

L. E. SHERWOOD.
 AXLE LUBRICATOR.
 APPLICATION FILED APR. 13, 1908.

911,910.

Patented Feb. 9, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

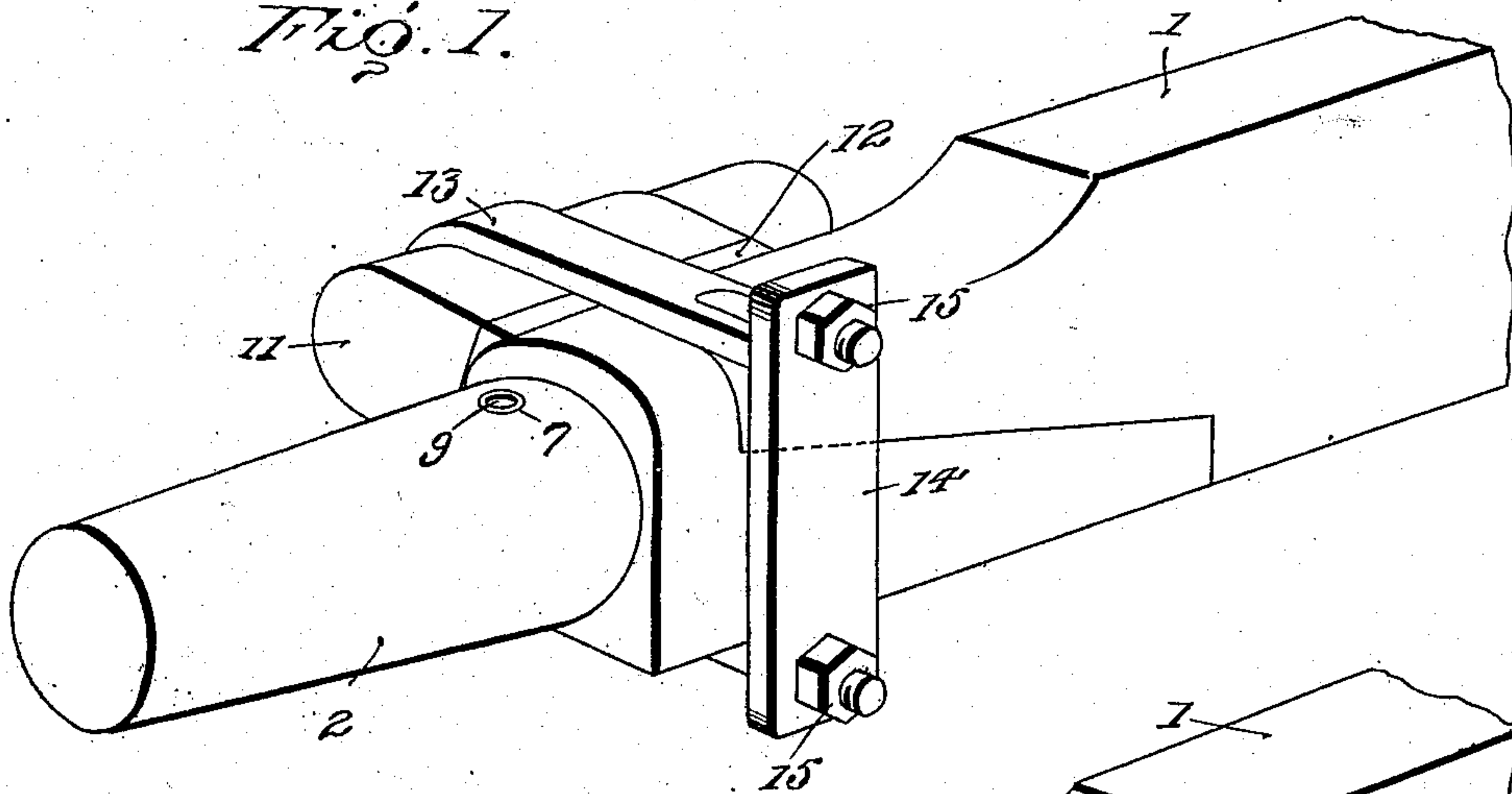


Fig. 2.

