

No. 717,127.

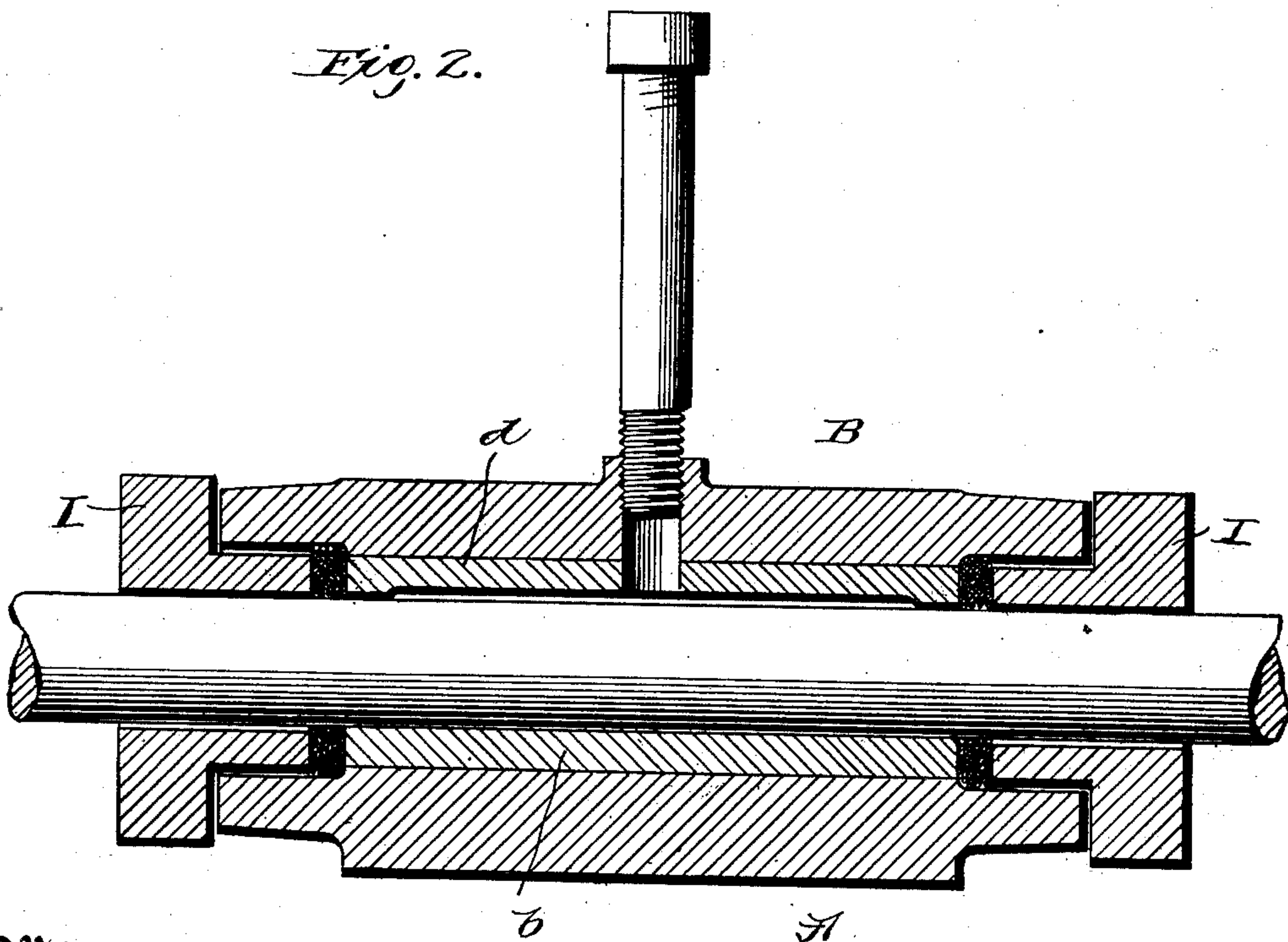
