

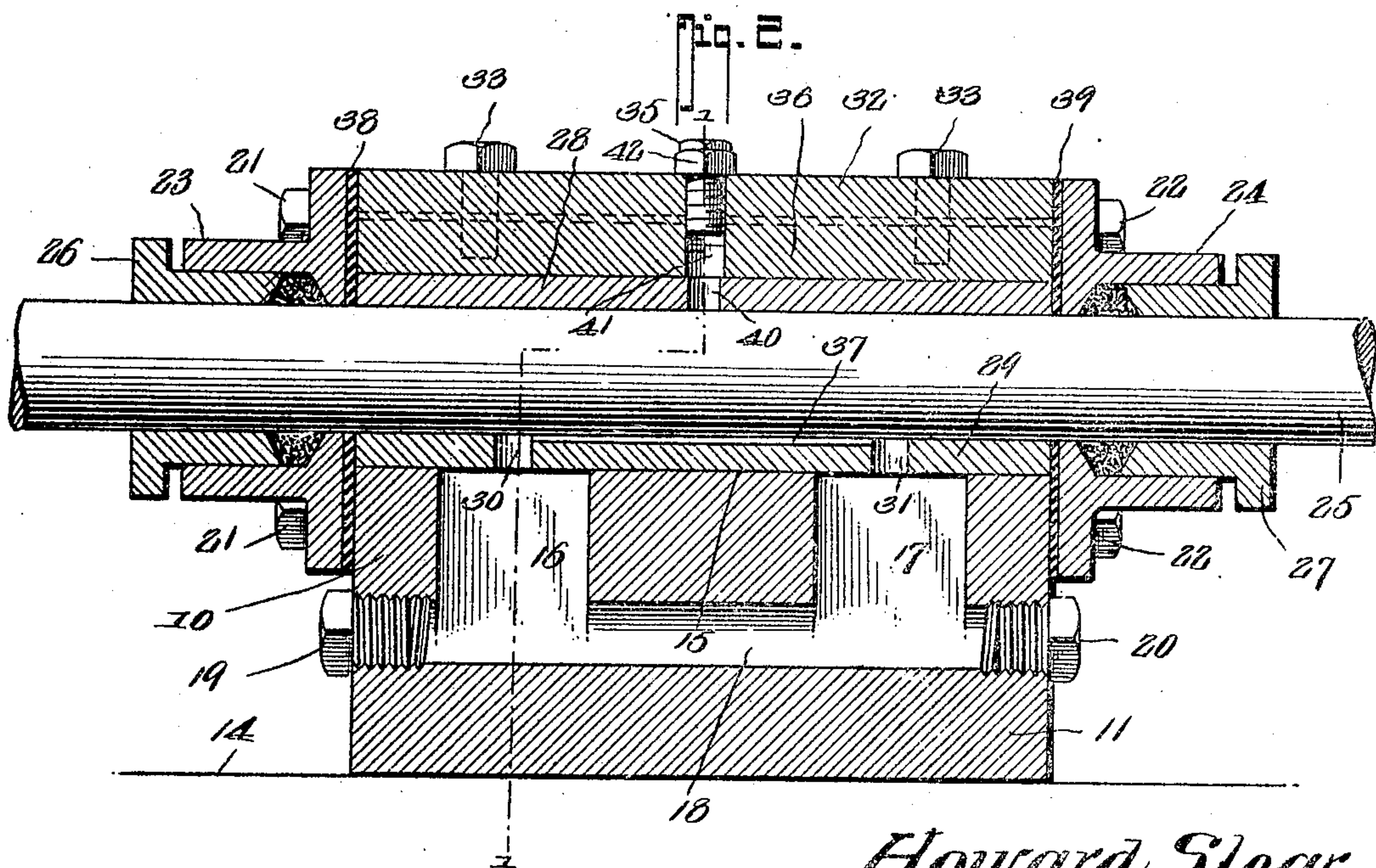
