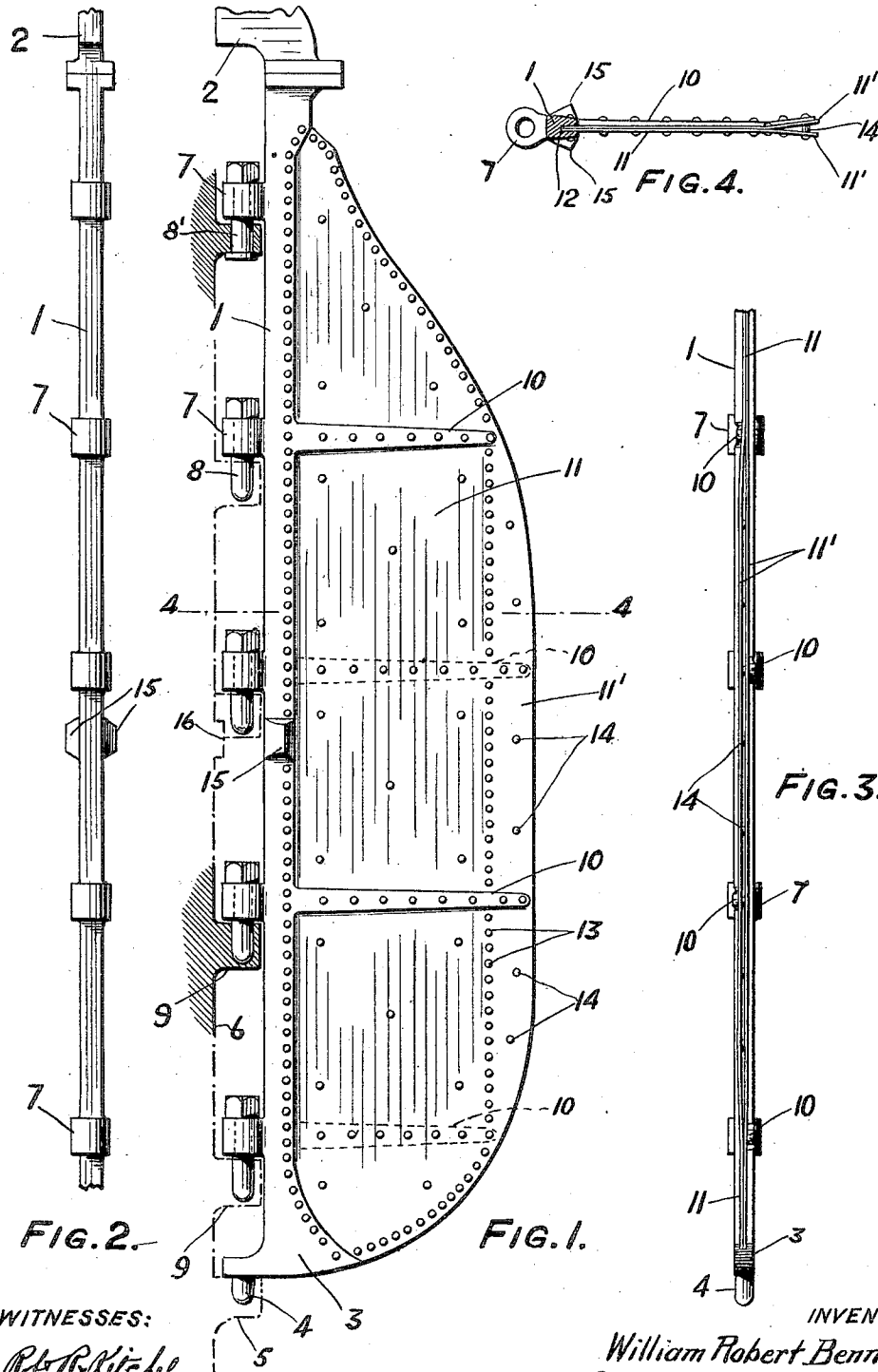


W. R. BENNETT.
 RUDDER.

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971,240.

Patented Sept. 27, 1910.



WITNESSES:

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971,240.

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To all whom it may concern:

Be it known that I, WILLIAM ROBERT BENNETT, a subject of the King of Great Britain, residing at St. John, New Brunswick, Canada, have invented certain Improvements in Rudders, of which the following is a specification.

My invention is a rudder comprising divaricate plates in combination with the frame having integrally formed braces fixed alternately on opposite sides of the plates, and knuckles at intervals on the frame post, said knuckles having pintles with hemispherical ends stepped in bearings of like contour on the stern post.

This construction has the purposes of providing a rudder that is capable of resisting the blows which are usually damaging, that will maintain its true position, and that will more effectively steer the boat by reason of the increased resistance to the shearing of the water from the rudder.

The characteristic features of my invention will appear from the following description and the accompanying drawings in illustration thereof.

In the drawings, Figure 1 is a side elevation of a rudder embodying my improvements; Fig. 2 is an elevation of the rudder post viewing at right angles to the position in Fig. 1; Fig. 3 is a partial view of the rear of the rudder showing the divarication of the plates; and Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 1.

As shown, the rudder comprises the post 1 having thereon the head 2 and the heel 3, the latter having the pivot 4 for engaging the step 5 of the stern post 6. Knuckles 7, integrally formed on the post 1, have secured therein the pintles 8 provided with hemi-spherical lower ends which are stepped in gudgeons 9 on the post 6, the gudgeons having sockets conforming to the pintles. A woodlock 8' in one of the knuckles 7 pre-

vents the unshipping of the rudder. Braces 10 are integrally formed on the post 1 and are riveted to the plates 11, which are set in the groove 12 of the post 1, the braces being placed alternately on opposite sides of the plates to which they are riveted. The plates are further riveted together in contact, particularly by the line of rivets 13 extending vertically. The rear edges of the respective plates, exterior to the row of rivets 13, are spread so that the rudder is provided with wings 11' diverging outwardly from the plane surfaces of the remainder of the respective plates 11, the wings being held in the desired position by the stay bolts 14 in conjunction with braces 10. The angle of divergence may vary but an angle of about six degrees has been found most practicable with vessels of moderate speed. The extreme width of each plate is preferably one sixth of its extreme length, and the extreme width of the divaricate portion of each plate is preferably one-sixth of its entire width, from which width it gradually decreases until it merges in the flat portion of the plate. Stoppers 15 are formed on the rudder frame and engage corresponding blocks 16 formed on the stern post when the rudder has reached its greatest angle to prevent further movement.

Having described my invention, I claim: A rudder comprising a post having braces and pintle knuckles integrally formed therewith, in combination with plates having their rear sections deflected outwardly, said plates being secured to said post by said braces.

In witness whereof I have hereunto set my name this 9th day of May, 1910, in the presence of the subscribing witnesses.

W. R. BENNETT.

Witnesses:

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