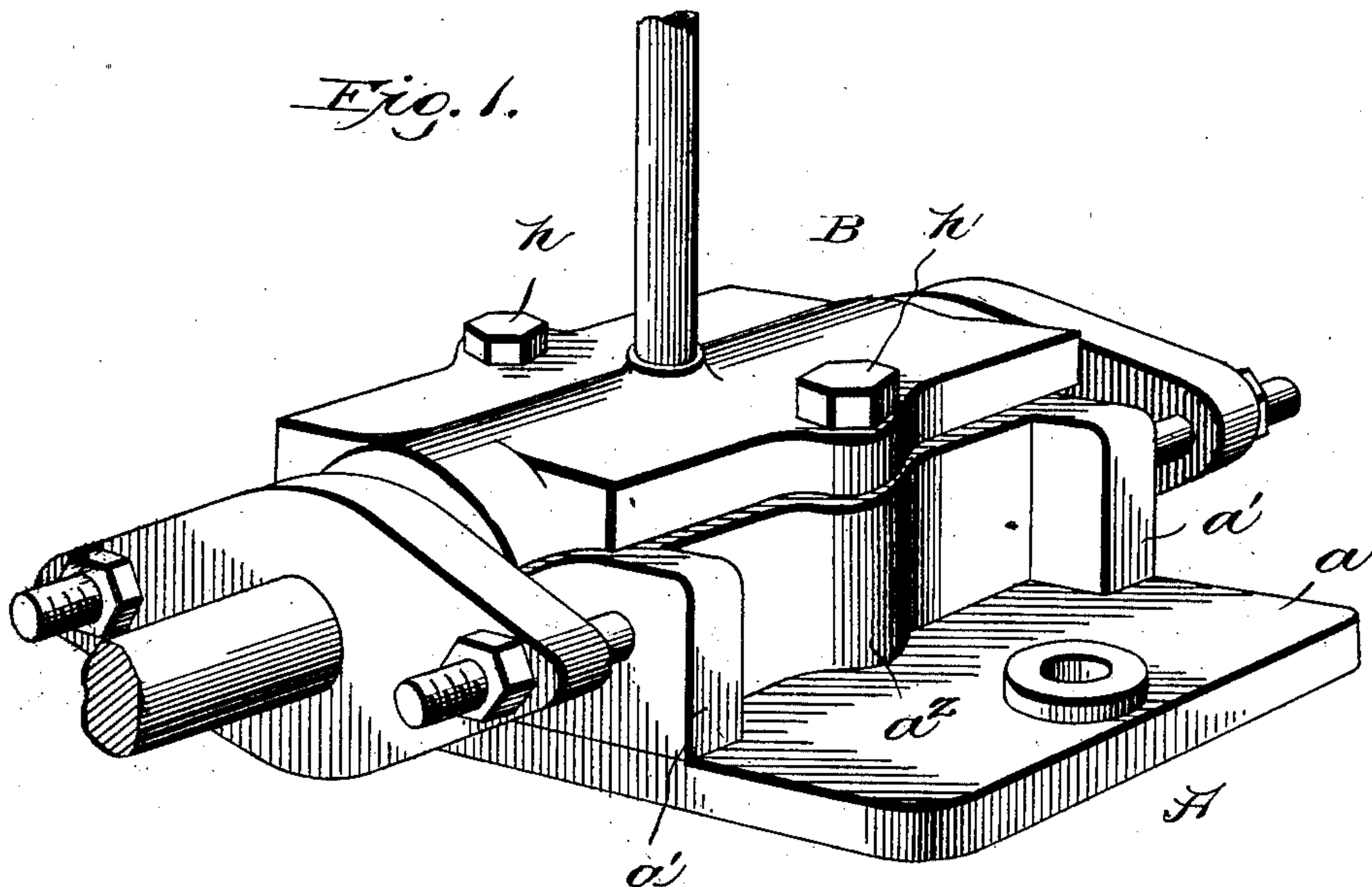
Patented Dec. 30, 1902.

