J. W. VAN SANT.

Rudders for Vessels.

No. 138,962. Patented May 13, 1873.

Fig. 1

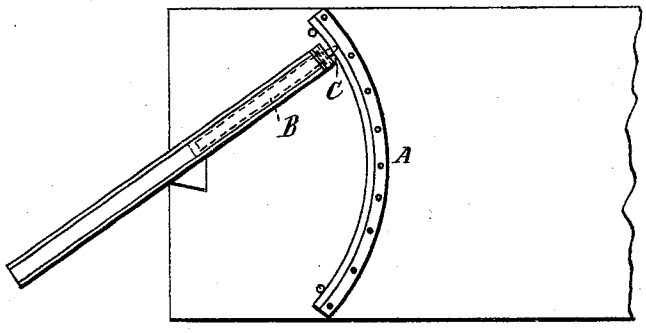
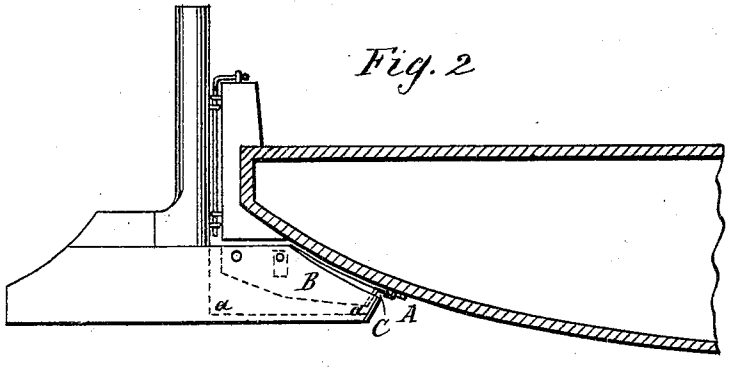


Fig. 2



Witnesses

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JOHN W. VANSANT, OF LE CLAIRE, IOWA.

IMPROVEMENT IN RUDDERS FOR VESSELS.

Specification forming part of Letters Patent No. **138,962**, dated May 13, 1873; application filed September 13, 1872.

To all whom it may concern:

Be it known that I, JOHN W. VANSANT, of the town of Le Claire, in county of Scott and State of Iowa, have invented certain new and useful Improvements in Boat-Rudder; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

This, my invention, is intended to apply to the double or balance rudder, a kind used on a class of boats much used on the western rivers, being constructed with square, or nearly square, sterns. The rudder is attached in the usual manner, and is constructed with the fore, or that part working under the vessel, with a hollow or recess, in which is placed a movable section, B, so made as to work freely in the recess and to conform to the rake of vessel's stern, and is held in its place by bolt or other device. This section is made with a projection or toe, C, which works in the metallic ways A, they being firmly bolted on boat's stern, and formed on the arc of the circle. In turning the rudder to the right or the left the movable section B is raised or lowered in the recess of the rudder by means of the toe C following, and working in the circular ways, and always working close to vessel's stern. The advantage of this is, first, to prevent any obstruction from getting between the rudder and stern of the boat, thereby preventing the free working of the rudder; and, second, it presents a greater surface to the water, and renders the boat more easily manageable and quicker to answer her helm.

Figure 1 represents a section of boat-hull showing the form of placing the ways A and the position of movable section B as it stands at an angle of about forty-five degrees. Fig. 2 represents the rudder and the movable section B as it works in recess represented by dotted lines *a a*.

I claim—

1. The movable section B when combined to operate with the rudder, as specified and set forth.

2. The arrangement of the metallic ways A in combination with the movable section B, for the purpose set forth and specified.

JOHN W. VANSANT.

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