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A. H. ROLLINS

ADJUSTABLE SUPPORT

Filed Nov. 13, 1922

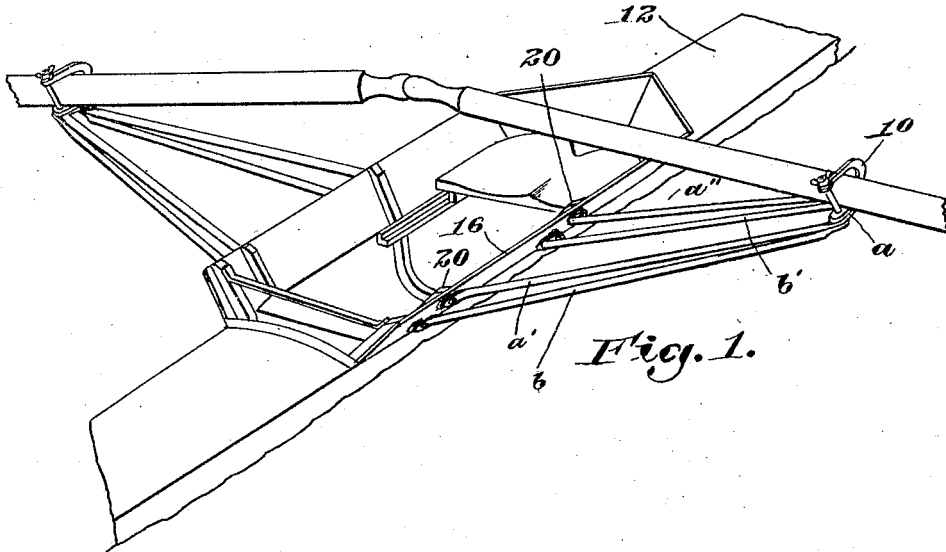


Fig. 1.

Fig. 2.

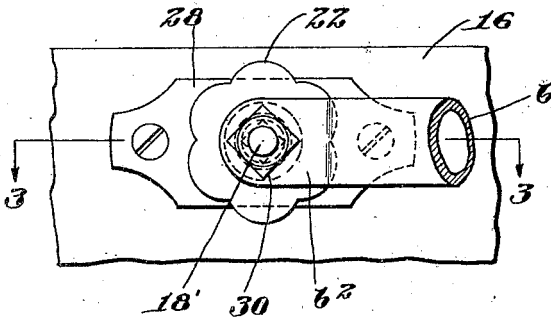


Fig. 3.

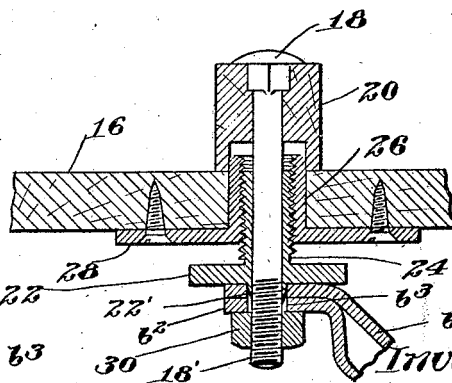
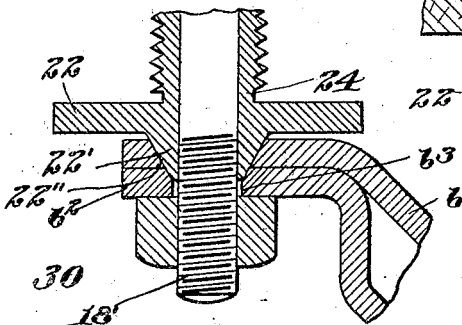


Fig. 4.



Inventor  
Alden H. Rollins  
by Twitchell, Chadwick & Hunt  
Attorneys

# UNITED STATES PATENT OFFICE.

ALDEN H. ROLLINS, OF CAMBRIDGE, MASSACHUSETTS.

## ADJUSTABLE SUPPORT.

Application filed November 13, 1922. Serial No. 600,584.

*To all whom it may concern:*

Be it known that I, ALDEN H. ROLLINS, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Adjustable Supports, of which the following is a specification.

This invention relates to improvements in adjustable supports. More particularly it relates to a device for adjusting the position of a brace end with respect to its fixed support. It is illustrated herein for use for adjusting the outriggers of a racing shell, but it may be applied with advantage in other connections.