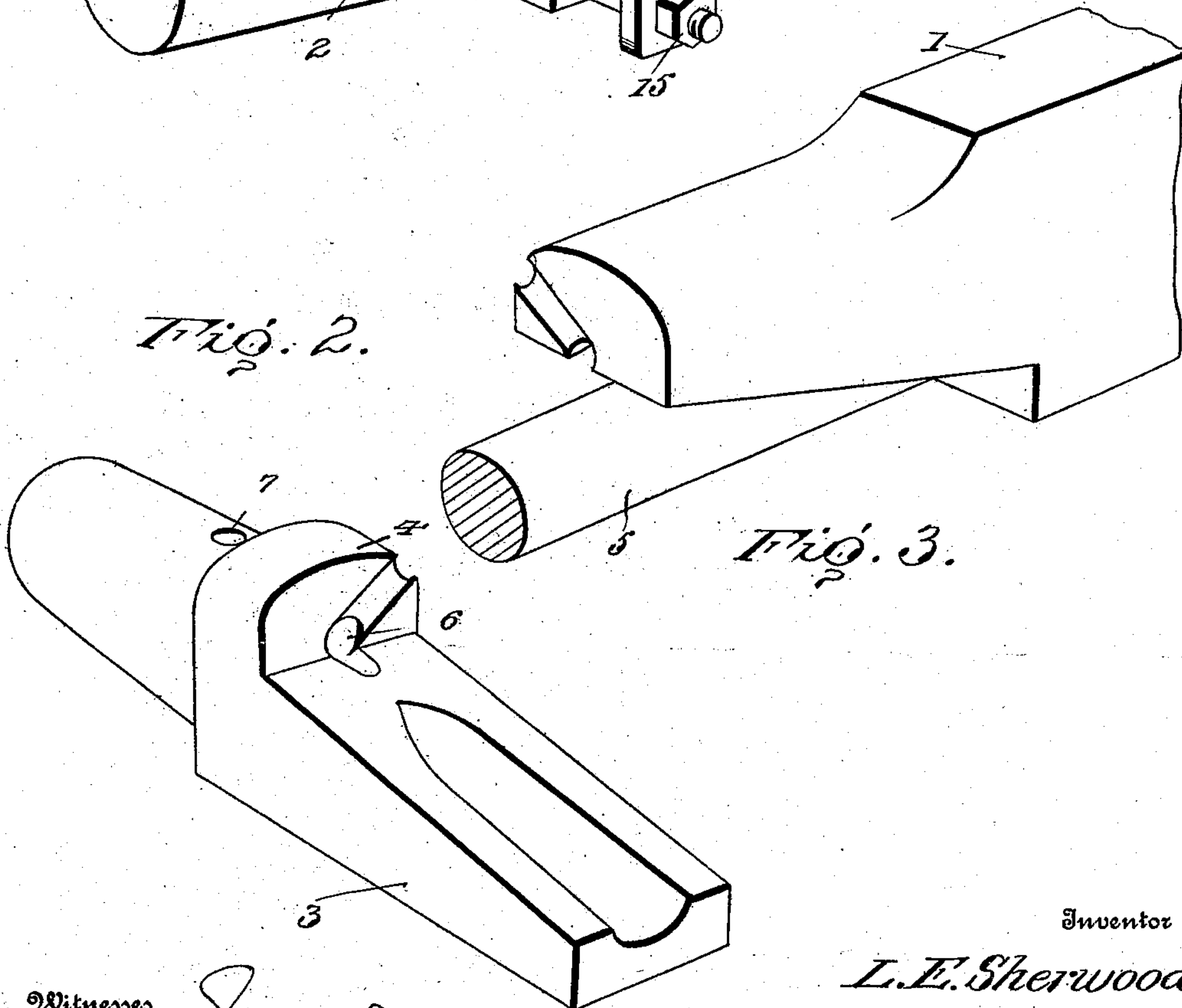
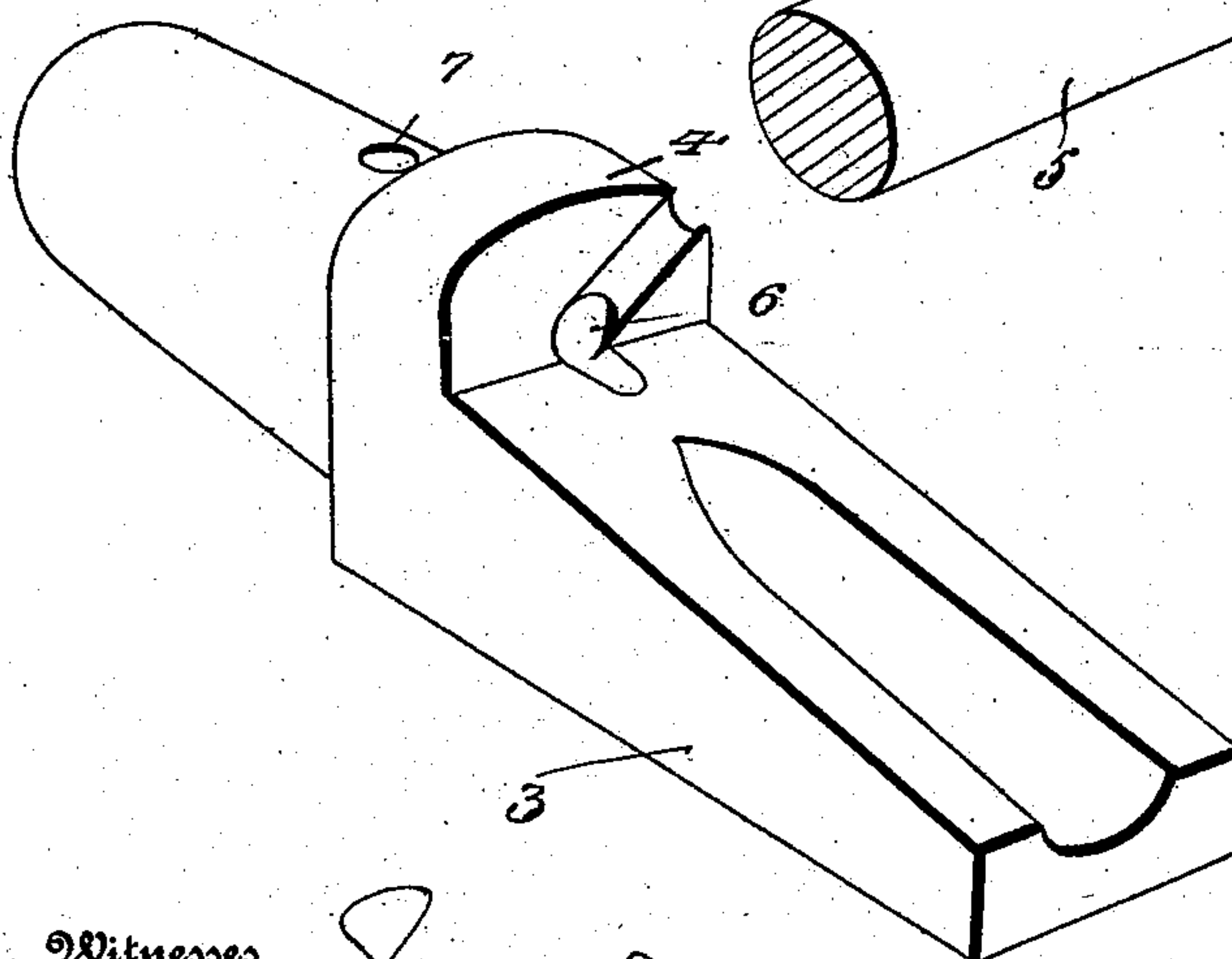


