

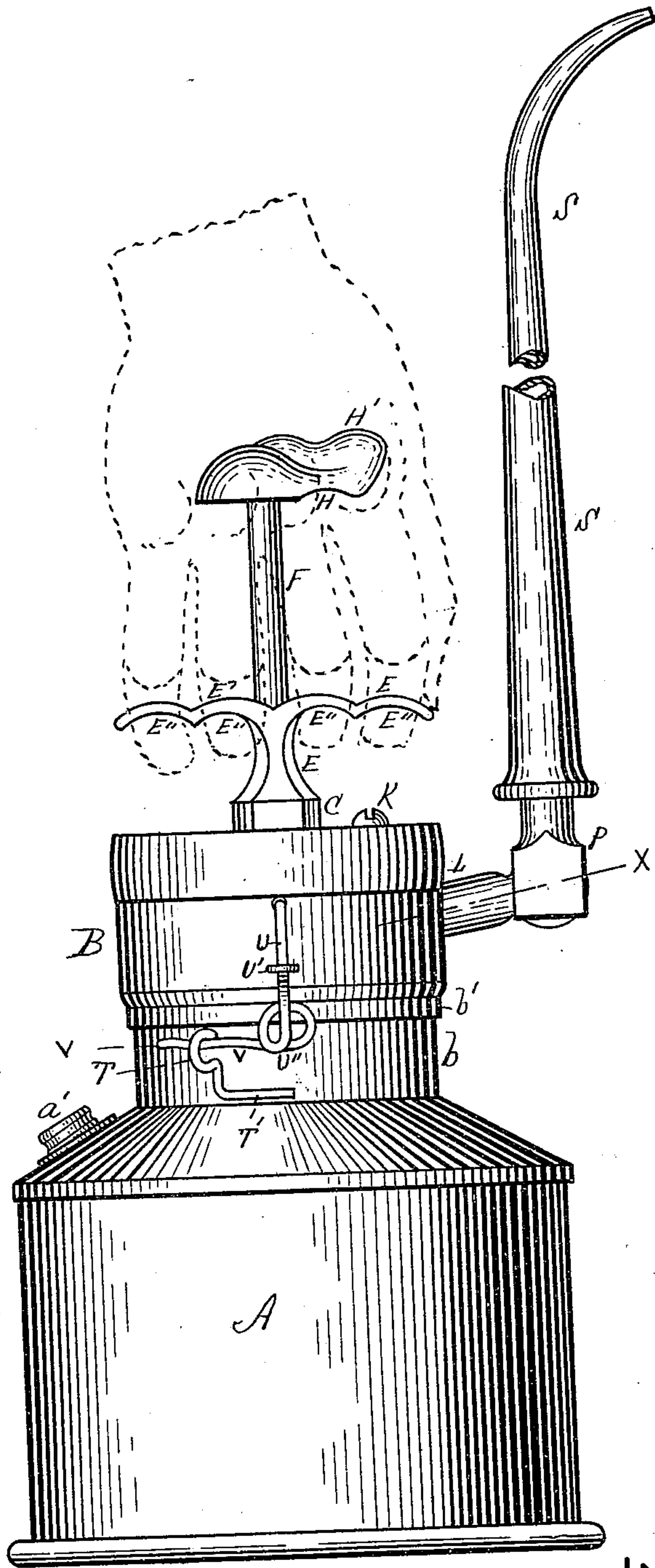
(No Model.)

3 Sheets—Sheet 1.

D. TRUE.
OIL CAN.

No. 547,048.

Patented Oct. 1, 1895.



WITNESSES

E. A. Woodbury
B. W. Williams

FIG. 1.

INVENTOR

David True,
By his Atty
Sherry Williams

(No Model.)

3 Sheets—Sheet 2.

D. TRUE.
OIL CAN.

No. 547,048.

Patented Oct. 1, 1895.

