E. L. YOUNG.

STEERING APPARATUS.

No. 190,177. Patented May 1, 1877.

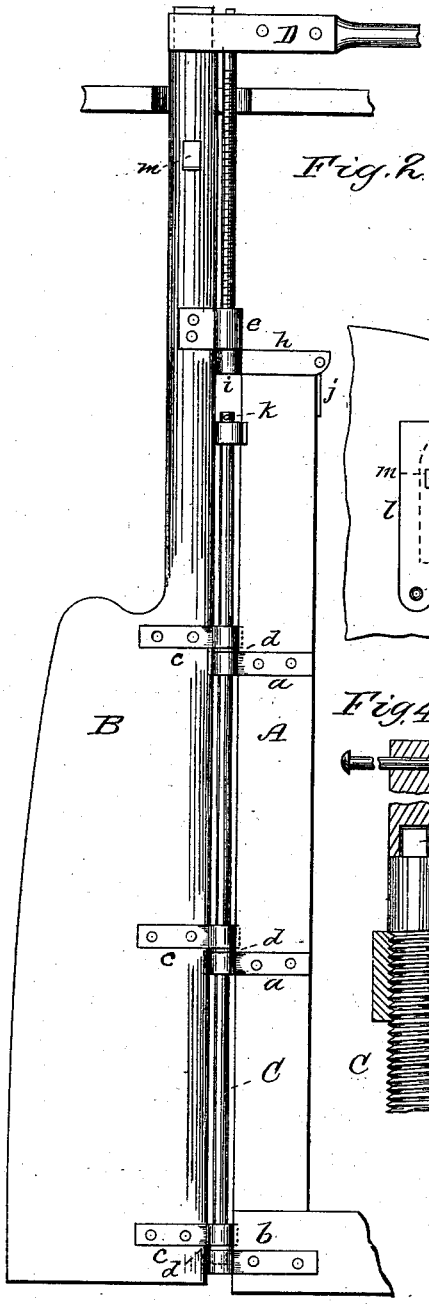

Fig. 2.

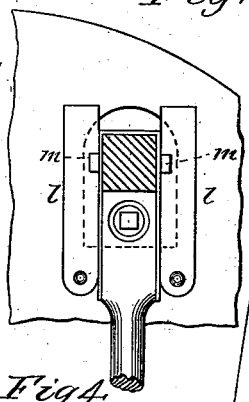

Fig. 3.

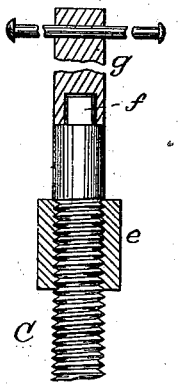

Fig 4.

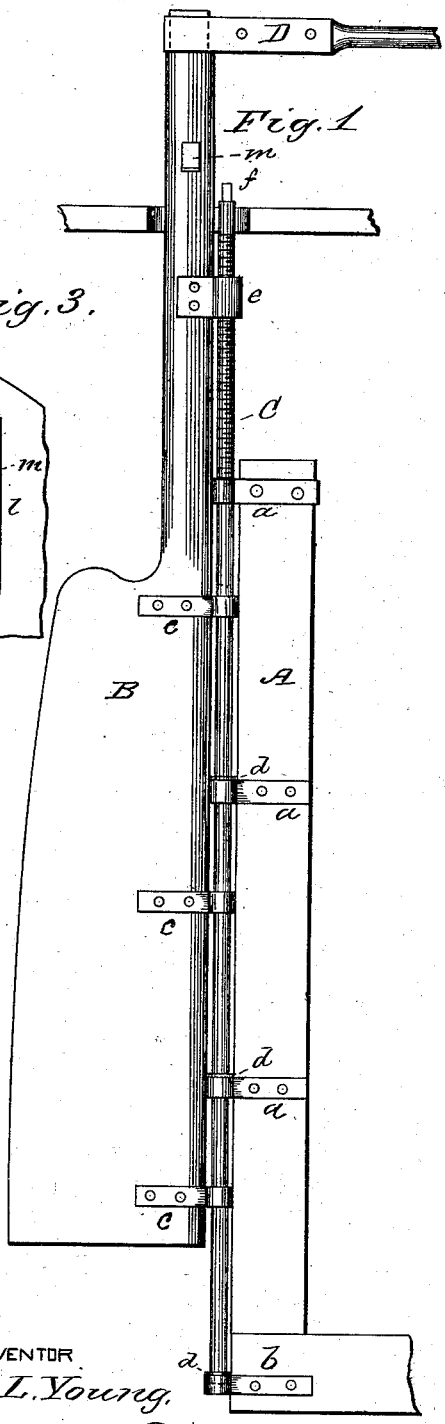

Fig. 1.

