

J. N. BITTING, Sr.
Rudder-Post Bearings.

No. 163,726.

Patented May 25, 1875.

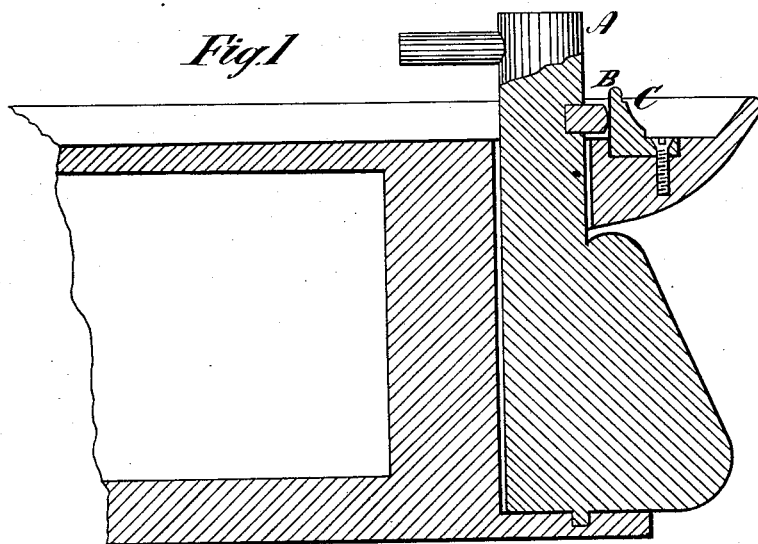


Fig. 2.

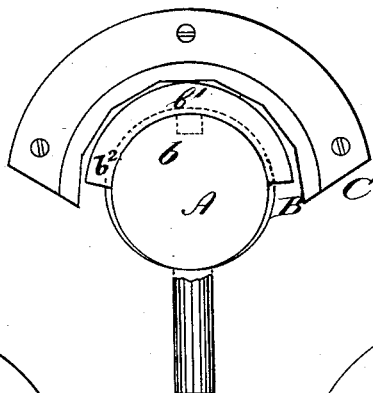


Fig. 3.

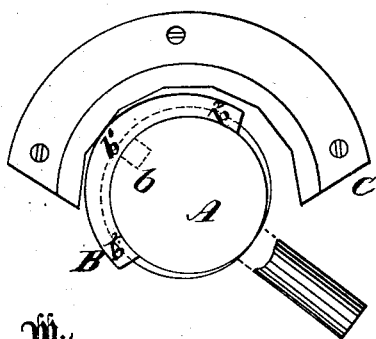
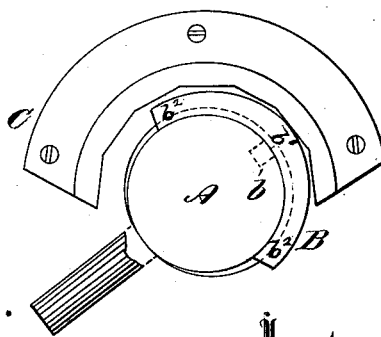


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE

JOSEPH N. BITTING, SR., OF CAMDEN, NEW JERSEY.

IMPROVEMENT IN RUDDER-POST BEARINGS.

Specification forming part of Letters Patent No. **163,726**, dated May 25, 1875; application filed March 26, 1875.

To all whom it may concern:

Be it known that I, JOSEPH N. BITTING, Sr., of Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Anti-Friction Rudder-Bearings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a longitudinal vertical section; Figs. 2, 3, and 4, plan views of the rudder in different positions.

The nature of my invention consists in the peculiar construction of parts, as hereinafter described, having reference particularly to forming the segment eccentric, so as to cause but one point of said segment to impinge on the bearing, and to making the bearing polygonal, so as to reduce the amount of frictional surface between the said segment and bearing.

Referring to the accompanying drawing, A shows a rudder-post; B, a segment secured thereto, having a lug, *b*, which enters the post A; and C, the bearing, secured to the floor of the vessel in the usual or any suitable manner. The segment B is made wider at the middle, *b*¹, than at the end, *b*², thus forming an eccentric and confining the frictional surface of the said segment B to the periphery of its widest or central portion. The inner side of the bearing C, or surface adjacent to the segment B, is made up of a series of straight lines, *c c*, forming a segment of a polygon, the sides of which are tangents to the periphery of the said bearing, and reducing the amount of friction, surface.

By this construction it will be seen that the amount of friction-surface of the bearing is greatly reduced. Were the outer periphery of the segment concentric with the post A, and the inner surface of the bearing merely the segment of a circle, instead of a polygon, the segment B and bearing C would be in contact at all times on every portion of the surface of the latter, as shown in my patent of January 15, 1867; but by making the segment an eccentric the frictional surface thereof is confined to one point, and by making the bearing polygonal the segment impinges on less surface than it otherwise would. The sides *c c*, instead of being straight, may be curved, thus forming a spherical polygon.

The bearing should be made flaring or sloping from the top to the bottom, so that as it wears away the segment will still fit snugly against it, always holding the rudder-post in its vertical position; in other words, taking up all lost motion resulting from wear and tear.

What I claim as my invention is as follows:

1. The bearing B, made eccentric or wider at the middle than at the ends, substantially as shown and described.

2. In combination with a rudder post, A, an eccentric segment, B, and polygonal bearing, C, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of March, 1875.

JOSEPH N. BITTING, SR.

Witnesses:

JNO. A. BELL,
M. DANL. CONNOLLY.