

JOURNAL BOX FOR OIL PUMPING POWERS.

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929,544.

Patented July 27, 1909.

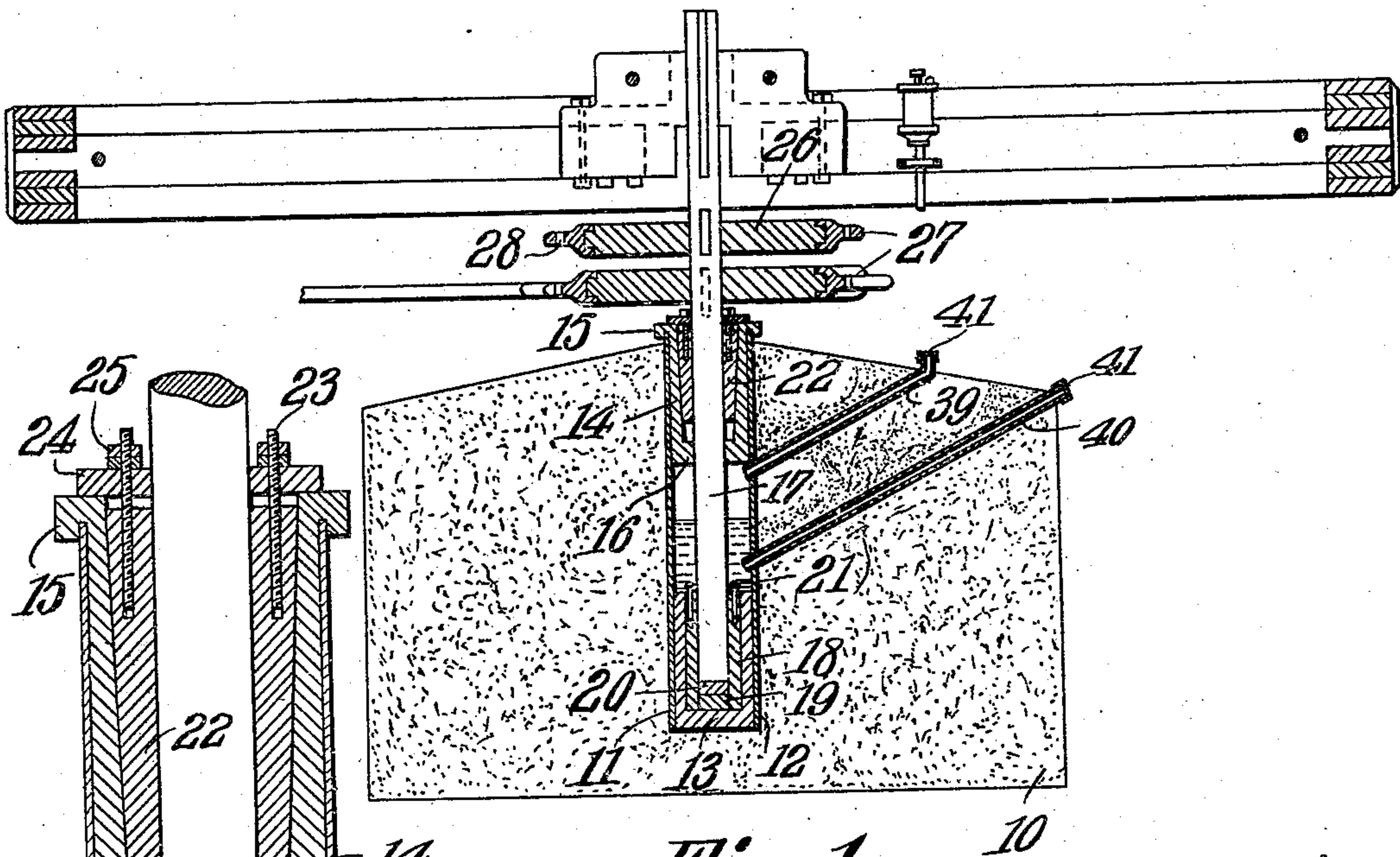


Fig. 1.