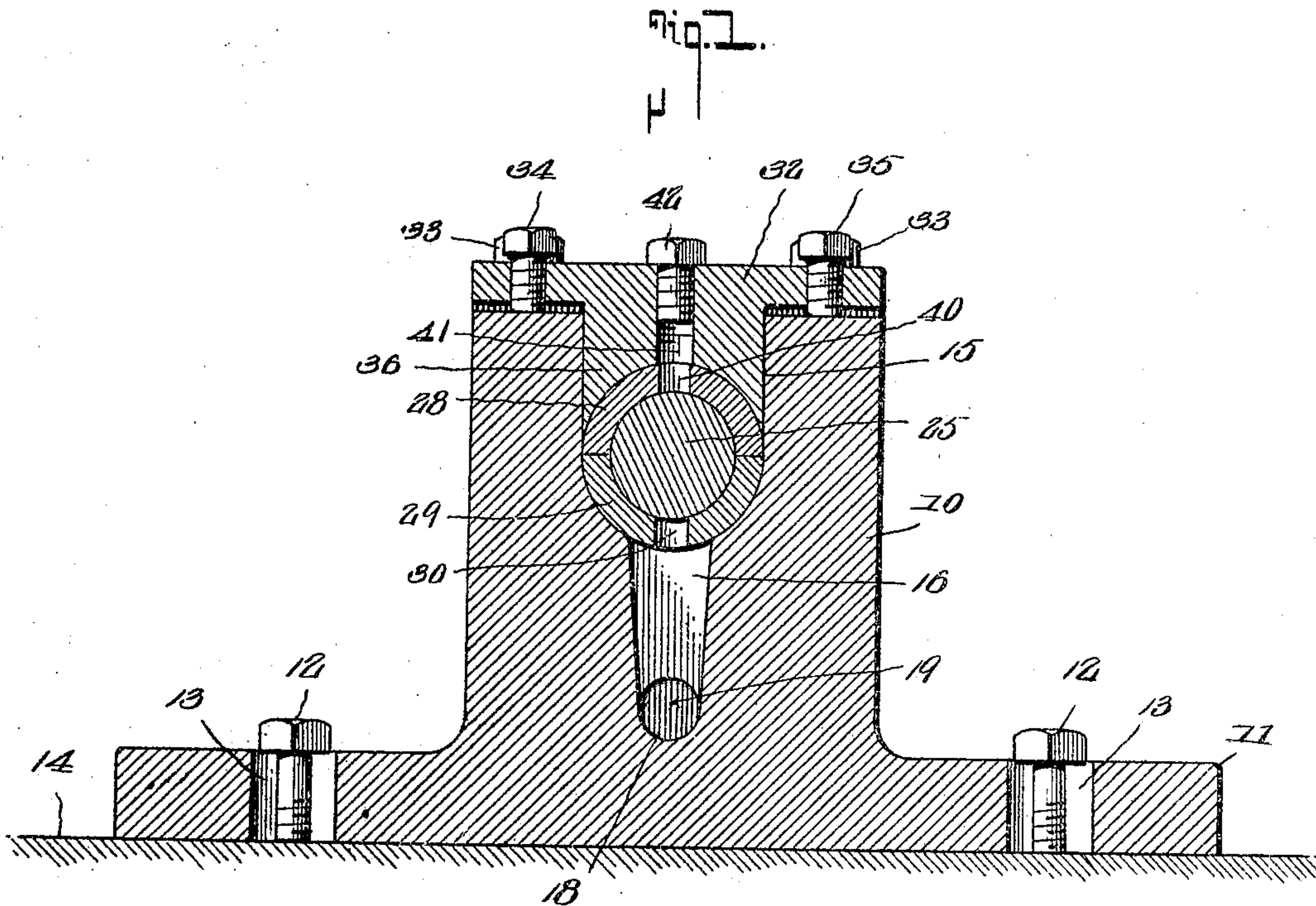
No. 798,536.