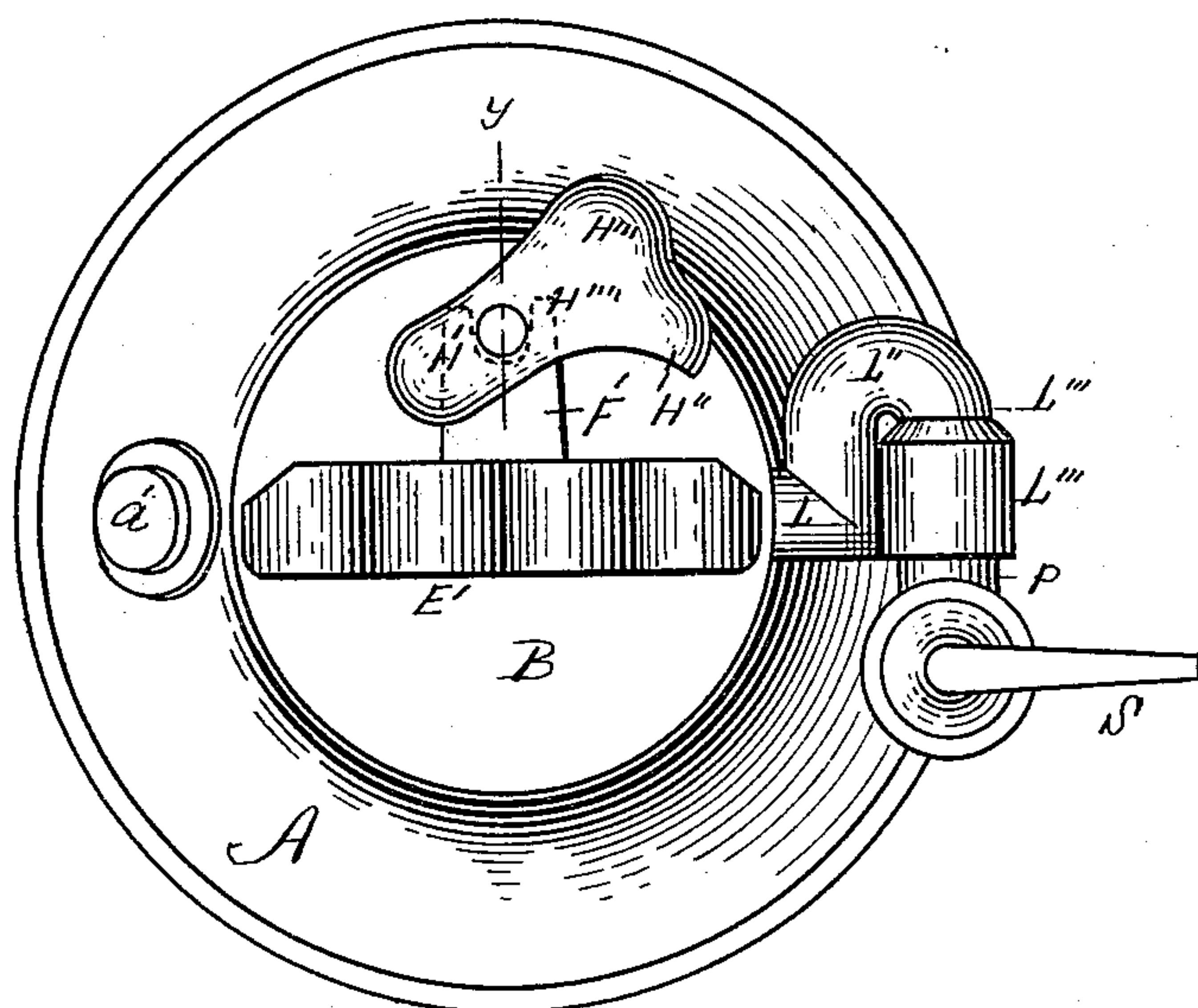


Fig. 2.