In row boats of the type known as shells and in other boats which are so narrow as to require that the rowlocks be outriggered, there is occasional necessity for adjusting the position of the braces which support the rowlocks. In a racing shell, for example, each outrigger has four braces preferably made of light steel tubing about  $\frac{3}{8}$ th of an inch in diameter, which frequently require adjustment in order to hold the rowlocks in proper position. Usually only one of these braces needs to be shifted, and that but a little, to bring the row lock into correct position. To avoid disturbing the three properly set braces it is customary to loosen the binding nut of the one that is to be altered, and then wedge a split washer around the bolt between the end of the brace and the wash board of the shell. Often several different washers of varying thicknesses must be tried before the correct setting of the brace is attained, so that this method of adjustment is open to objections and is a constant annoyance.

It is an object of the invention to provide a simple and convenient means for adjustment of the braces to a greater degree of fineness and with more certainty and lasting rigidity than has heretofore been possible, and to do so without the use of washers. This is accomplished by providing a movable base for the outrigger brace which can be screwed out or in from the face of the wash board and to which the end of the brace may be tightly clamped. This base is itself centered and rigidly held, both by screw engagement in a metallic socket let into the wash board, and into a timber of the boat, and by the rigid stud on which the end of the brace is centered; and it can

be locked in its adjusted position at any desired distance from the wash board by a nut on said stud, so that the brace and its movable base become fixed immovably with respect to the wash board and the timber of the board which supports it. The base comprises a fixed socket and a tubular sleeve which screws into said socket. Both socket and sleeve have flanges. The flange of the socket is fastened by screws to the wash board. The flange of the sleeve is non-round, for grip in turning the sleeve. The shell of the socket is let into the wash board and a boat rib behind it. It has an internal screw thread into which the flanged tubular sleeve screws. The tubular sleeve is externally screw threaded, fitting into said socket. Internally it has a hole to receive, with close fit, the stud which holds the brace. It is provided with a conical extension outside of the flange and close to the stud, adapted to project with the stud into the hole in the end of the brace, filling that hole tightly and thus centering it, thus engaging conically within it. The stud passes through said brace, and outside of it carries a nut, screwing on the stud and clamping the end of the brace against said conical center and flange. This locks all together. By loosening this nut and then screwing the sleeve out or in by means of its flange the position of the end of the brace can be adjusted.

Although illustrated and described as it may be applied to a racing shell it is obvious that this method of varying the position of a supporting strut or brace can be applied in other connections, and that the design can be varied according to circumstances. It is intended that the patent shall cover, by suitable expression in the appended claims, whatever features of patentable novelty exist in the invention disclosed.

In the accompanying drawings:

Figure 1 is a perspective showing the invention as applied to the outrigger of a racing shell;

Figure 2 is an elevation showing the end of an outrigger brace attached to the improved support;

Figure 3 is a plan in section on line 3—3 of Figure 2; and

Figure 4 is a plan like Figure 3, showing details, somewhat enlarged, of the support.

Referring to the drawings, the rowlock is pivotally mounted upon an outrigger

at a distance from the body 12 of the shell. The outrigger comprises a tubular member having a flattened portion *a* constituting a mount for the rowlock, and having arms or  
 5 braces *a'*, *a''*, *b*, *b'* diverging in four directions therefrom, fore and aft, down and lower down, toward the washboard 16 near which the end of each brace is flattened,  
 10 bent parallel to the face of the washboard and provided with a hole through which a bolt or stud 18 projects and holds it to a rib 20 of the shell. Heretofore a nut threaded on this stud has served to clamp the flat end of the outrigger arm. It is  
 15 frequently necessary to adjust the rowlocks either fore or aft, or up or down, and it has been the practice to do so by shimming the ends of the brace or braces in order to swing the mount *a* and rowlock to the desired position. A slight movement of the  
 20 mount creates a considerable effect at the handle end of the oar, so that the setting of the brace ends must be accomplished with a great degree of nicety and exactness. This has made it necessary on such occasions  
 25 to experiment with shim pieces, such as washers, of varying thickness, in order to get the exact result desired in the setting of the end of the brace. The present invention is directed to the provision of means where-  
 30 by the adjustment of the ends of the braces may be effected directly, quickly, easily and with absolute exactness. This is accomplished by providing an auxiliary supporting surface for the end of a brace and by  
 35 making this auxiliary surface adjustable toward and from the fixed surface of the washboard. This surface is provided by the head 22 of a sleeve nut 24 which screws into a socket 26 set into the washboard 16 and  
 40 rib 20 behind it. The socket 26 is formed integral with a plate 28 which is made fast to the washboard. Through the hollow of the sleeve nut 24 the threaded shaft 18' of an ordinary binding bolt passes loosely so  
 45 that the sleeve may slip along the bolt as it is screwed in and out of its socket. The flattened end *b*<sup>2</sup> of the brace *b* is strung on the bolt, against the head 22 of the sleeve  
 50 nut 24, and is clamped thereto by the bolt nut 30, which at the same time, reacting through the shaft and head of the bolt, clamps the whole firmly on the timber and washboard. If the end of the brace is to  
 55 be shifted away from the washboard the binding nut 30 is loosened and the sleeve 24 rotated so as to move outward, thereby forcing the brace end ahead of it to the exact position desired. It is secured in this  
 60 position by merely tightening the binding nut.