Fig. 3.



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Fig. 4.

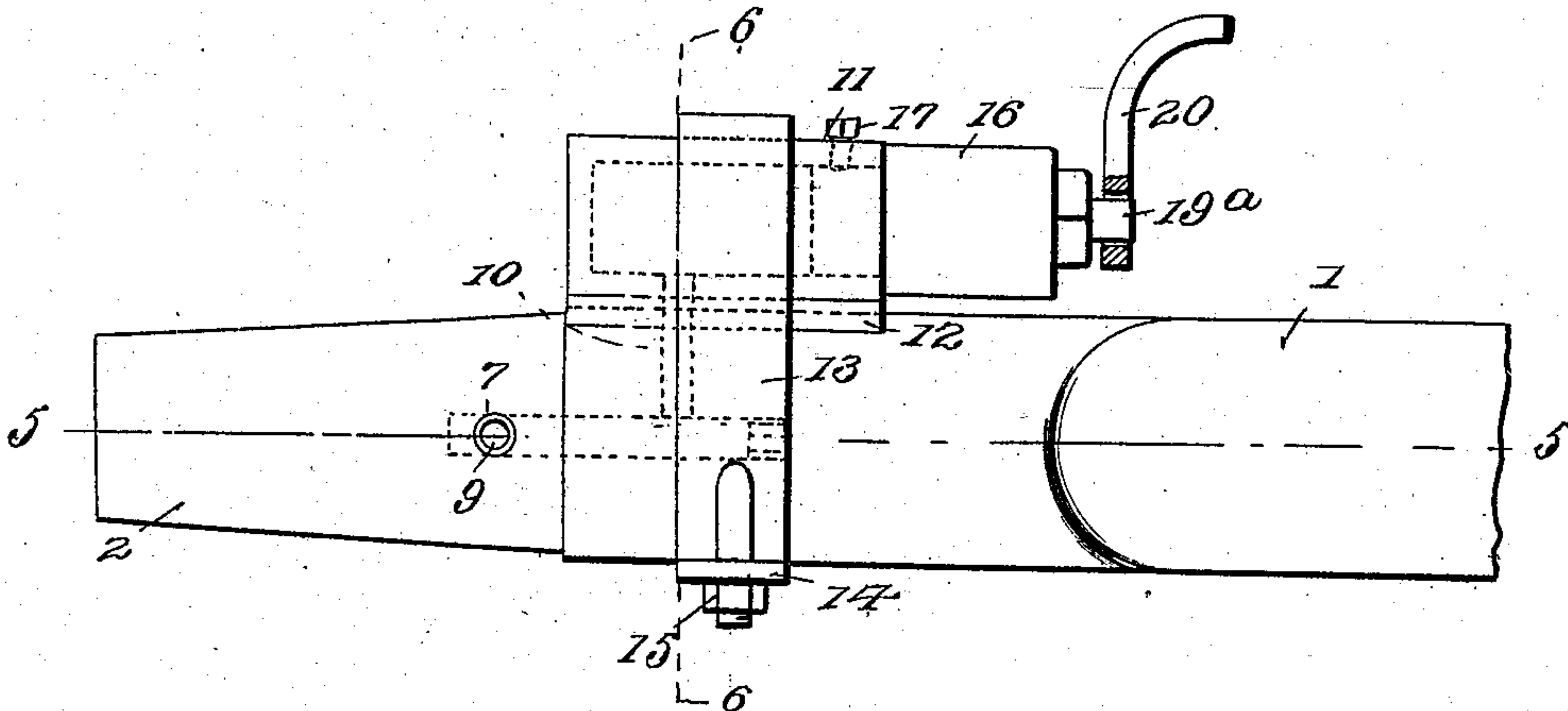


Fig. 5.