PATENTED AUG. 29, 1905.

H. SLEAR.
PILLOW BLOCK.

APPLICATION FILED OCT. 20, 1904.

2 SHEETS--SHEET 1.



Witnesses

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Howard Slear,
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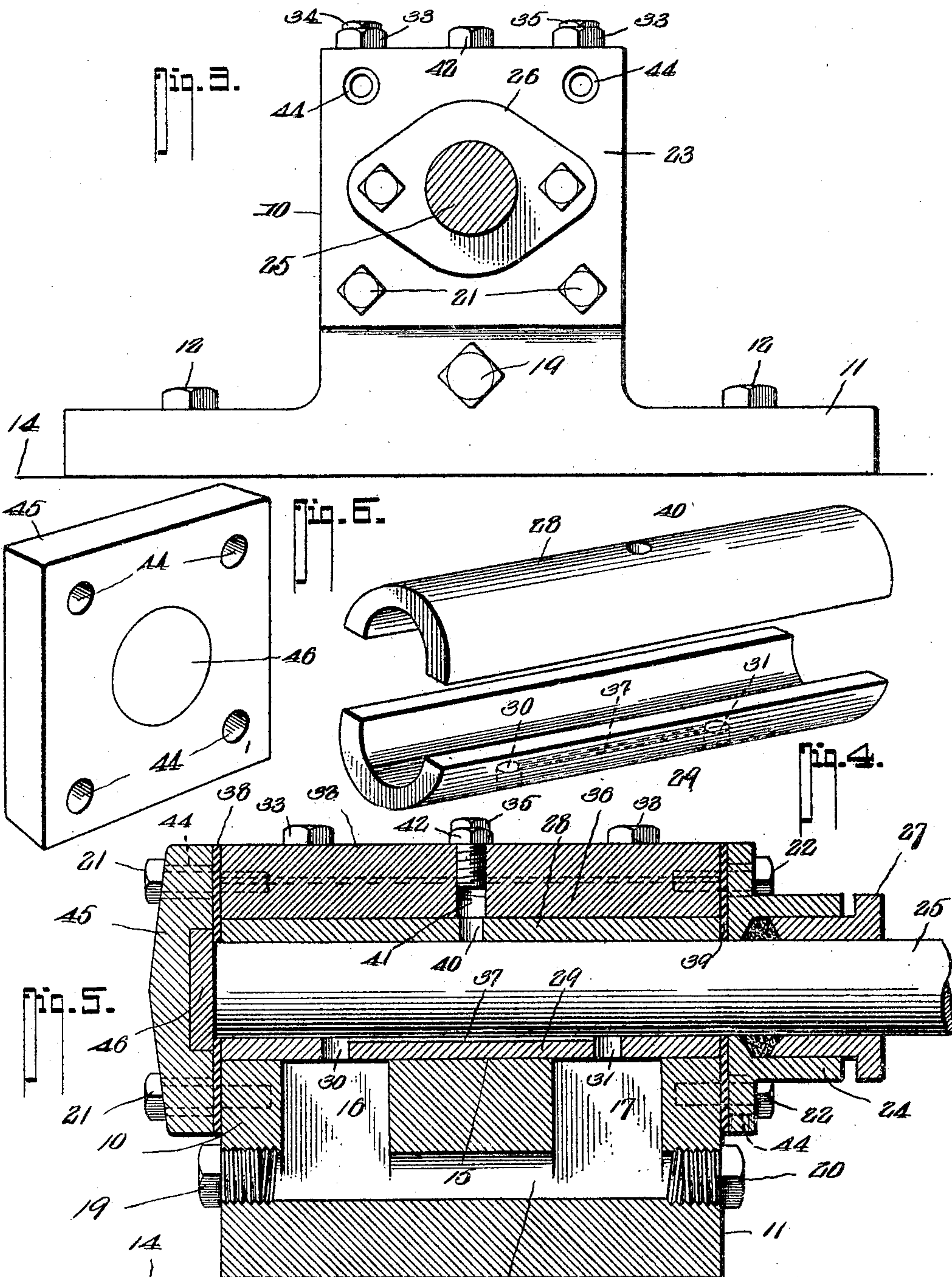
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Witnesses
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UNITED STATES PATENT OFFICE.

HOWARD SLEAR, OF GRANGEVILLE, IDAHO.

PILLOW-BLOCK.

No. 798,536.

Specification of Letters Patent.

Patented Aug. 29, 1905.

Application filed October 20, 1904. Serial No. 229,283.

To all whom it may concern:

Be it known that I, HOWARD SLEAR, a citizen of the United States, residing at Grangeville, in the county of Idaho and State of Idaho, have invented a new and useful Pillow-Block, of which the following is a specification.

This invention relates to bearings for shafts, more particularly to the class known as "pillow-blocks," and has for its object to improve the construction and increase the efficiency and durability of devices of this character.

Another object of the invention is to produce a device of this character wherein the bearing for the shaft is supported constantly in a reservoir of lubricating material or compound.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportion, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

In the drawings thus employed, Figure 1 is a transverse section on the line 1 1 of Fig. 2. Fig. 2 is a longitudinal section. Fig. 3 is an end elevation of the improved device. Fig. 4 is a perspective view of the bushing members detached. Fig. 5 is a view similar to Fig. 2, illustrating the modification required to adapt the device for supporting the end of a shaft. Fig. 6 is a perspective view of the step-plate employed when the modified structure shown in Fig. 5 is used.

The improved device comprises a casing 10, supported upon a suitable base 11, which is in turn provided with means, such as clamp-bolts 12, operating through slots 13 in the base member for attachment to the foundation, (represented at 14.)

