R. B. McENTIRE.

Means for Hanging Rudders.

No. 161,140. Patented March 23, 1875.

Fig. I.

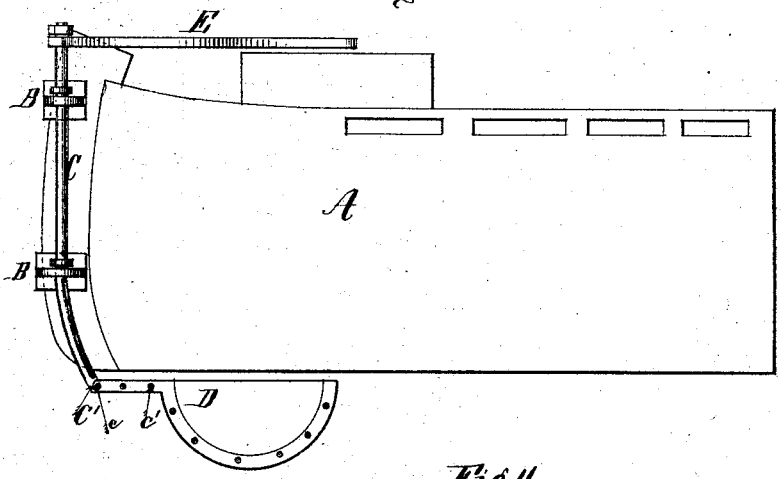


Fig. II.

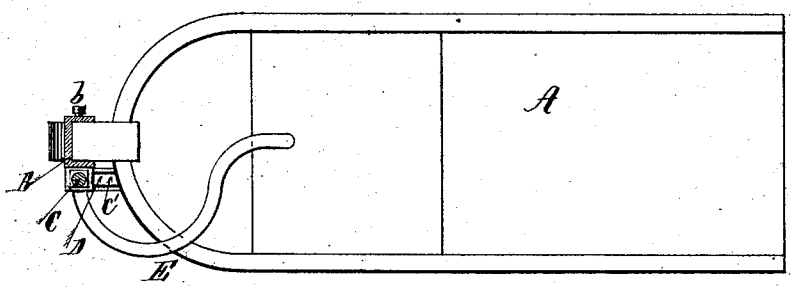
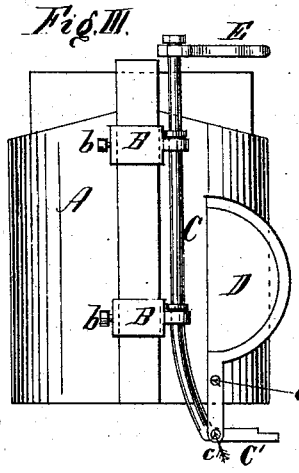


Fig. III.



Witnesses:
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UNITED STATES PATENT OFFICE.

RICHARD B. McENTIRE, OF EAST BOSTON, NEW YORK.

IMPROVEMENT IN MEANS FOR HANGING RUDDERS.

Specification forming part of Letters Patent No. **161,140**, dated March 23, 1875; application filed October 22, 1874.

To all whom it may concern:

Be it known that I, RICHARD B. McENTIRE, of East Boston, in the county of Madison and State of New York, have invented a new and useful Improvement in Steering Apparatus for Canal-Boats; and I do hereby declare the following to be a full and clear description thereof, which will enable those skilled in the art to use my improved apparatus.

This invention consists of a movable blade or steerage board, adjusted and lowered at pleasure, under the bow of the boat, and operated by means of a vertical shaft, placed at the side of, and resting in, bearings attached to the stem of the boat. The shaft and its steerage-blade are operated by suitable apparatus from the deck of the vessel. The invention will be readily understood by reference to the accompanying drawings, of which—

Figure I is a side elevation of a vessel fitted with the improved steering apparatus. Fig. II is a deck plan of the same, the steerage-blade below the vessel being shown in dotted lines. Fig. III is a front elevation of the vessel, showing the steerage-blade folded up by the side of the stem.

The vessel A is any vessel of ordinary construction, and to its stem a series of metal clamps, B, are secured by means of set-screws, *b*, so that the said clamps may be adjusted to, or removed from, the stem at pleasure. In one side of each of the aforesaid clamps is a journal-bearing for the reception of the vertical shaft C. This shaft is held in its vertical position by means of these bearings, and is held up, either by seats turned in its periphery for the bearings B, or by small collars secured to it above the said bearings.

The lower end of the shaft C terminates in an elbow, C′, which is allowed to swing around just below the keel of the boat. The elbow C′ has a vertical slot for the reception of the steering-blade D, which enters the said slot and is assembled to the elbow C′, by means of a pivot-pin, *c*. A stop-pin, *c′*, a few inches aft the pin *c*, falls into a notch in the after end of the elbow C′, and holds the blade D in its proper vertical position when let down. When this steerage-blade is not needed, or when the water is too shallow to permit its use, it may be turned around from under the boat and hoisted up by the side of the stem, as shown in Fig. III, it being pivoted to the elbow C′ by the pivot-pin *c*, permitting of this raising and lowering adjustment without difficulty, and without the unnecessary loss of time. A bent lever, E, attached to the top end of the shaft C, is used to turn the said shaft and its steering-blade as required. By having this lever bent it will be more conveniently kept out of the way of articles on deck or alongside. Suitable ropes and tackle may be attached to the end of the lever to operate it, and the ropes may be taken back along the deck to the stern of the vessel, so as to permit them to be operated by the pilot who operates the rudder.

By using this apparatus on canal-boats the vessel can be more easily controlled in a gale of wind, or when the traction of the tow-line draws the bow of the boat too hard toward the bank or tow-path.

The blade D may be made of a single wide plank, thick and stiff enough to withstand the strain, or it may be built up of several pieces.

Having thus described my invention, I desire to claim—

The clamp-bearings B, operating shaft C and rudder-blade D, combined and arranged as and for the purpose set forth.

RICHARD B. McENTIRE.

Witnesses:
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