(No Model.)

S. N. SMITH.

THRUST BLOCK.

No. 388,227. Patented Aug. 21, 1888.

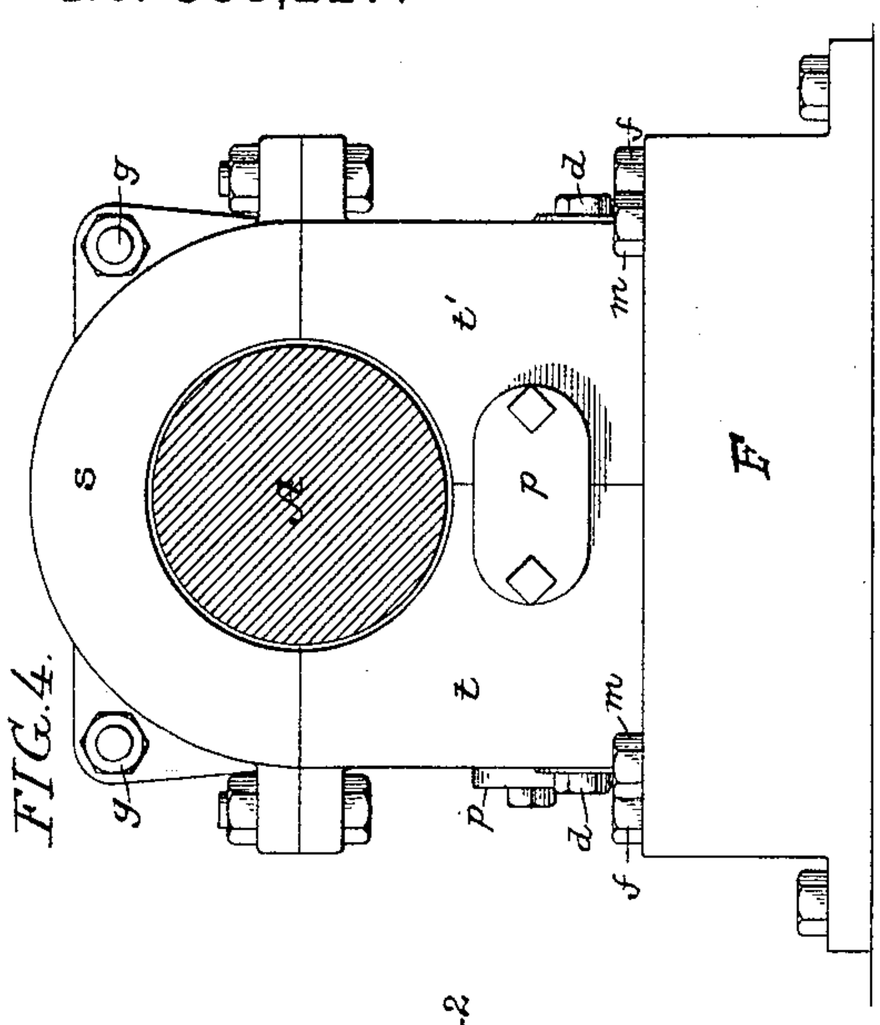

FIG. 4.