F. W. SHERMAN.
JOURNAL BOX.

(Application filed Feb. 7, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

J. H. Norton
E. H. Smith

Inventor

Frederic W. Sherman

by

L. D. Gane & Son

Attorneys

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2 Sheets—Sheet 2.

Fig. 3.

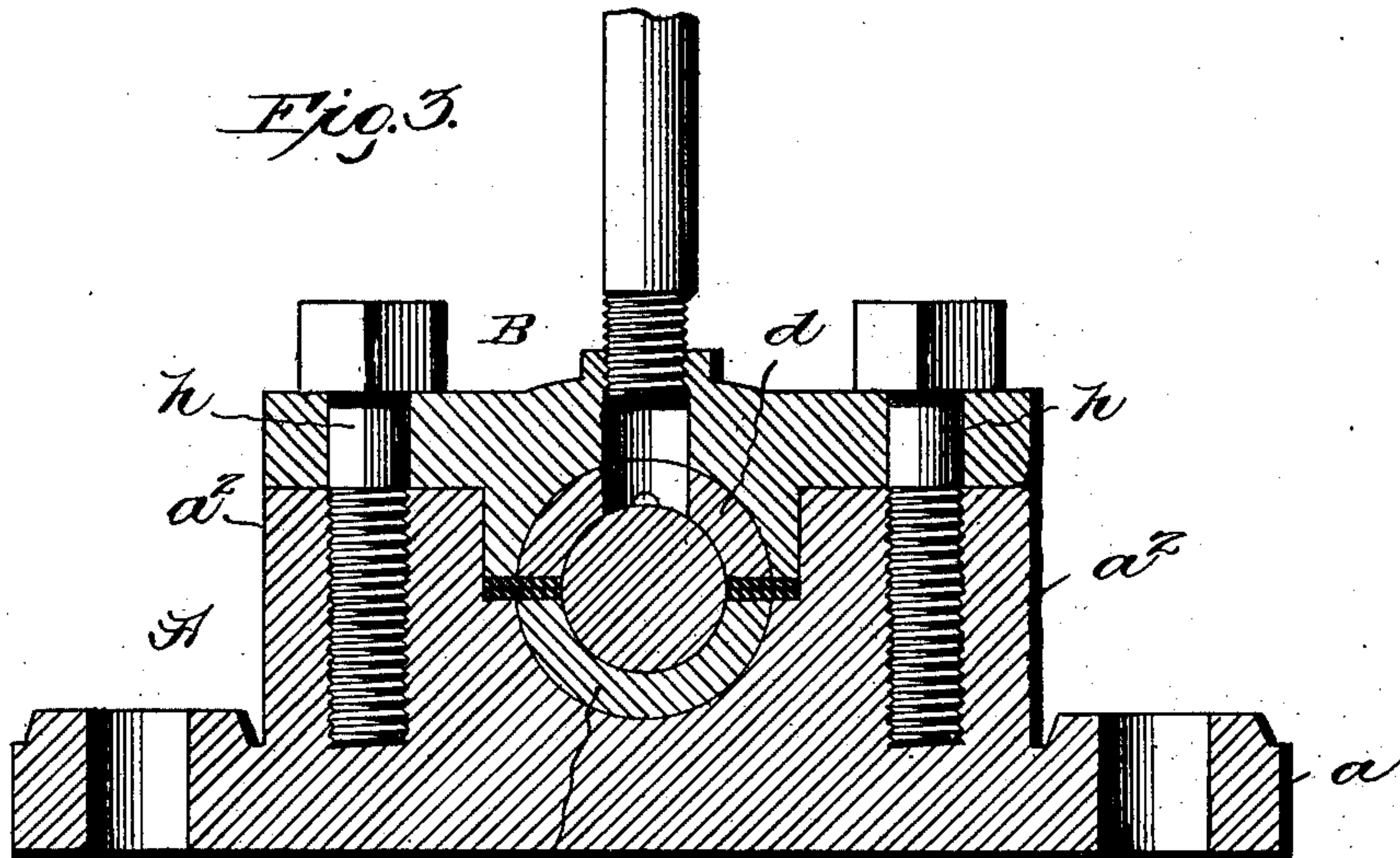


Fig. 4.