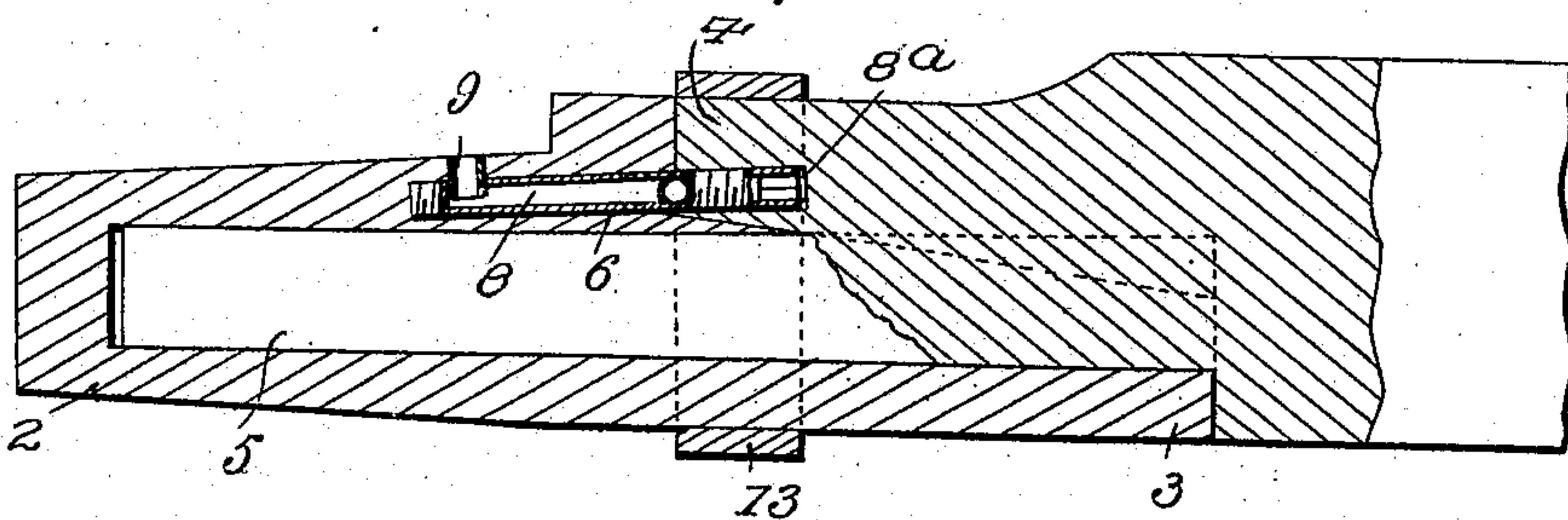


Fig. 6.