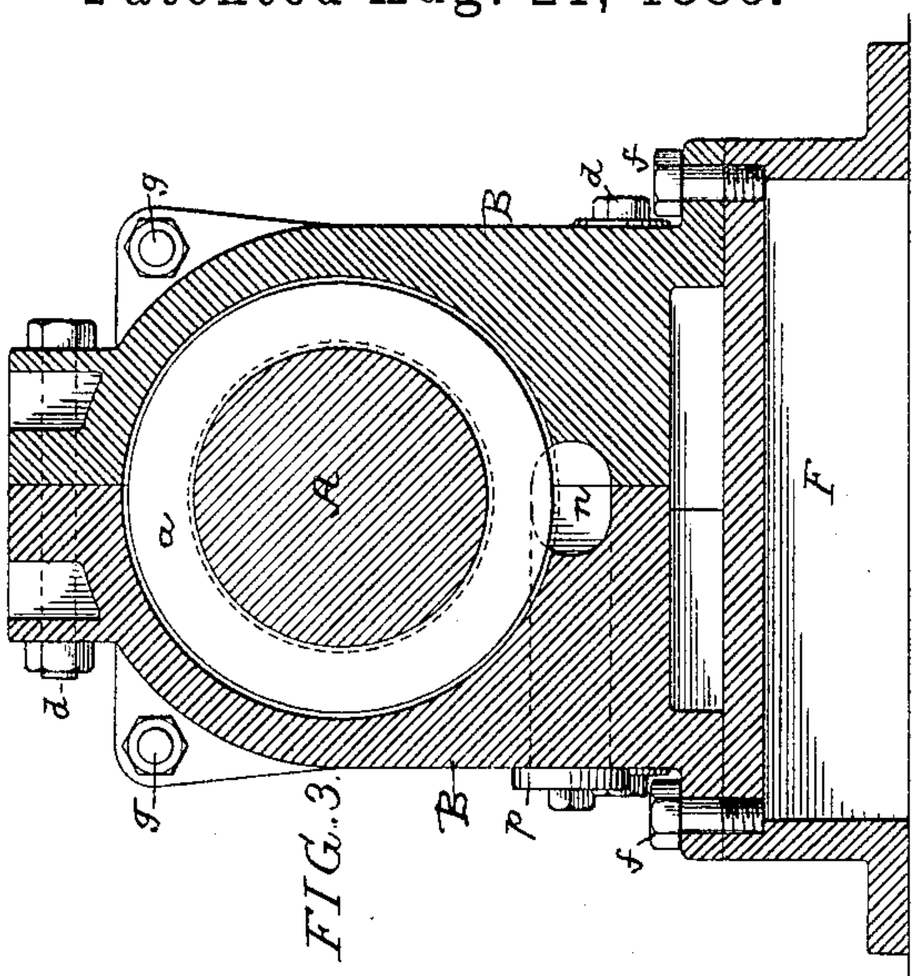

FIG. 3.