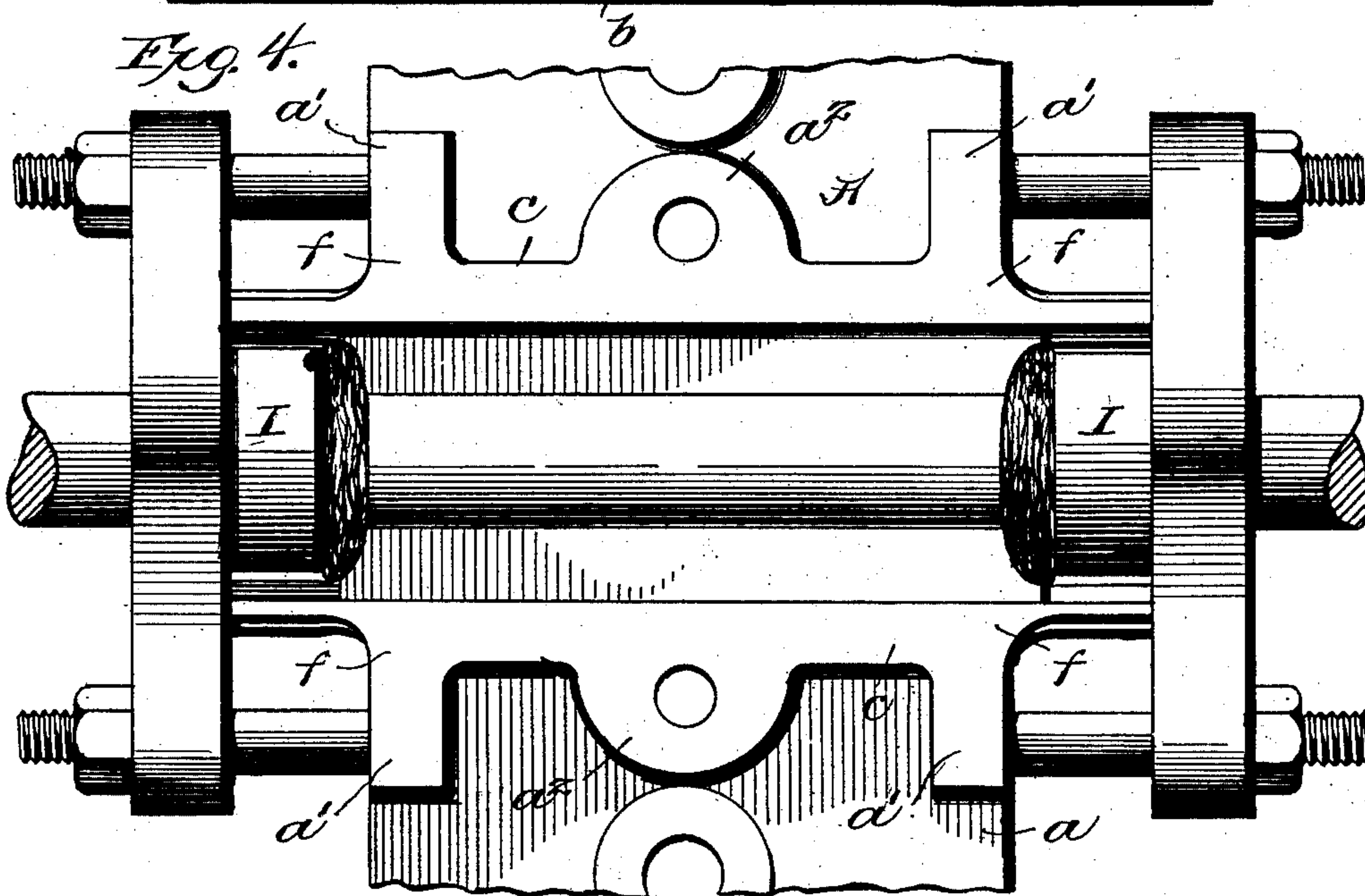