WITNESSES

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EDWARD L. YOUNG, OF NORFOLK, VIRGINIA.

IMPROVEMENT IN STEERING APPARATUS.

Specification forming part of Letters Patent No. **190,177**, dated May 1, 1877; application filed March 29, 1877.

To all whom it may concern:

Be it known that I, EDWARD L. YOUNG, of Norfolk, in the county of Norfolk and State of Virginia, have invented a new and valuable Improvement in Means for Raising Ships' Rudders and Manner of Hanging the Same; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side elevation of my invention. Fig. 2 is a similar view, showing a modification. Fig. 3 is a top-plan view of a portion of the deck, showing the means used to suspend the rudder; and Fig. 4 is a vertical longitudinal section of the screw-threaded sleeve.

This invention has relation to the manner of hanging or suspending the rudders of vessels; and the object and purpose thereof is to so hang the rudder that it will admit of being raised from its usual position when required, and thereby securing it against all danger of being injured and rendered useless—as, for instance, when the vessel may be run ashore or aground, strained, or otherwise injured; and when gotten out of danger, the rudder can be at once lowered to its usual or proper position, and brought into immediate use.

Previous to my invention the usual method of securing the vessel's rudder to the stern-post has been by the use of pintles and gudgeons.

My invention consists in so hanging the rudder that the necessity of the pintles is entirely dispensed with by the use of a strong metallic rod to pass through the eyes of the gudgeons, both on the rudder and the stern-post, and having a portion of its upper end screw-threaded, which passes through a screw-threaded sleeve secured to the rudder, as will be hereinafter more fully described, and subsequently pointed out in the claims.

In the accompanying drawings, A represents a stern-post of a vessel, and B the rudder. To this stern-post are secured a series of gudgeons, *a*, and to the lower portion is secured a blind-gudgeon, *b*. The rudder B also has gudgeons *c*, and is connected to the stern-post by a stout rod, C, the same passing through the gudgeons, and the end resting on a concavity formed upon the upper face of said blind-gudgeon.

It will be noticed that the gudgeons are so placed in relation to each other that the space between them is equal to the distance that is required for the rudder to be lifted; and when the rudder is at its lowest point the gudgeons thereon will rest upon the stern-post gudgeons; and it is considered desirable to place a washer, *d*, between each pair of gudgeons, to prevent wearing. To that portion of the rudder a little above the stern-post there is affixed a screw-sleeve, *e*, of sufficient strength to sustain the weight of the rudder when raised. Through this sleeve *e* passes the screw-threaded portion of the rod C, said rod having upon its upper end a square projection, *f*, by which the rod is operated by a suitable key, *g*.

The rod C may be made any length found desirable at the point above the rudder, and should the wood-work or deck obstruct its working, a suitable hole may be cut through the wood-work, and the rod or its appendages necessary to work it can be continued in length through and above the wood-work; and should the rod C be found inconvenient on account of its length, it may be cut in two parts, as shown in Fig. 2, forming an upper and lower section. If it be thus divided it will be necessary to place on the head of the stern-post a stout metallic cap, *h*, having a stout thick flange on each side of it to fit closely to the sides of the stern-post. The after portion of this cap is shaped so as to form a blind-gudgeon, *i*, which must conform in size and shape to the gudgeons below it. To the forward end of the cap is a strong tail or brace, *j*, bolted to the wood-work below it, said cap being hinged to the brace, so that it can be raised and turned back when required, to enter the lower section of the divided rod into the gudgeons. A pin, *k*, passes through, or is connected to, the end of the lower section of the rod, to prevent the same from slipping down in case any accident should happen to the lower blind-gudgeon on the stern-post, thus rendering it more secure.

The lower section of the divided rod will be

stationary, and only the upper section will be made to rotate in the manner and by the means before stated, and while thus rotating will raise or lower the screw-threaded sleeve *e*, and, consequently, the rudder to which it is attached. When the rudder is raised the strain of its weight on the threads of the rod C can be greatly relieved by the use of pivoted bars *l*, which are swung around and brought underneath shoulders on bearing-plates *m*, secured to each side of the rudder. When the rudder is raised, the tiller D, which is of the ordinary construction, should be lashed amidship, to prevent it from playing back and forth.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The rudder B, with shoulders *m*, in combination with the pivoted or swinging bars *l*, substantially as and for the purpose specified.

2. The rudder B, secured to the stern-post A by gudgeons *a c* and screw-rod C, with screw-sleeve *e*, in combination with shoulders *m* upon the rudder, and the swinging bars *l*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDWARD L. YOUNG.

Witnesses:
EDWIN GRAY,
CHARLES J. SMITH.