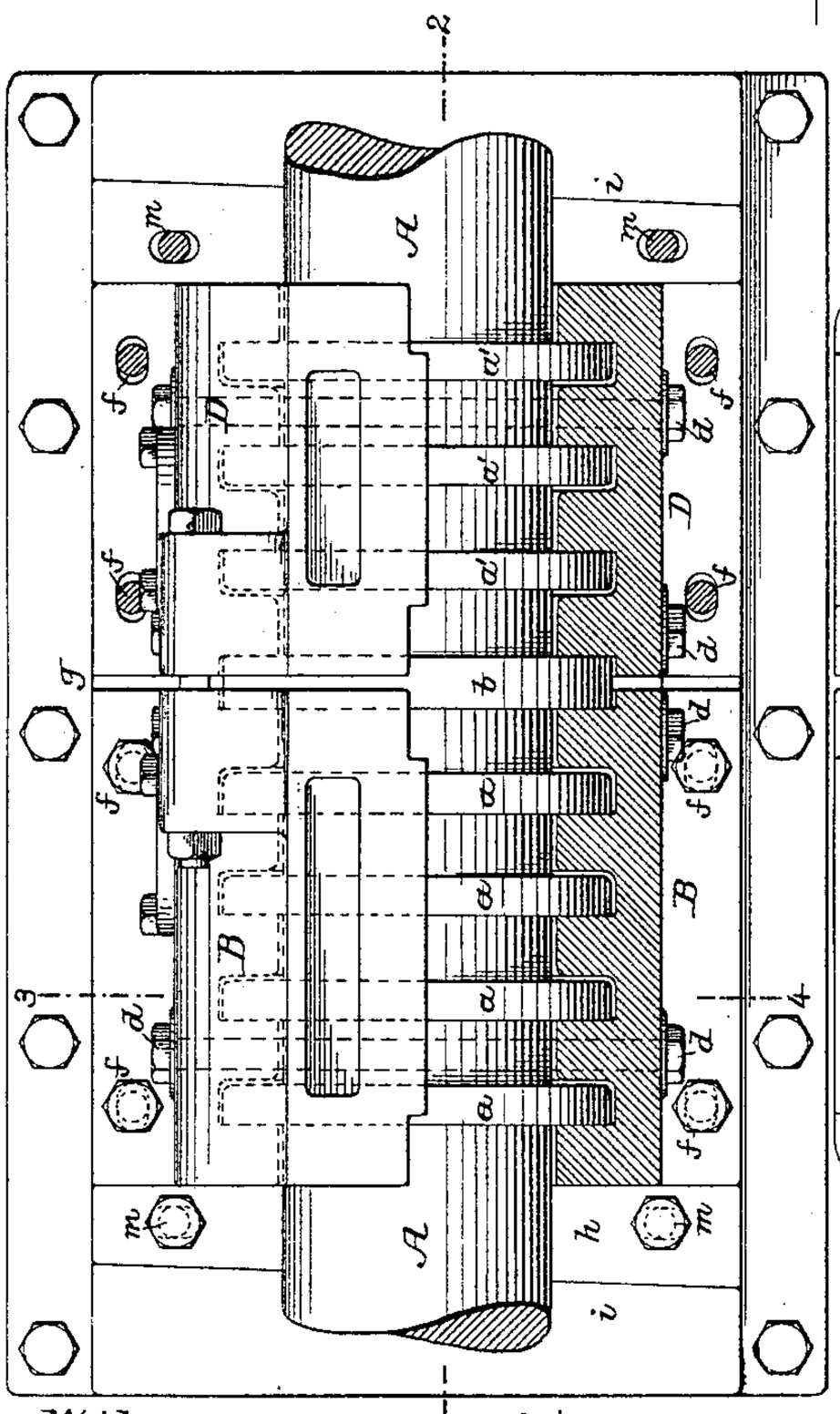

FIG. 1.

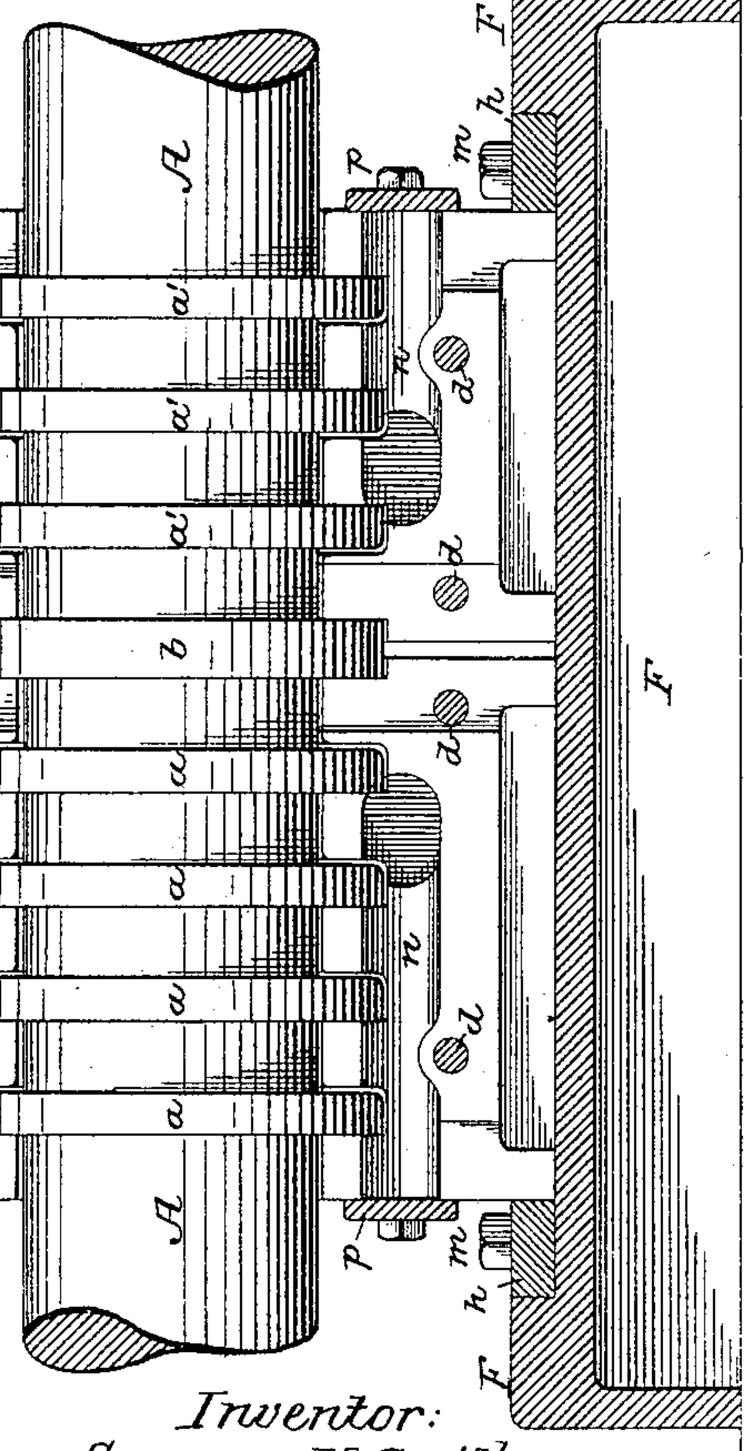

FIG. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

SOMMERS N. SMITH, OF PHILADELPHIA, PENNSYLVANIA.

