

G. Dowling.
Lowering Ships' Masts.
N^o 75671 *Patented Mar. 17, 1868.*

Fig. 1

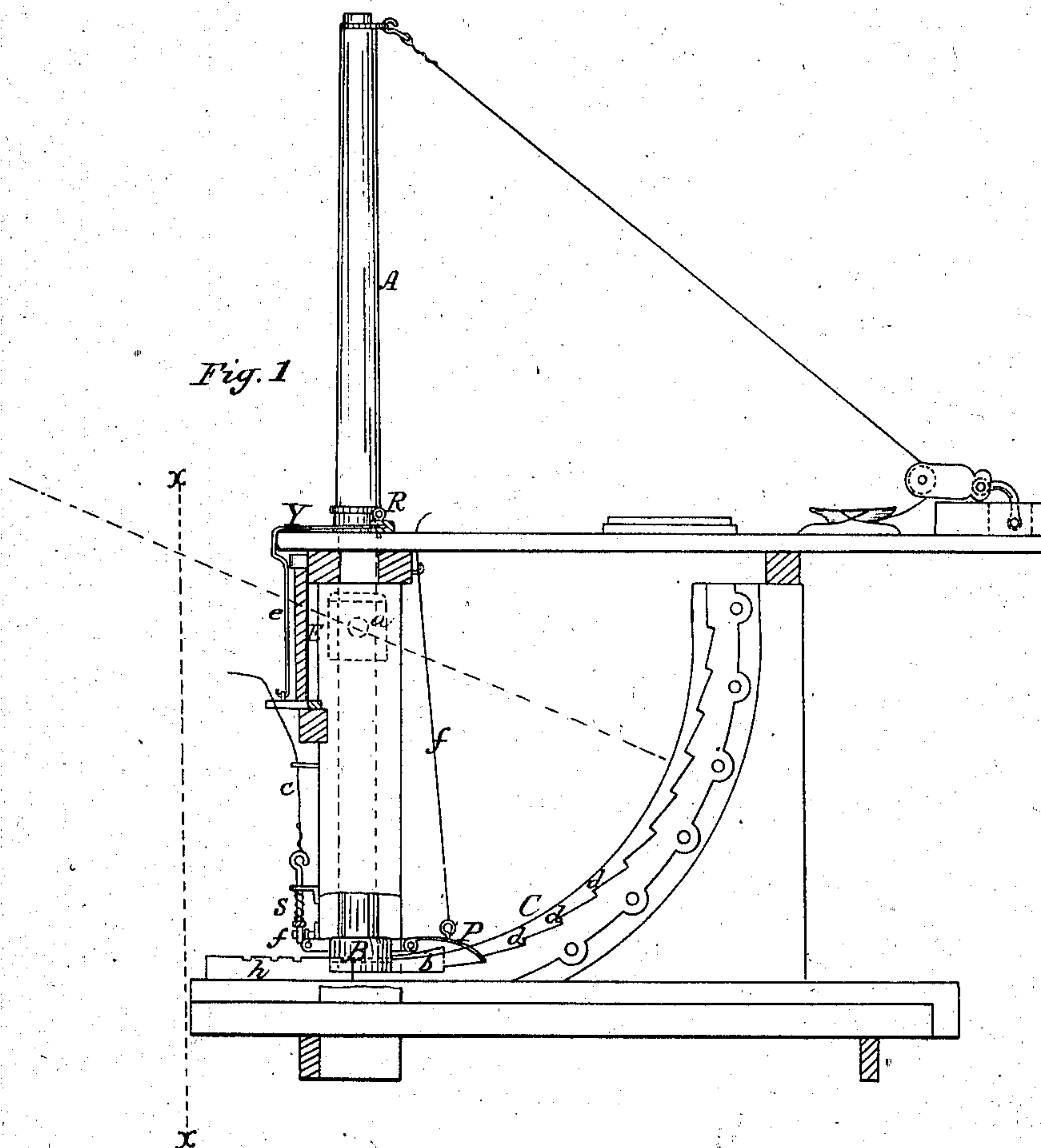