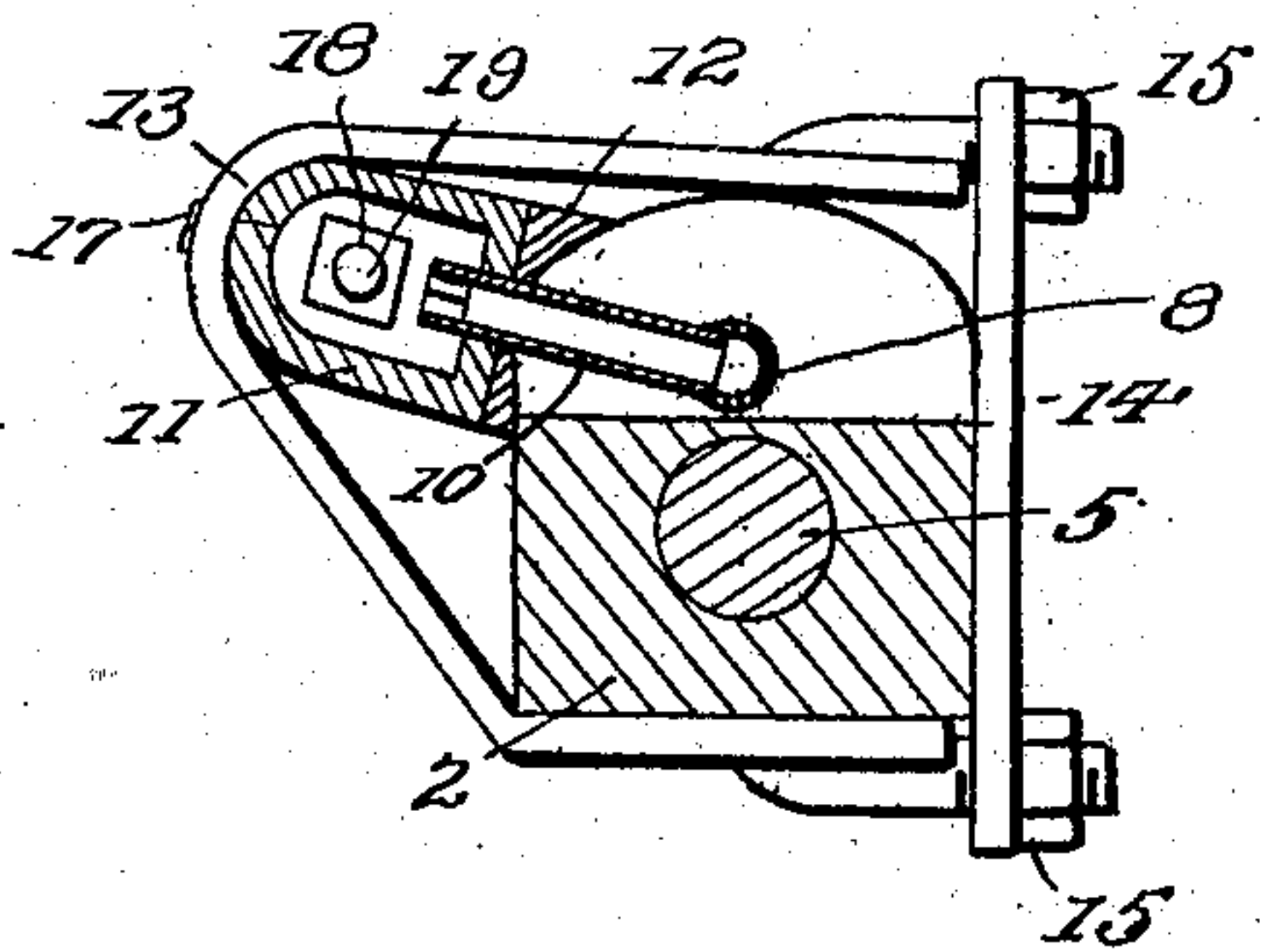