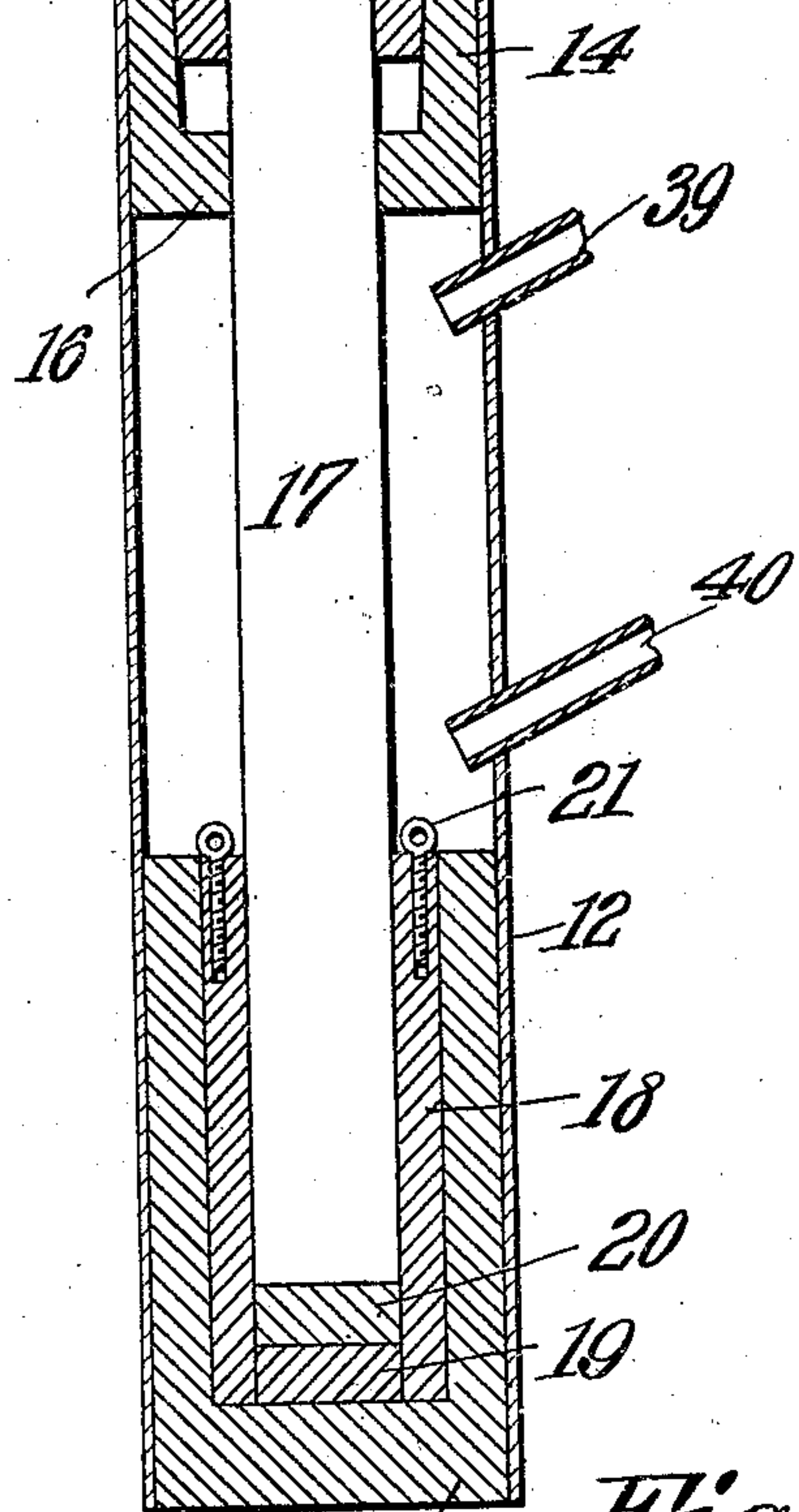


Fig. 2.