Fig. 2

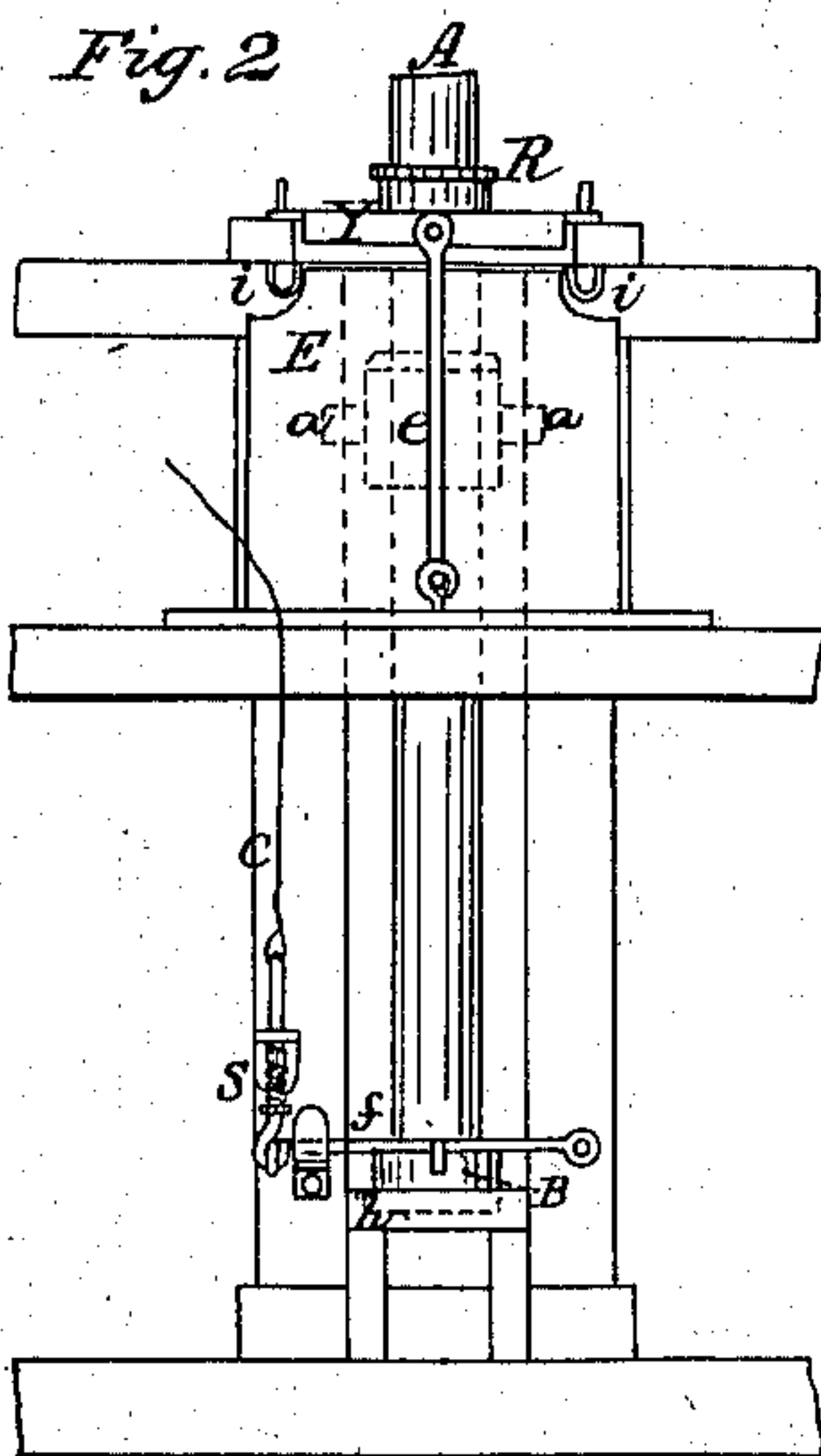
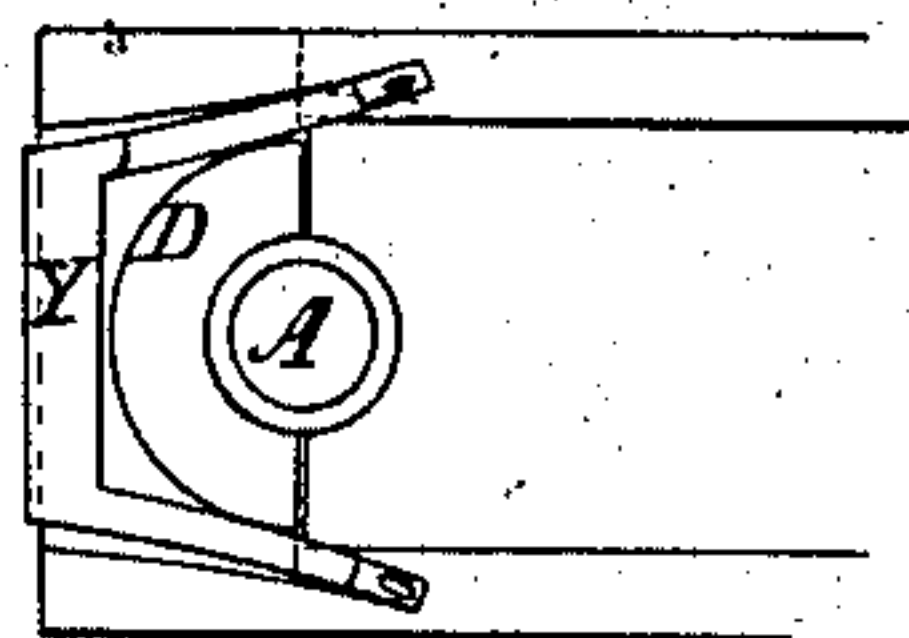