The hole *b*<sup>3</sup> provided in the brace end is ordinarily slightly larger than the bolt 18, and this loose fit permits some play, the effect of which is magnified upon the position-

ing of the oar. The device of the invention eliminates this defect by providing a conical extension 22' from the surface of the sleeve nut, which fits within the opening in the brace end, and by countersinking the  
 70 latter, as at 22'' in Fig. 4, so that the tapered wall of the extension will fit snugly against the sides of the conical recess, the bearing surface between the two may be sizably increased. The coned extension thus  
 75 centers the brace end exactly with respect to the axis of the sleeve and bolt and prevents side play. Thus the only movement of the brace end when being adjusted is perpendicularly away from or toward the surface of the washboard, and this movement may be brought about by simply rotating the sleeve nut. While being adjusted, the effect of the displacement of the brace end may be noted at the rowlock and oar handle, as the sleeve nut is being turned, consequently the turning can be stopped at the precise point desired, and there will be no deviation of the brace end from this determined setting as the binding nut is tightened.

The illustrated application of the device is only one embodiment of the invention. By making the base plate, socket and sleeve nut of suitable size, a heavy brace may be adjustably supported in the same manner  
 95 as the light brace illustrated. If used in other surroundings in which the bolt or stud is made rigid without aid of the nut 30, as if it were set in concrete, or were clamped by an inner nut, the sleeve nut  
 100 would not be necessarily mounted on the base plate as illustrated, but might be arranged to screw in and out on any rigid part of the apparatus. Furthermore, the invention is not limited to use with a strut but is equally adaptable to adjusting the position of the end of a tie rod. It is in this sense of a connector or transmitter of stresses that the term brace is employed, and the stresses transmitted may be either  
 105 tensile or compressive in type.

I claim as my invention:

1. The combination, with a boat and rowlock, of an adjustable supporting means for the rowlock on the body of the boat, comprising a socket let into the body of the boat and provided with internal screw threads; a member screw-threaded into said socket, and thereby adjustable in and out to different depths with respect to the body of the boat; a brace for the rowlock, extending to said member; and means to clamp the said member and brace together.

2. The combination, in a rowlock outriggering device, of a bolt passing from its head within the boat through a timber and the washboard and projecting outward; a socket fast on the washboard having a screw threaded interior through which said bolt passes; a sleeve loosely surrounding the bolt,

movable along the bolt, screw-mounted in said socket, and with the bolt constituting a support for the brace end of the outrigger; and a nut on said bolt, for clamping together the said brace end, the sleeve, the washboard and the timber at various positions to which the sleeve may be adjusted on its screw.

3. The combination, with a boat and a rowlock having a brace extending therefrom, of an adjustable supporting means for the brace on the body of the boat comprising a socket let into the body of the boat and provided with internal screw threads; a member screw-threaded into said socket, and thereby adjustable in and out to different depths with respect to the body of the boat, and having a conical projection adapted to enter a hole in the brace and support it against transverse displacement with respect to the body of the boat; and means to clamp the said member and brace together.

Signed at Boston, Massachusetts, this eighth day of November, 1922.

ALDEN H. ROLLINS.