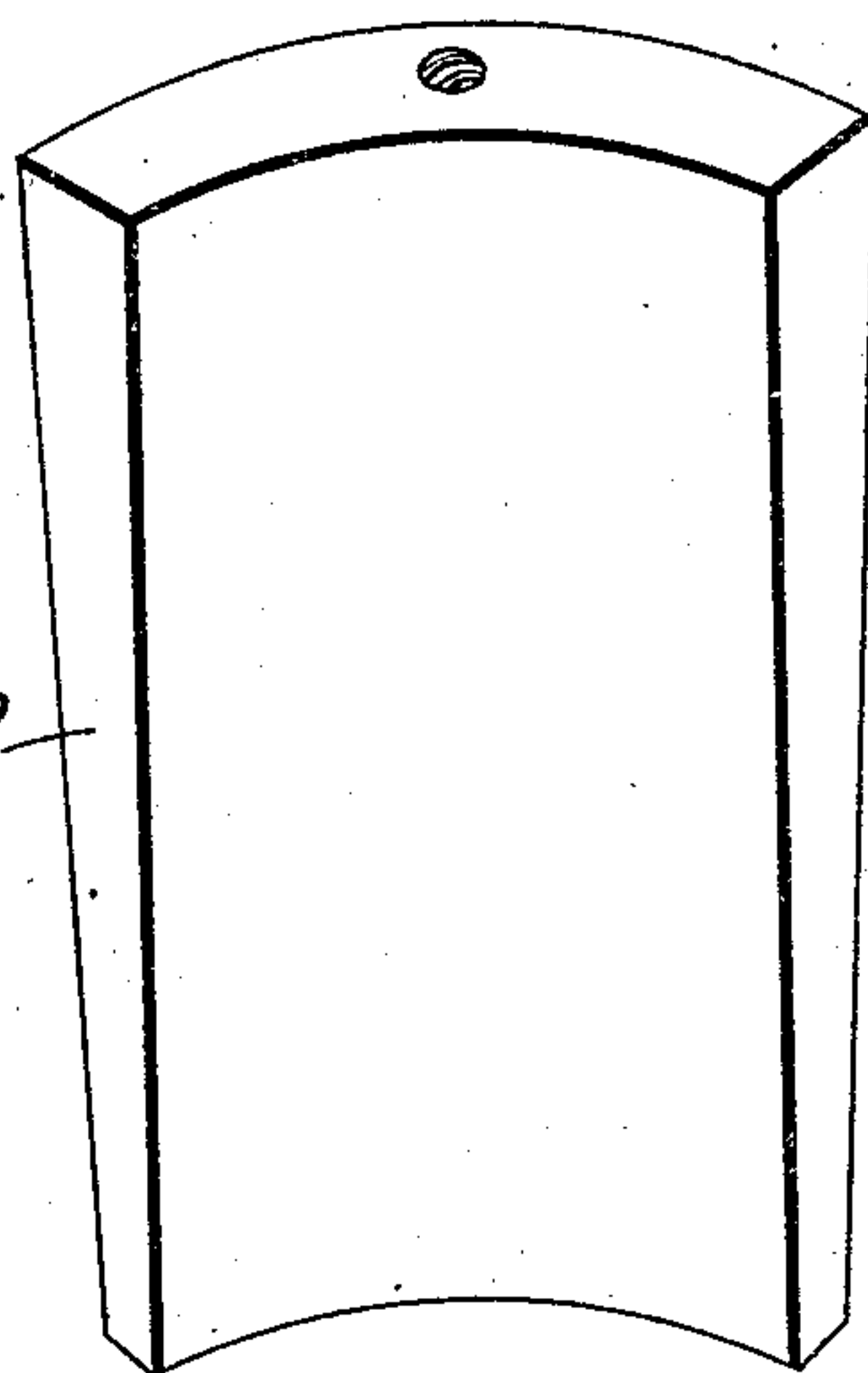


Fig. 3.

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UNITED STATES PATENT OFFICE.

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JOURNAL-BOX FOR OIL-PUMPING POWERS.

No. 929,544.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed August 15, 1908. Serial No. 448,692.

To all whom it may concern:

Be it known that I, HARLEY E. BRAYMER, a citizen of the United States, residing at Independence, in the county of Montgomery and State of Kansas, have invented a new and useful Journal-Box for Oil-Pumping Powers, of which the following is a specification.

This invention relates to pump powers and its principal object is to improve the general construction of a bearing for such a power.

With the above and other objects in view, the invention consists in general of certain novel details of construction and combinations of parts, hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and: Figure 1 is a vertical section of a pump power and its bearings constructed in accordance with this invention. Fig. 2 is an enlarged vertical section of the bearings. Fig. 3 is a perspective view of one of the segments hereinafter referred to.