Fig. 3



Witnesses
John H. Shumway
A. J. Tibbits

Inventor
Geo. Dowling
By his Attorney
John E. Earle

UNITED STATES PATENT OFFICE.

GEORGE DOWLING, OF FAIR HAVEN, CONNECTICUT.

IMPROVEMENT IN APPARATUS FOR LOWERING SHIPS' MASTS.

Specification forming part of Letters Patent No. 75,671, dated March 17, 1868.

To all whom it may concern:

Be it known that I, GEORGE DOWLING, of Fair Haven, in the county of New Haven, and State of Connecticut, have invented a new Improvement in Apparatus for Lowering Ships' Masts; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a longitudinal section of a portion of a vessel with my improvement arranged thereon; Fig. 2, a transverse section on line *x x* looking toward the mast; and in Fig. 3 a top view upon the deck, looking down.

The object of this invention is the arrangement of the mast so that it may be tipped to pass under a bridge, and thus avoid the necessity of opening the draw, designed especially for small craft; and

The invention consists in the arrangement of the mast upon a step, the said step being set upon a segmental track, and the mast pivoted in the centre of the circle, of which the segment is a part, so that the said step will traverse up upon the segmental track, carrying with it the foot of the mast, while the upper end tips down upon a pivot above; also, in a mechanism and arrangement of the parts, whereby the mast is made so to tip.

In order to the clear understanding of my invention, I will proceed to fully describe the same as illustrated in the accompanying drawings.

A is the mast, supported upon a step, B, and provided with trunnions at *a*, arranged in proper bearings, so that the said mast will swing fore and aft upon the said trunnions. The step B is fitted upon a segmental track, C, the said track being a portion of a circle described from the centre of the trunnions *a*, the said step constructed so as to traverse freely upon the said segmental track when the mast is tipped; that is to say, when the mast is tipped aft or down, the step, by the movement of the mast, travels up the segmental track, and supports the foot of the mast. Upon the edge of the said segment, or at other convenient point, I form ratchet-teeth, *d*, more or less in number, and to the step, or at other point near the foot of the mast, I arrange a

strong pawl, P, so as to fall in the said notches, and support the mast at any inclination, or at its perpendicular position, as seen in fig. 1. From the pawl a cord, *f*, extends up to any convenient point upon deck, so that the pawl may be operated from above.

For the further security of the mast, when in its upright position, I arrange a latch-bar, *g*, which, when the mast arrives at its upright position, will fall into a notch upon the step or other part near its foot, the said bar serving to support the mast in its upright position. The said latch is operated from above by a cord, *c*, and is forced down by the arrangement of a spring, as seen in fig. 2. At the deck I fit the mast with a metallic ring, R; and aft of the mast I make a portion of the deck, D, so as to be removed, also a portion, E, of the bulk-head, as seen in figs. 2 and 3. When these are removed, the mast is left clear, and can be tipped aft, as denoted in red, fig. 1, passing down through the passage formed by the removal of the parts D and E. To turn the water from the joint formed by these parts, I place scuppers, I, around the joints, as seen in fig. 2, and secure the parts to the deck by means of a strong bar, *e*, and the yoke *y*, as seen in the drawing.

When the vessel is to be employed upon a voyage where there are no bridges to interfere, then I insert a block, *b*, as denoted in red, fig. 1, forward of the mast, and there securely fix it so as to hold the step in its place; and aft of the mast, at its foot, I fix solidly a block, *h*, so that the mast is held as firmly as though fixed in the ordinary manner.

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

1. The arrangement of the mast A upon the trunnions *a* and step B, combined with a segmental track, C, and pawl P, and toothed segment *d*, so as to operate in the manner and for the purpose herein set forth.

2. In combination with the above, I claim the latch *g*, arranged so as to lock the mast in an upright position, in the manner described.

GEORGE DOWLING.

Witnesses:

A. J. TIBBITS,

J. H. SHUMWAY.