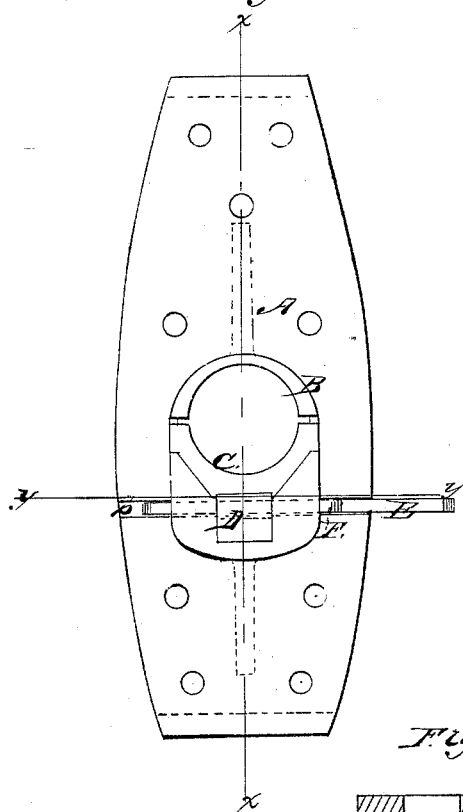


*R. E. Campbell.*  
*Screw Propeller.*

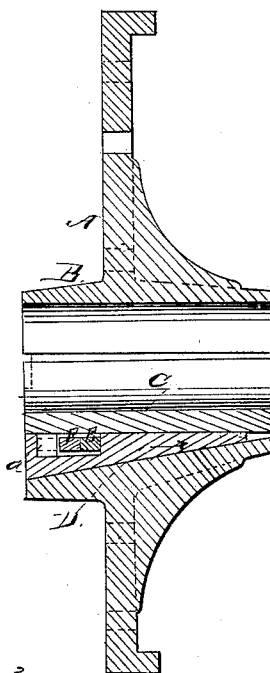
*N<sup>o</sup> 45,473.*

*Patented Dec. 20, 1864.*

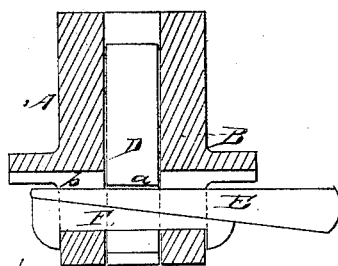
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses.*

*John O. Jamison*  
*W. Hauff*

*Inventor,*  
*R. E. Campbell*

# UNITED STATES PATENT OFFICE.

R. E. CAMPBELL, OF NEW YORK, N. Y.

## IMPROVED STERN-BEARING FOR PROPELLER-SHAFTS.

Specification forming part of Letters Patent No. 45,473, dated December 20, 1864.

*To all whom it may concern :*

Be it known that I, R. E. CAMPBELL, of the city, county, and State of New York, have invented a new and Improved Stern-Bearing for Propeller-Shafts; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a face view of this invention, partly in section. Fig. 2 is a longitudinal vertical section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 3 is a transverse vertical section of the same, taken in the plane indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention consists in the application of a wedge acted upon by a key, in combination with the lower box of a stern-bearing in such a manner that by the action of the key and wedge said box can be readily adjusted as it wears, and when it has completely worn out it can be easily removed and replaced by a new one without disturbing the bracket.

A represents the bracket of the stern-bearing, which is constructed in the ordinary manner, of cast-iron or any other suitable material, and secured to the stern-post by screw-bolts or any other desirable means in the most permanent and durable manner. This bracket is provided with a tubular seat, B, that forms the bearing for the propeller-shaft. The lower part of said seat is lined with a box, C, of brass, composition, or other suitable material, which is so arranged that it can be adjusted up and down. It is supported by a wedge, D, which is fitted into a cavity under the seat B, and the bottom of said cavity may be made to form an inclined plane; or the wedge itself may be so shaped that by forcing the same in the direction of the arrow marked on it in Fig. 1 of the drawings the box C is raised, and

by moving the wedge in the opposite direction the box is lowered. The position of the wedge is governed by a key, E, which passes in a transverse direction through a slot, *b*, in the outer end of the tubular seat B, and through a notch, *a*, in the upper edge of the wedge. The key is wedge-shaped, and it bears with one edge on the shoulder formed at the inner edge of the notch *a*, and its other edge bears on a gib, F, which is fitted into the slot *b*, as clearly shown in Fig. 3 of the drawings. By driving the key E the wedge D is moved in the direction of the arrows marked thereon in Figs. 2 and 3 of the drawings, and the box C closes up. By this arrangement said box can always be adjusted as it wears down, and the bearings of the shaft can easily be kept in line. The strain on the stern-post is thereby greatly reduced, and any waste of power from a useless strain on the shaft is avoided. If the box C has worn out completely, it can easily be removed and replaced by a new one without disturbing the bracket A.

By the use of a stern-bearing constructed according to my invention a great saving is effected in repairs of the bearing and adjoining parts, and also in power requisite to turn the propeller shaft by keeping the bearings of the same always in line.

Instead of adjusting the wedge by the key E, it might be adjusted from the inside of the vessel by a screw or by levers or any other suitable contrivance, and in order to reduce friction it may be supported by friction-rollers.

I claim as new and desire to secure by Letters Patent—

The combination of the box C, wedge D, and one or more keys, E F, arranged and operating as described.

R. E. CAMPBELL.

Witnesses:

JOHN P. JAMISON,  
W. HAUFF.