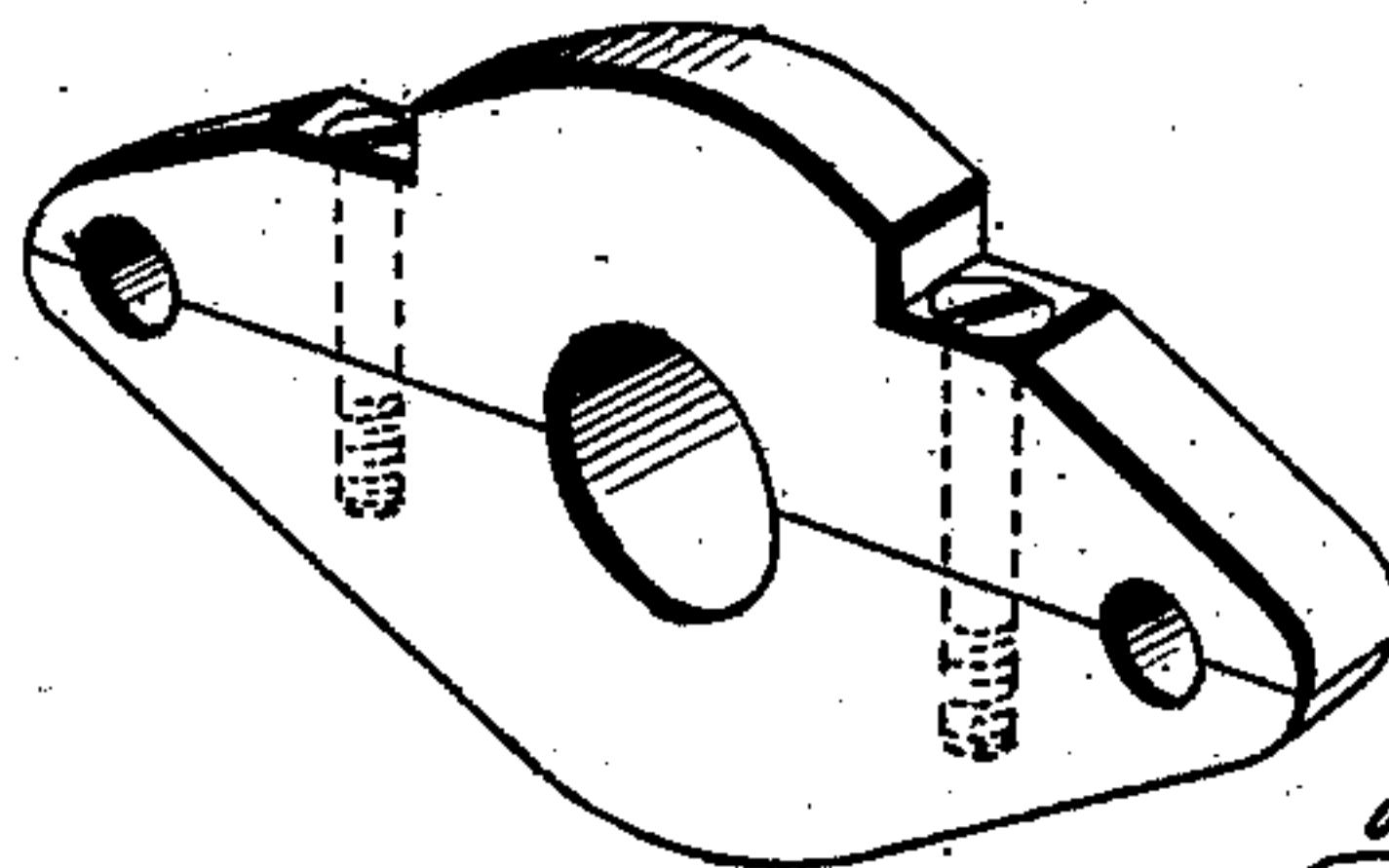