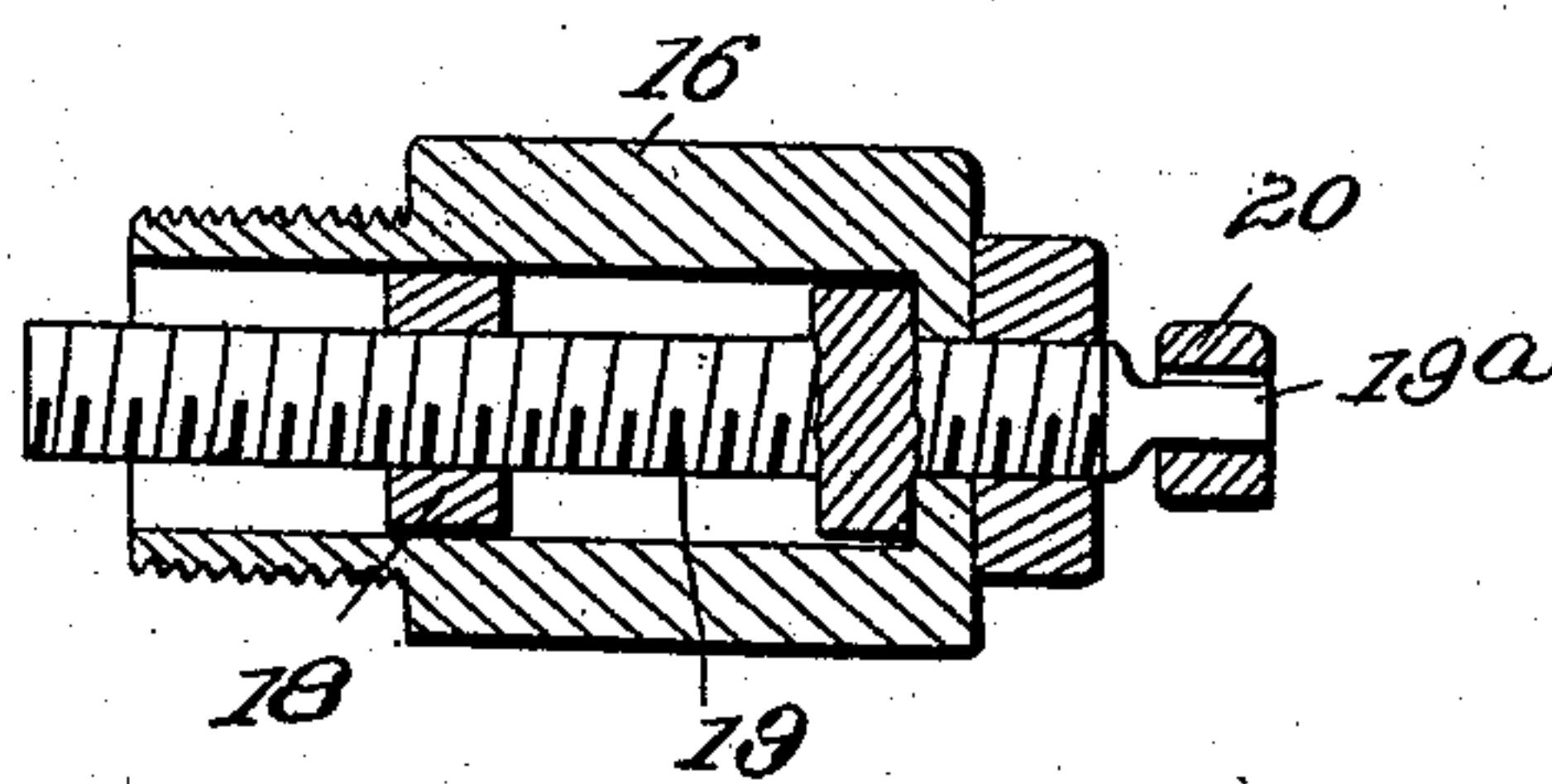