The casing 10 is formed with a longitudinal recess 15, open at the ends and communicating with lubricant-holding pockets 16 17, the latter being spaced apart and connected at the bottom by a drainage-conduit 18, supplied at the ends with closing-plugs 19 20. Attached,

as by clamp-bolts 21 22, to the ends of the casing 10 are plates 23 24, forming closures to the ends of the recess 15, said plates being provided with central apertures to receive the shaft 25 and also provided externally with packing-glands 26 27 to prevent leakage around the shaft. Suitable packing means will also be inserted, as at 38 39, between the plates 23 24 and the casing 10. Surrounding the shaft within the recess 15 and resting upon the bottom of the same is a bushing member, preferably in two parts 28 29, the lower section 29 being provided with apertures 30 31, communicating, respectively, with the lubricant-pockets 16 17 and connected by a longitudinal chamber 37.

A cap member 32 is provided for the casing 10, the former being secured thereto, as by clamp-screws 33, and also adjustable vertically relative to the casing, as by set-screws 34 35. The cap member is provided with a central longitudinal concaved rib 36 for bearing upon the upper bushing member 28.

The bushing members 28 29 may be of any suitable material—such as Babbitt metal, brass, bronze, phosphor-bronze, or the like—and when worn or broken can be readily replaced at small expense.

The apertures in the plates 23 24 for the securing-bolts 21 22 are larger than the bolts as represented at 44 in Fig. 3, wherein two of the holding-bolts are wanting to enable the plates to be adjusted to aline the shaft 25 relative to the bushings and to compensate for the wear of the same. Thus the shaft may be retained in perfect alinement at all times.

In installing the improved bearing the lower bushing member 29 and the packing members 26 27 are placed in position and the shaft 25 thrust through the end plates and their packing members and the end plates adjusted to properly aline the shaft relative to the bushing member. The recess 15, pockets 16 17, and sediment-channel 18 are then charged with the lubricant, which is poured in from above and flows around the shaft and through the ducts 37 30 31 and allowed to run until it overflows the shaft. The upper bushing member is then inserted above the shaft and the cap member 32 attached and adjusted. Thus it is obvious the shaft rotates constantly in a reservoir of the lubricant and requires no further attention so long as the supply of lubricant remains in the reservoir. It will also be obvious that the lubricant cannot escape because of the packing members 26, 27, 38, and 39.

An aperture 40 is formed through the upper bushing member 28 in alinement with a similar aperture 41 in the cap member 32, internally threaded and supplied with a screw-plug 42 when not in use. By this means an ordinary oil-cup may be attached to provide means for lubricating the shaft if for any reason it should be necessary to drain the oil from the reservoirs while the shaft is running.

10 In this device the sediment which from any cause gathers in the lubricant material settles in the channel 18 and may be readily removed, together with the material in the pockets and recess, by detaching one or both of the closure-
15 plugs 19 20, and while this is being accomplished the oil-cup may be utilized to lubricate the shaft. After the sediment-charged lubricant is removed the plugs 19 20 are restored, the cap 32 and upper bushing member 29 de-
20 tached, and the reservoir recharged with a supply of the lubricant as before and without stopping the motion of the shaft.

When the bearing device is employed upon the end of a shaft, one of the plates 23 or 24,
25 as the case may be, will be replaced by a plate 45, having a bearing-block 46 in the center to receive the end thrust of the shaft 25, the bearing-block being of the same material as the bushings 28 29.

30 By this simple means the shaft is firmly supported from end movement, as will be obvious.

Having thus described the invention, what is claimed is—

35 1. In a journal-box, a stationary casing provided with a longitudinal opening having an internal lubricant-reservoir communicating therewith, a shaft journaled in said longitudinal opening, plates adjustably secured to the
40 opposite ends of the casing and provided with

central apertures for the reception of the shaft, a packing carried by said plates, and a bearing for said shaft supported within the casing and disposed between the plates.

2. In a journal-box, a stationary casing pro- 45
vided with a longitudinal opening having an internal lubricant-reservoir communicating therewith, a shaft journaled in the longitudinal opening of the casing, a bearing-plate ar-
ranged within the casing and embracing the 50
shaft, a vertically-adjustable cap provided with an integral depending rib the end of which is concaved and adapted to bear against the bearing-plate, and means carried by the
55 cap and engaging the casing for adjusting the former, there being an opening formed in said cap and communicating with the longitudinal opening.

3. In a journal-box, a casing provided with a longitudinal opening and having a pair of 60
spaced communicating lubricant-reservoirs formed therein, a shaft journaled in said opening, plates secured to the opposite ends of the casing and provided with apertures for the
65 reception of the shaft, a packing carried by each plate, a bearing-plate embracing the shaft and provided with a longitudinal channel and having transverse openings communicating with said channel and with the lubricant-reservoir, and a cap detachably secured 70
to said casing and adapted to engage the bearing-plate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HOWARD SLEAR.

Witnesses:

W. H. CASADY,
J. C. GELBACH.