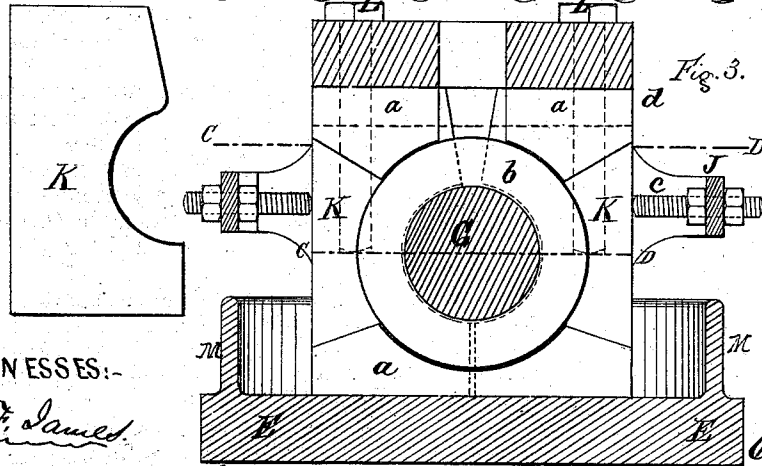
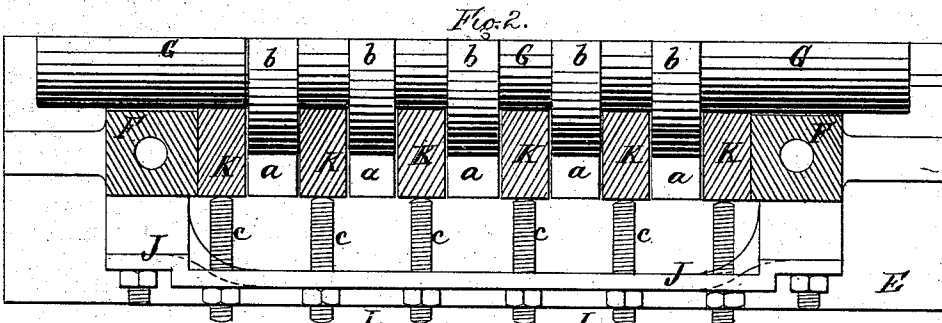
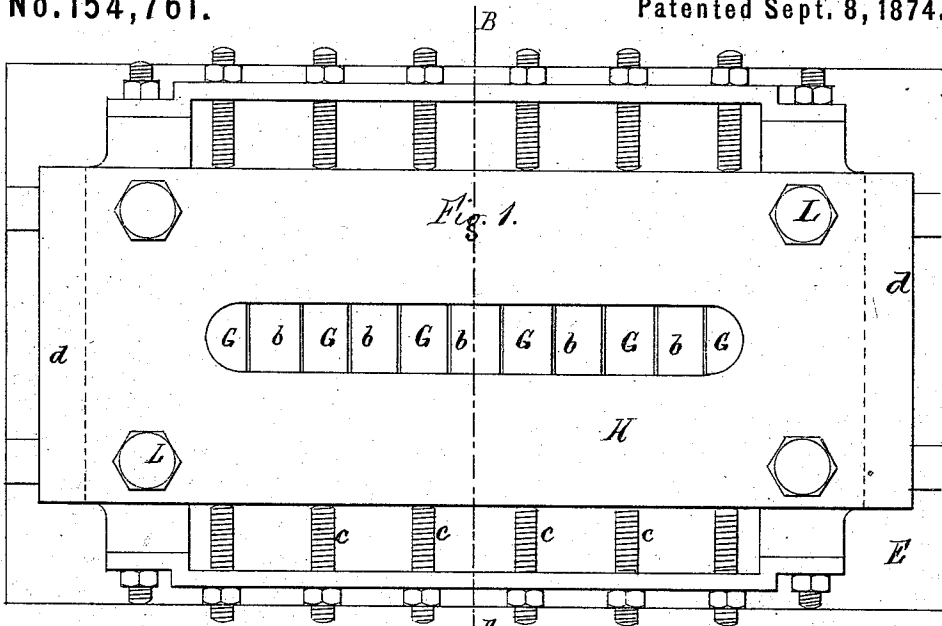


E. MARSLAND.
Thrust-Bearings.

No. 154,761.