The numeral 10 indicates the foundation of the device which is preferably made of some form of artificial stone, such as concrete, cement or the like. Within this foundation is formed a centrally disposed shaft pit 11, the walls whereof are formed of a casing 12, preferably made of some form of seamless tubing and extending from a point slightly above the top of the foundation nearly to the bottom thereof. Within the casing 12 and resting against the bottom of the shaft in the foundation is a foot casting 13 in the form of a hollow cylinder having its upper end open. This foot casting closely fits the casing 12. Above and spaced from the foot casting 13 is a top journal casting 14, provided at its upper end with an outwardly extending grooved flange 15, the groove being arranged to receive the upper edge of the casing 12, which projects above the top of the foundation for this purpose. At the bottom of the upper journal casting 14 is formed an inwardly extending flange 16. The interior of this casting 14 is frusto-conical in form. A shaft 17 is positioned within the casing 12, it being spaced from the castings 13 and 14 as shown. These castings 13 and 14 are preferably made of cast iron. Within the foot casting 13 is a foot journal bearing 18,

closely fitting the hollow of the casting 13 and the shaft 17. Between the lower end of the shaft 17 and the bottom of the foot casting 13 is provided a foot-step bearing preferably comprising a pair of plates 19 and 20, 19 indicating the lowermost of the two plates, and resting directly on the bottom of the casting 13, while 20 is held within the journal bearing 18 between the plate 19 and the bottom of the shaft 17. The plate 19 is preferably made of steel, while the journal bearing 18 and the plate 20 are made of some anti-friction metal, the plate 20 being preferably of brass while the journal bearing 18 may be of brass babbeted interiorly, or such other metal as may be preferred. At the upper end of the journal bearing 18 there is provided a plurality of eye-bolts 21 screwed into the bearings so that the same may be readily removed by means of a suitable tool introduced from the top of the casing 12 whenever it becomes necessary to renew the same.

The upper journal bearing is composed of a plurality of segments 22, closely fitting within the casting 14 and embracing the shaft 17. These segments are so arranged that they may be adjusted longitudinally of the casting 14, and thus caused to bear more or less firmly against the shaft 17. For this purpose the segments are made shorter than the length of the interior of the casting 14, and each of the segments is provided with a bolt 23, which passes upward through a plate 24 held upon the upper end of the casting 14. Suitable adjusting and jam nuts 25 are provided on the upper end of these bolts, so that the bearing segment may be properly positioned within the casting 14. Immediately above the plate 24 and nuts 25 is a plurality of eccentrics 26 firmly keyed upon the shaft, there being one of these eccentrics for each of the wells to be operated. Each of these eccentrics is equipped with suitable eccentric straps 27 each having a plurality of openings 28 in which rods may be hooked and extended to the pumping mechanism located at the mouths of the various wells. Above these eccentrics on the shaft 17 is located the band wheel which may be driven from any desired source of power.

For the purpose of insuring lubrication of the bearings, an oil pipe 39 is provided which extends from the top of the foundation 10 through and into the casing 12 at

a point just below the upper journal castings. A vent-pipe 40 is also provided to permit the escape of air from the casing as it is being filled, and this vent-pipe may
5 also be used, when connected with a pump, to draw off oil from the bearings in the event of the removal of the shaft for repairs or transportation to another point. Each of these pipes is provided with a cap 41 to
10 exclude dust and dirt from the bearings. It is to be noted that by this construction a very firm and rigid bearing is had for the band wheel and that this bearing is thoroughly protected from dust and dirt, the
15 lubricating pipes being capped and the plates 24 covering the upper end of the bearing casings.

It is obvious that many minor changes may be made in the form and construction
20 of this invention without departing from the material principles thereof. It is not therefore desired to confine the invention to the exact form herein shown and described, but it is wished to include all such as prop-
25 erly come within the scope thereof.

Having thus described the invention, what is claimed as new, is:—

1. A shaft support comprising a casing, a step bearing therein, and a side-bearing
30 comprising a box suspended in the casing,

and having a flange engageable over the end of the casing, said flange being provided with a groove in which the end of the casing fits, and brasses in the box.

2. A bearing comprising a casing, a shaft, 35 a cylindrical casting suspended in the casing and surrounding the shaft, said casing being provided with a flange at its upper end having an annular groove in its under side to engage the upper end of the casing, whereby 40 said casting is supported and centered in the casing, and said casting also having a frusto-conical interior, a segmental journal bearing in the casting arranged to fit the interior thereof and embrace the shaft, a 45 plate surrounding said shaft and removably supported on the casting, bolts attached to the segmental bearing, said bolts extending through said plate, and nuts screwed on said bolts and engageable with the plate to 50 adjust the bearing longitudinally in the casting.

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

HARLEY E. BRAYMER.

Witnesses:

GEO. STUMP,
CHAS. FRANCIS.