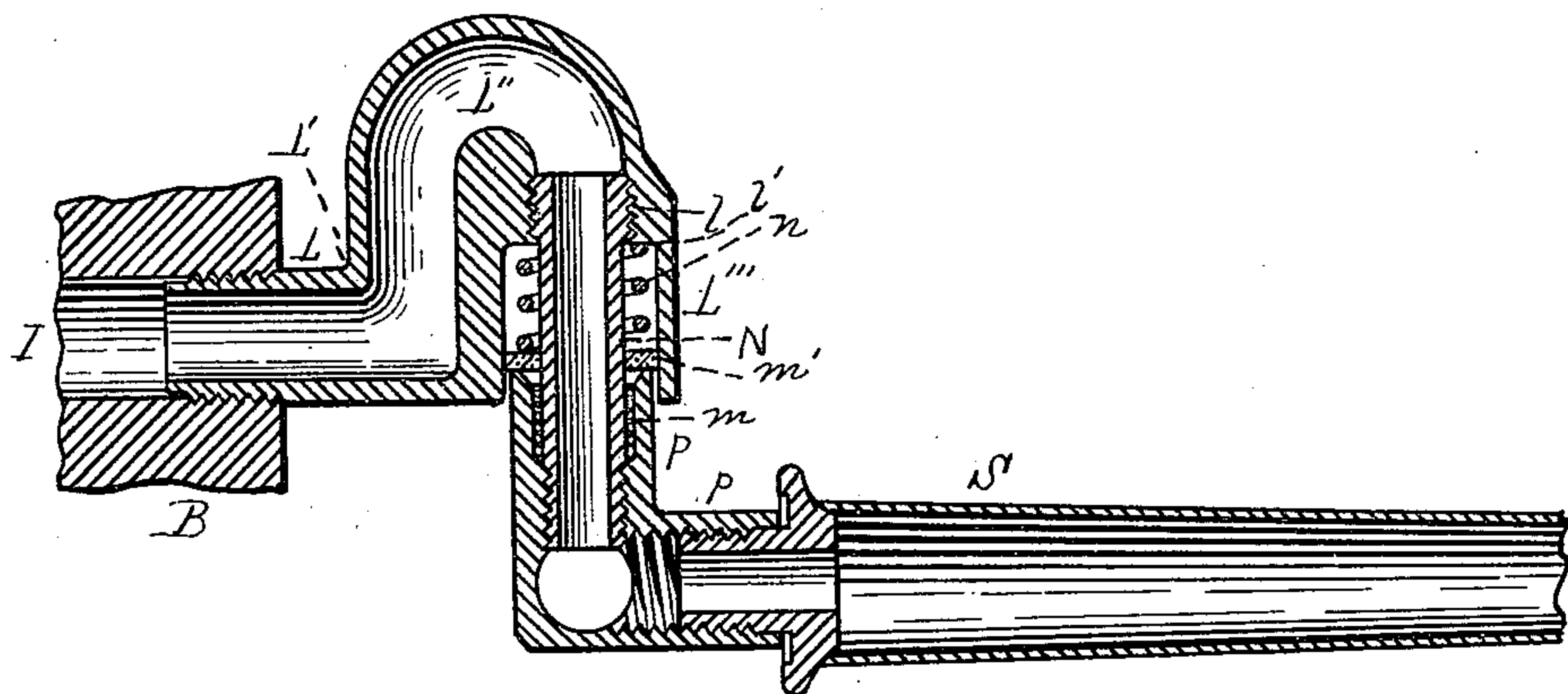


Fig. 3.