Fig. 7.



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LOWELL E. SHERWOOD, OF CHELAN, WASHINGTON.

AXLE-LUBRICATOR.

No. 911,910.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed April 13, 1908. Serial No. 426,798.

To all whom it may concern:

Be it known that I, LOWELL E. SHERWOOD, citizen of the United States, residing at Chelan, in the county of Chelan and State of Washington, have invented certain new and useful Improvements in Axle-Lubricators, of which the following is a specification.

The present invention relates to an improved axle lubricator embodying novel means for supplying the axle with lubricant from a reservoir permanently mounted thereon.

The object of the invention is the provision of a simple and inexpensive lubricating device of this character which will prevent loss or waste of the lubricant and when applied to a vehicle will eliminate the necessity for removing the wheel when it is desired to grease the axle.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view showing the lubricating device applied to a vehicle axle. Fig. 2 is a detail view of the removable axle spindle. Fig. 3 is a similar view of one end of the axle tree to which the spindle is attached. Fig. 4 is a top plan view of the device. Fig. 5 is a sectional view on the line 5—5 of Fig. 4. Fig. 6 is a transverse sectional view on the line 6—6 of Fig. 4. Fig. 7 is a longitudinal sectional view through the cup which is applied to the reservoir.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates an axle and 2 a spindle which is detachably applied to the axle, the inner end of the spindle being formed with an extension 3 received within a corresponding recess at the lower portion of the axle. It will also be observed that a shoulder 4 is formed at the base of the extension 3 and abuts against the end of the axle in the usual manner. A tongue 5 is also shown as projecting longitudinally from the end of the axle and received within the spindle.

Extending within the spindle 2 from the shoulder 4 is the longitudinal passage 6 communicating at its inner end with a lateral

opening 7 leading to the top of the spindle. A tube 8 is fitted within the longitudinal passage 6 and has a threaded connection toward its inner end with an upwardly extending feed tube 9 adapted to lead the lubricant from the longitudinal tube 8 to the exterior of the spindle 2. In the preferred embodiment of the invention this longitudinal tube 8 is threaded in position within the passage 6 and is provided at its outer end with an angular socket 8^a designed to engage any suitable tool for screwing the tube in position or removing it therefrom. It will also be observed that the rear end of the tube 8 projects beyond the shoulder 4 and is received within a recess in the axle 1.