Fig. 5.



Witnesses
T. L. Mockabee
W. B. Ferguson

Inventor
Frederic W. Sherman
by N. Deane & Son
Attorneys

UNITED STATES PATENT OFFICE.

FREDERIC W. SHERMAN, OF PARK CITY, UTAH.

JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 717,127, dated December 30, 1902.

Application filed February 7, 1902. Serial No. 92,977. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC W. SHERMAN, a citizen of the United States, residing at Park City, in the county of Summit and State of Utah, have invented certain new and useful Improvements in Journal-Boxes, of which the following is a specification.

My invention relates to journal-bearings; and the object thereof is to provide a bearing-box of simple construction, great durability, and one which will be economical in the use of oil and practically dirt and dust proof.

To this end the invention includes a bearing-box comprising a shell having a cylindrical bore the major portion of which is provided with a lining of Babbitt metal and end glands having neck portions fitted to the unlined parts of the box, these glands being adjustable to a position to provide compartments within the shell between the ends of the glands and the lining, in which a suitable packing may be placed.

The invention also includes other details of construction, as will appear from the following description and which will be more particularly pointed out in the claim.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the complete bearing-box. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse sectional view, and Fig. 4 is a plan view, of one section of the box. Fig. 5 is an end view of a modified form of gland.

In the embodiment of the invention illustrated in the accompanying drawings and to be herein described in detail, the shell of the box is formed in two sections, a lower or base section A and a top or cap section B. The former section is made integral with a base-plate a , and it is provided on its exterior, near each end thereof, with integral wings a' and with central integral bosses or lugs a^2 . This section is provided with a central bore, semi-cylindrical in shape, the major portion of which is lined with Babbitt metal, as indicated by the letter b . The sides of the shell extend above the surface of the lining and provide flanges c , which coact with the cap-section, as will be hereinafter described.

The bore of the shell is considerably larger than the shaft for which the box is to provide a bearing; but the bore of the lining is substantially the same diameter as said shaft. As the lining terminates a distance from each end of the shaft, it leaves a recess at each end of a larger diameter than the diameter of the shaft for which the box is provided. The cap-section of the shell is provided with a similar lining d to that indicated by the letter b , and the ends of the cap-section are provided with similar recesses to those at the ends of the base-section. This cap is provided with wings, which are intended to rest upon the upper surfaces of the lower section, and it is further provided with centrally-arranged lugs corresponding to the bosses a^2 . When the cap is placed in position, the sides thereof are inserted between the flanges c , and the ends of the sides rest upon shoulders f on the lower section, while the longitudinal walls or sections of the lining in the cap and base sections are made to abut each other, with interposed "liners" comprising one or more strips of rubber packing. These liners are provided so that when the Babbitt wears one or more of the strips may be taken out to prevent any play of the shafting in the journal-box, for, as is well-known, if a shaft is permitted to have much play it will soon pound the Babbitt metal out. The bosses a^2 on the lower section are provided with threaded sockets designed to receive the bolts h , which pass through openings in the lugs on the cap-section and are threaded in said sockets. These bolts serve to secure the cap firmly against the base-section. When the cap is in place, the recesses at each end thereof, in conjunction with the recesses at each end of the base-sections, form at each end of the box complete cylindrical compartments designed to receive the necks of the glands l . The bore of the gland is of such diameter relative to the shaft that passes through it as to permit of the wearing away of at least three thirty-seconds of an inch of the Babbitt metal without permitting the shaft to bear upon the inner periphery of the glands. In the normal position of the glands when fitted in the box the ends of the necks are removed such a distance from the end of

the lining as to provide a compartment at each end of the box, which is intended to receive a suitable packing, such as candle-wick, which is applied by wrapping the wick about the shaft which finds a bearing in the box. 5 As will be noted, the packing overlies for quite a distance the spaces between the lining and the shaft at the ends of the former, so that it is practically impossible for dust or 10 dirt to pass into the ends of the box and between the shaft and lining of Babbitt metal or for oil to escape from the box except in very small quantities and very slowly.

To provide means for lubricating the bearing, an opening is provided in the cap-section 15 of the shell, which extends through the lining in said section and is provided with distributing-ducts formed in said lining. In this oil-opening a section of pipe is threaded, which 20 provides a reservoir to receive oil and supply the same to the box, and the upper end of said pipe is closed by a suitable cap threaded thereon.

Instead of making the glands of one piece 25 or of a single casting I may make them in two sections, so that they may be fitted to shafting intermediate of the ends of the latter,

these sections being preferably held together by suitable bolts.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is— 30

A journal-box comprising a shell having a bore extending entirely through the same of much greater diameter than the shaft to be 35 journaled therein, a lining of soft metal fitted to said bore, said lining terminating a distance within the ends of the shell and being provided with a bore substantially the diameter of the shaft to be journaled whereby an annular shoulder or flange is provided within 40 each end of the shell to form the rear wall of a packing-chamber, and a gland fitted to each end of said shell, the space between said shoulders and the glands being designed for 45 the reception of packing, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERIC W. SHERMAN.

Witnesses:

PETER MARTIN,
JAMES DON.