WITNESSES

E. A. Woodbury

B. M. Williams

INVENTOR

David True

By his Atty

Henry Williams

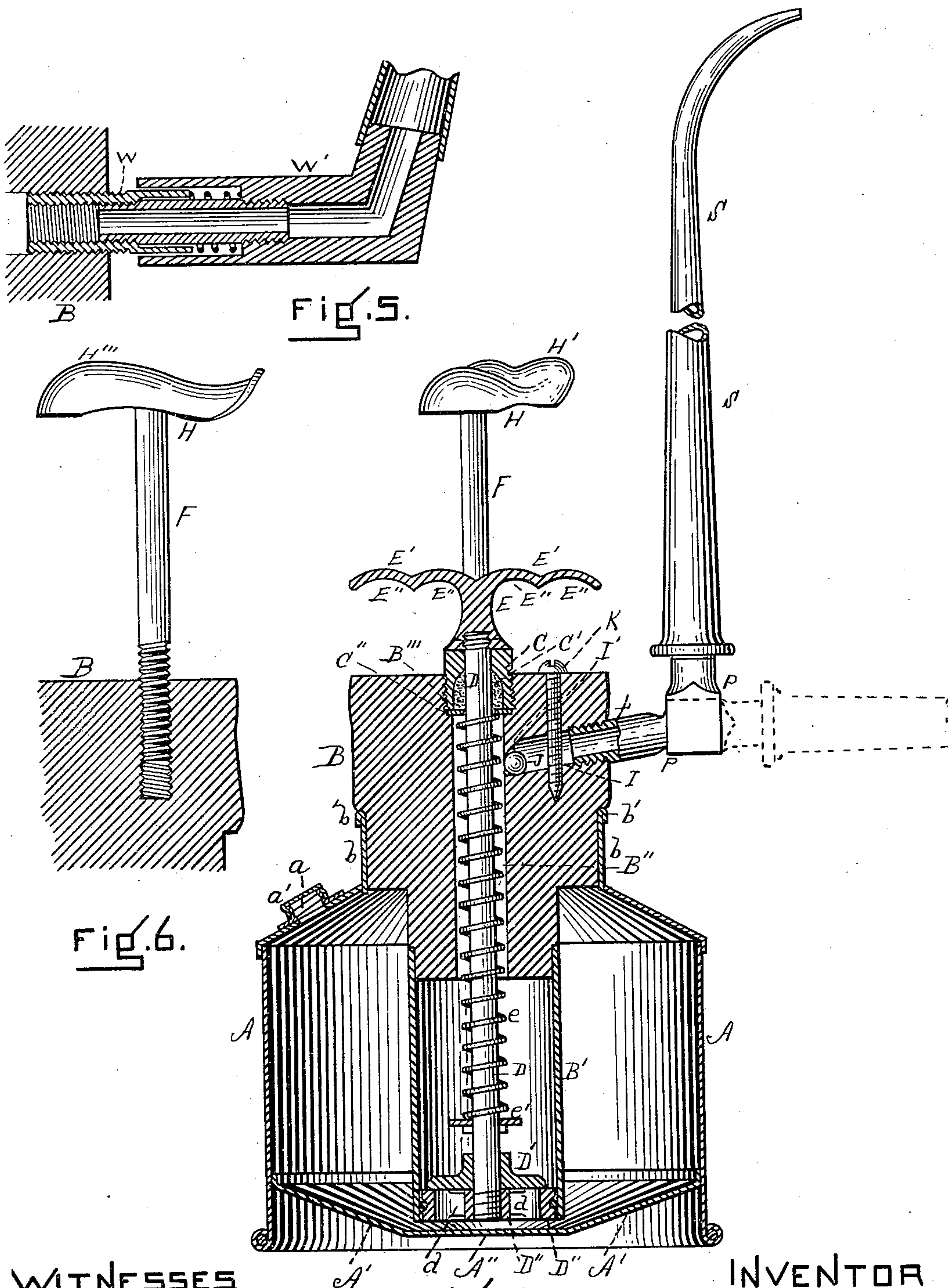
(No Model.)

3 Sheets—Sheet 3.

D. TRUE.
OIL CAN.

No. 547,048.

Patented Oct. 1, 1895.