A supply tube 10 has a threaded connection with the tube 8 toward the rear end thereof, and this supply tube is located at the junction of the axle and spindle and is received within corresponding depressions formed in the shoulder 4 of the spindle and the abutting end of the axle. This supply tube projects upon one side of the axle and is threaded into one end of a reservoir 11 which is permanently clamped upon the exterior of the axle. Interposed between this reservoir and the axle is a filling block 12 which is perforated to receive the supply tube 10 and has the inner face thereof recessed so as to fit over the rounded portion of the axle.

The clamp for holding the reservoir 11 in position may be of any approved construction and in the present instance is shown as formed by a U-shaped band 13 fitting over the reservoir, the arms of the band embracing the top and bottom of the axle and terminating in threaded stems which pass through openings in a cross bar 14 and are capped by the nuts 15. It will thus be obvious that by tightening the nuts the U-shaped band 13 may be caused to clamp the reservoir securely in position upon the axle. The open end of the reservoir 11 receives a removable cup 16, which has a tubular formation and constitutes an extension of the reservoir, the mouth of the cup being threaded within the reservoir and a set screw 17 being utilized for locking the cup against loss or accidental displacement. A follower 18 is mounted within the cup 16 for the purpose of forcing the lubricant therefrom, the said follower being held against rotation within the cup and having a threaded connection with a stem 19 pass-

ing longitudinally through the cup. This stem is journaled within one end of the cup so as to rotate freely and at the same time be held against longitudinal movement and
 5 terminates in an angular stud 19^a designed to receive a removable handle 20.

When it is desired to supply the device with lubricant the cup 16 is detached from the reservoir and the follower 18 moved to
 10 the rear end of the cup. The lubricant is then placed within the cup and the latter member again threaded in position upon the reservoir. By applying the handle 20 to the angular stud 19^a of the stem 19 the said stem
 15 can be turned to move the follower outwardly and force the lubricant from the reservoir through the tubes 10, 8 and 9 to the exterior of the spindle 2. The quantity of lubricant supplied to the wheel can be
 20 estimated according to the number of turns imparted to the stem 19, and lubricant can be readily supplied to the spindle at any time without the necessity of removing the wheel therefrom.

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

1. The combination of an axle, a spindle detachably applied to the axle and formed with a shoulder abutting against the end of
 30 the axle, a reservoir carried by the axle, a supply tube fitted between the shoulder of the spindle and the end of the axle and leading from the reservoir, and means for taking lubricant from the supply tube and
 35 carrying it to the exterior of the spindle.

2. The combination of an axle, a spindle detachably applied to the axle and formed with a shoulder abutting against an end of

the axle, the said spindle being also formed with a longitudinal opening extending in- 40 wardly from the shoulder and communicating with a lateral opening leading to the exterior of the spindle, a reservoir carried by the axle, and a supply tube fitted between the shoulder of the spindle and the end of 45 the axle and communicating between the reservoir and the longitudinal opening of the spindle.

3. The combination of an axle, a spindle detachably applied to the axle and formed 50 with a shoulder abutting against an end of the axle, the said spindle being also formed with a longitudinal opening extending inwardly from the shoulder and communicating at its inner end with a lateral opening 55 leading to the exterior of the spindle, a tube threaded within the longitudinal opening in the spindle, one end of the tube projecting beyond the shoulder for engagement with a tool when placing the tube in position or 60 removing it therefrom, a feed tube communicating with the before mentioned tube and arranged within the lateral opening of the spindle, a supply tube detachably connected to the rear end of the longitudinal tube and 65 arranged between the shoulder of the spindle and the end of the axle, and a reservoir carried by the axle and communicating with the supply tube.

In testimony whereof I affix my signature 70 in presence of two witnesses.

LOWELL E. SHERWOOD. [l. s.]

Witnesses:

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 H. W. VAN SLYKE.