THRUST-BLOCK.

SPECIFICATION forming part of Letters Patent No. 388,227, dated August 21, 1888.

Application filed May 18, 1888. Serial No. 274,238. (No model.)

To all whom it may concern:

Be it known that I, SOMMERS N. SMITH, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Thrust-Blocks for Propeller-Shafts, of which the following is a specification.

The object of my invention is to so construct a thrust-block for propeller-shafts as to permit ready access to that portion of the shaft within the block and to the interior of the block itself without removing the shaft from its bearings. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a part of the propeller-shaft and thrust-blocks therefor, part of the blocks being shown in section. Fig. 2 is a longitudinal section on the line 1 2, Fig. 1. Fig. 3 is a transverse section on the line 3 4, Fig. 1, with both halves of the thrust-block in position; and Fig. 4 is an end view illustrating a modified form of my improved thrust-block.

A represents part of the propeller-shaft, having the usual flanges or collars, *a a'*, which are adapted to annular grooves or recesses formed in the two thrust-blocks B and D, the collars *a* having their bearing in the block B and tending to resist forward thrust, while the collars *a'* have their bearing in the block D and tend to resist rearward thrust. There is also an intermediate collar, *b*, which has a bearing in both blocks; but this construction of the collars and of the thrust-blocks is common and forms no part of my invention. In carrying out my invention, however, each of the thrust-blocks is made in two parts, the block being divided longitudinally in a vertical plane passing through the center of the shaft, so that either or both halves of the block can be removed laterally to permit access to the collared portion of the shaft, or to the interior of either half of the block, thus overcoming a serious objection to ordinary thrust-blocks, which are divided horizontally, like an ordinary bearing, so that the removal of the lower portion of the block cannot be effected without disconnecting that section of the shaft which forms the thrust-bearing and lifting the same from the lower half of the block, an operation which is very often exceedingly difficult of performance in the contracted space afforded by the usual shaft-alley. When applied to the shaft, the opposite halves of my improved thrust-block are secured together by bolts *d*, and are secured to the base-frame or pedestal F by means of bolts *f*, the two blocks being secured together by bolts *g*, and the entire structure being secured in longitudinal position on the pedestal by means of wedges *h*, interposed between the ends of the blocks and inclined shoulders *i* on said pedestal, locking-bolts *m* serving to secure the wedges in position after adjustment.

To further insure the proper longitudinal relation to each other of the two halves of each thrust-block, the joints formed between said halves are rabbeted, as shown in Fig. 1. In the lower portion of each block is formed an oil-chamber, *n*, closed at its ends by means of suitable caps, *d;* but this oil-chamber forms no part of my invention, and I lay no claim thereto.

In carrying out my invention each block may, if desired, be made in three parts, as shown, for instance, in Fig. 4, the block in this case consisting of the upper semicircular portion or cap, *s*, and the lower portions, *t t'*, these latter portions comprising all that portion of the block below the horizontal center of the shaft, and being divided longitudinally in a vertical plane passing through the center of the shaft, as shown, so that the block may be freed from the shaft by first removing the cap *s* vertically, and then laterally removing the sections *t t'* of that portion of the block beneath the shaft.

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

1. A thrust-block for propeller-shafts, recessed to receive the collars or flanges of the shaft, and having that portion below the horizontal center of the shaft made in parts divided

longitudinally in a vertical plane, so that they can be removed transversely without disturbing the shaft, all substantially as specified.

2. A thrust-block for propeller-shafts, grooved for the reception of the collars or flanges of the shaft, and made in parts divided longitudinally in a vertical plane, so that each part can be removed transversely without disturbing the shaft, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SOMMERS N. SMITH.

Witnesses:
EDWARD M. RILEY,
HARRY SMITH.