WITNESSES

E. A. Woodbury

L. M. Williams

Fig. 4.

INVENTOR

David True.

By his Atty.

Sperry Williams

UNITED STATES PATENT OFFICE.

DAVID TRUE, OF AMESBURY, MASSACHUSETTS.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 547,048, dated October 1, 1895.

Application filed April 25, 1895. Serial No. 547,079. (No model.)

To all whom it may concern:

Be it known that I, DAVID TRUE, a citizen of the United States, residing at Amesbury, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Oil-Cans, of which the following is a specification.

This invention relates to that class of oil-cans in which a pump is employed for driving the oil through the discharge-spout; and the invention consists in the novel construction and arrangement of parts hereinafter described, whereby the device may be operated with the least expenditure of power and without waste of oil and whereby the construction is improved in various details, all substantially as illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my improved oil-can. Fig. 2 is a plan view of the same. Fig. 3 is a section taken on line *x*, Fig. 1, with the spout turned down into the position indicated by broken lines in Fig. 4. Fig. 4 is a central vertical section of the device. Fig. 5 is a sectional view of a modification of the connection between the spout and can. Fig. 6 is a vertical section taken on line *y*, Fig. 2.

Similar letters of reference indicate corresponding parts.

A represents the reservoir or fount, made of any suitable material and provided with an opening *a*, by means of which it may be filled, and a cap *a'* for closing said opening. The bottom of the reservoir is raised from the lower edge of the sides, as shown in Fig. 4, and said bottom inclines downwardly from its edge at *A'* toward a central depression *A''*, the effect being that when the oil becomes low in the reservoir or when the oil-can is tipped the last place for the oil to leave is the central portion *A''* of the bottom. As will hereinafter appear, the piston by means of which the oil is driven through the spout and the tube in which said piston moves are located centrally in the can and extend down into the central depression produced by the above-described shape of the bottom. Hence, owing to the fact that this central depression is the last portion of the can to become exhausted and that the can may be tipped considerably without causing the oil to flow out

of said depression, the pump is enabled to accomplish its object until the oil in the can is almost entirely exhausted.

B is a plug which sits snugly in the can and is formed to rest upon the upper edge *b'* of the mouth *b*. This plug is provided with a vertical central bore *B''*, which is counter-bored and screw-threaded at *B'''* to receive the small plug C, which is centrally and vertically bored to receive the piston-rod D, which moves through suitable packing *C'*, supported by a centrally-bored disk or washer *C''*, which lies between the lower end of the plug C and the annular shelf produced by the counter-boring of the passage *B''*. The piston-rod D is provided near its lower end with the piston *D'*, provided with suitable radial openings *d*, said piston fitting and moving vertically in a tube *B'*, which extends down from the plug B into the depression formed by the shape of the bottom of the can. A spring *e* surrounds the piston-rod and extends from the washer *C''* to a cross-piece or support *e'*, secured to the piston-rod, as shown in Fig. 4, and a sliding valve *D'*, of less diameter than the piston, moves on the rod D between the piston and the cross-piece *e'*. To the upper end of the piston-rod D is secured a lifting-bar, which consists of the central portion E and cross-piece *E'*, the latter having its under side formed into finger-recesses *E''*, as shown.

F is a vertical rod screwed into the upper surface of the plug B, as shown in Fig. 6, so as to be adjustable as to height. Supported by and secured to the upper end of this rod is the hand-support H. A bifurcated guide *F'* extends from the portion E to opposite sides of the rod F. (See Fig. 2.) The upper surface of the hand-support is shaped as indicated in the drawings, so that when the hand is in the proper position for operating the piston the fingers are in the concavities *E''* on the under side of the lifting-bar, the convex protuberance *H'* on the hand-rest lies nearly under the center of the palm of the hand, the upwardly-flaring portion *H''* extends toward the space between the thumb and forefinger, and the portion *H'''* and central portion *H''''* lie under the base of the thumb. (See Fig. 2.) With the hand and fingers in this position, as indicated in Fig. 1,

the natural movement of the fingers in closing pulls up the finger-bar E' and lifts the piston. This movement is, owing to the relative positions and shape of the hand-rest and finger-bar, naturally a substantially vertical one, and the effect is to accomplish the lifting movement with a minimum of effort and also, on account of the substantially vertical direction of the movement, to prevent any tendency to a lateral movement or swing of the can, even if it be suspended or raised from the floor. Hence no power is wasted, and the can is kept steady even when it is supported solely by the hand which operates it.