Patented Sept. 8, 1874.



WITNESSES:-

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EDWARD MARSLAND, OF SING SING, NEW YORK.

IMPROVEMENT IN THRUST-BEARINGS.

Specification forming part of Letters Patent No. **154,761**, dated September 8, 1874; application filed December 13, 1873.

To all whom it may concern:

Be it known that I, EDWARD MARSLAND, of Sing Sing, in the State of New York, have invented certain new and useful Improvements in Thrust-Bearings for Propeller-Shafts; and hereby declare the following to be a full and clear description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a top view. Fig. 2 is a longitudinal section through the lines C D, showing the shaft in position; and Fig. 3 is a cross-section through the line A R, Fig. 1.

The object of my invention is to provide a thrust-bearing for propeller-shafts, constructed in such a manner that all parts of the shaft and bearing may be easily inspected, and the thrust-plates adjusted or removed at pleasure; and my improvements consist principally in the use of a series of removable and adjustable bearings or thrust-plates combined with an open construction of the entire bearings, and a suitable means of adjusting the thrust-plates, as hereinafter more particularly described.

In the drawing, E is a bed or base plate, upon which is placed, at each end, the pedestals F F, having bearings in which the shaft G rests. Between these pedestals I provide the base-plate E and top plate H, with projections *a a* corresponding in number and position with the collars *b b* on the shaft. About half-way up the pedestals F I place the carrier-bars J, which are secured in any convenient manner to the side of the pedestals, and carry the adjusting-screws *c c*, one of such screws being placed directly opposite each of the sections or bearing-plates K. These thrust-plates K K are made to fit the shaft between the collars, and may be of steel, iron, brass, anti-friction metal, or combinations of such materials as may be found best suited to the purpose. The top plate or cap H is fastened in place by the screws L, which pass down through the pedestals, and also is provided with a gib or lip, *d*, at each end, which slips over the top of the pedestals in order to take the thrust of the shaft. I also make the top plate with a longitudinal slot, as shown in the drawing, Fig. 1, so that a view is afforded of the thrust-plates and collars. On the base-plate, and running from one to the other of

the pedestals, on each side, I place the strips M M, which collect the oil dropping from the shaft and bearings. The shaft G being placed in position, and resting upon its bearings in the pedestals F F, the sections or thrust-plates K K are fitted in between the collars *b b*, and held from any longitudinal movement by the projections *a a* on the base and top plate, while they are regulated and adjusted laterally by the set-screws *c c*. Instead of having the projections *a a* cast on the base and top plates, these intervening projections may be cast on, or made a part of, the sections or thrust-plates K K, although I prefer to have them made on the base and cap, as shown in the drawing.

It will be perceived from the foregoing description that the bearing-surface is greatly increased, as the whole face of the thrust-collars on the shaft bear against the thrust-plates, while the entire bearing is under the inspection and control of the engineer or person in charge, and any defect from hot collars is obviated or easily overcome, as the thrust-plates or sections may be adjusted at pleasure, or entirely removed horizontally for the purpose of cleaning, and may be replaced by new ones in case they become in any manner defective.

I claim—

1. A thrust-bearing, having detachable and adjustable thrust-plates or sections, substantially as shown and described.

2. A thrust-bearing, having a bottom plate, E, and cap H, with projections *a a* thereon, in combination with adjustable thrust-plates or sections K K, substantially as shown and described.

3. A thrust-bearing, having detachable and adjustable thrust-plates K K, in combination with set-screws *c c*, held by carrier-bars J J, substantially as and for the purpose shown and described.

4. A thrust-bearing, substantially as shown and described, having adjustable thrust-plates, in combination with a base-plate, E, and a cap or top plate, H, provided with lips or gibs *d*, which take against the pedestals F, for the purposes shown and described.

EDWD. MARSLAND.

Witnesses:

L. H. BOOLE,
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