I is a passage leading from the passage B'' to the outer surface of the plug. This passage I is set at an upward incline from its inner end outward, and the diameter at its inner end I' is decreased in order to prevent a free ball J from entering the passage B''. This ball by gravity automatically closes the lower end of the passage I, thus forming a ball-valve, while its forward and upward movement is limited by a screw K, which passes into the plug and through said passage, as shown in Fig. 4. Thus air is prevented from entering the passage B'' when the can is not in use, while any oil in the spout or passage I is conducted downward to the lower end of said passage, instead of dripping outside.

L is a tube which is screwed into the passage I, (see Figs. 3 and 4,) and which at L' makes a horizontal turn at right angles, while at L'' it turns in a horizontal plane and bends back upon itself. The outer end L''' is screw-threaded at l to receive the connecting-tube N, upon whose outer end is screwed the elbow-tube or connection P. Suitable packing m is inserted between the tubes P and N, and the outer end of the portion L''' of the tube L is counterbored to receive the spring n, which lies between the shoulder l' and washer m'. A suitable spout S is screwed into the outer end of the elbow-tube P. This spout can be swung up into the position indicated in Fig. 1 or down into the position indicated in broken lines in Fig. 4, according to the location of the bearing to be reached. When it is thus swung, the elbow-tube P turns on the tube N, which remains stationary in the portion L''' of the tube L. The spring n, which bears against the washer or disk m' next the inner end of the elbow-tube P, provides sufficient friction to enable the spout S to be sustained in any position. Moreover when the spout is swung up—that is to say, outward—the tube P unscrews on the tube N with the result, of course, that said tube P and spout S are moved slightly outward from the can. There is usually a drop of oil at the extreme end of the spout, which is liable when the spout is removed from the bearing to work down upon the outside of the spout or to fly off when the spout is swung up; but by means of my construction the swinging up of the spout and its simultaneous move-

ment away from the can causes the drop of oil at the end to be sucked into the spout by atmospheric pressure and hence prevents it from working out or flying.

In practical operation when the can is to be used the nozzle is placed in the spot which is to be lubricated and the hand and fingers on and under the hand-rest and finger-bar, respectively, as above described. The end of the tube rests naturally upon the finger-bar next one end, as shown in Fig. 1. The other hand need not be used in lifting the can, the hand which is in engagement with the hand-rest and finger-bar being sufficient. By closing or lifting the fingers naturally the piston-rod D, piston D'', and valve are lifted, thus starting the oil toward the nozzle through the passages B'' I, and when the finger-bar is released the spring e forces down the piston and the valve D' drops more slowly by gravity.

For the purpose of securing the plug B removably to the can A a fastening device is employed, which may be duplicated on the opposite side of the plug, if desired. This consists of an eye T, forming an arch or bridge on the neck b and extending from a wire T', which is soldered or otherwise secured to said neck. Rigidly secured to the side of the plug B is a wire U, which extends down through an eye U' and is bent into loops at U'' and extends at V through the eye or arch T, being preferably bent a little downward next said arch in order to make the engagement therewith more certain. By this means a spring connection is formed making it easy to bring the portion V into and out of engagement with the eye T by rotating the plug B.

In the modification shown in Fig. 5 the bent tube L is omitted and a straight tube W connects with an elbow-tube W' (from which the nozzle extends) substantially in the same manner as the tube L is connected with the elbow P. In case the working of the ball-valve J is interfered with by the presence of impurities in the inclined passage I, such impurities can be easily removed and the ball-valve reached by removing the screw K. By reason of the combination with the pumping mechanism of the easily-operated finger-bar and hand-rest the heaviest and stiffest oils may be easily operated and driven out through the spout.

This application is made concurrently with another application by me for an improvement in oil-cans, Serial No. 547,080, in which the construction of the can, pumping mechanism, and plug B is substantially the same. The invention in the said application exhibits also a standard similar to the standard F; but none of the parts above mentioned are claimed in the said application excepting as they form parts of combinations with other features not shown or described in the specification and drawings.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. In an oil-can of the character described, an oil-reservoir provided with a suitable closure or plug, a pump connecting with the reservoir and provided with a piston which is adapted by its upward stroke to eject the oil, a lifting-handle connected with the piston and adapted to be engaged on its under side by the fingers of the operator, and a hand-rest supported by the stationary portion of the oil-can above the lifting-handle and adapted to support and bear against the palm of the hand, whereby the oil-can is held in a stationary position as the lifting-handle is lifted toward the hand-rest from beneath it, substantially as described.

2. In an oil-can of the character described, an oil-reservoir provided with a suitable closure or plug, a pump connecting with the reservoir and provided with a piston which is adapted by its upward stroke to eject the oil, a lifting bar connected with the piston and adapted to be engaged on its under side by the fingers of the operator, and the hand-rest H formed on its upper side into a convex protuberance H', flaring portion H'', and the portion H''' H'''' for the accommodation of the base of the thumb, said hand-rest being supported above the finger-bar by the standard F extending from a stationary portion of the can, substantially as set forth.

3. In an oil-can of the character described, the plug B provided with a passage extending to the exterior thereof and connecting with the oil reservoir, the pipe L bent at substantially right angles at L' and back upon itself at L'' L''', the connecting tube N extending from said pipe, the elbow pipe P extending from and rotating on said tube N, a nozzle extending from the outer end of the elbow pipe P, and a spring located in the outer end L''' of the pipe L and having its opposite ends bear against a shoulder in said pipe and a washer next the inner end of the elbow pipe P, substantially as set forth.

4. In an oil-can, the combination of the following parts viz., a pipe extending from the

can and connecting with the reservoir, a connecting pipe extending from the outer end of the first named pipe and externally screw-threaded at its outer end, a nozzle-supporting pipe internally screw-threaded and turning on said connecting pipe by means of its engagement with the screw-thread thereof, and a spring located between the pipe extending from the can and the nozzle-supporting pipe and bearing directly or indirectly against the inner ends of both pipes, said nozzle-supporting pipe as it is swung or turned up so as to unscrew upon the connecting pipe serving by the outward movement produced by such unscrewing to withdraw into the nozzle slightly the oil at its outer end, thus preventing it from running down on the outside, substantially as described.

5. In an oil-can of the character described, the neck or mouth b, the wire T' rigidly secured thereto and provided with the loop or arch T, the plug B adapted to fit into said neck or mouth, and the wire U secured to said plug, extending down therefrom over said neck or mouth and provided with the coil U'' and spring-extension V adapted to project through said loop or arch, substantially as set forth.

6. In an oil-can of the character described, in combination, the can A, provided with the mouth b and central wall B', the plug B fitting into said mouth and provided with the vertical passage B'' and connecting passage I, the piston-rod D provided with the stop or cross-piece e', spring e, the plug C screwing into said plug B and through which said piston-rod extends, a lifting bar connected with said piston-rod, the piston D'' secured to the lower end of the piston-rod and provided with the openings d, and a valve D' playing on said piston-rod between the piston and the stop or cross-piece e', substantially as described.

DAVID TRUE.

Witnesses:

HENRY W. WILLIAMS,
E. A. WOODBURY.