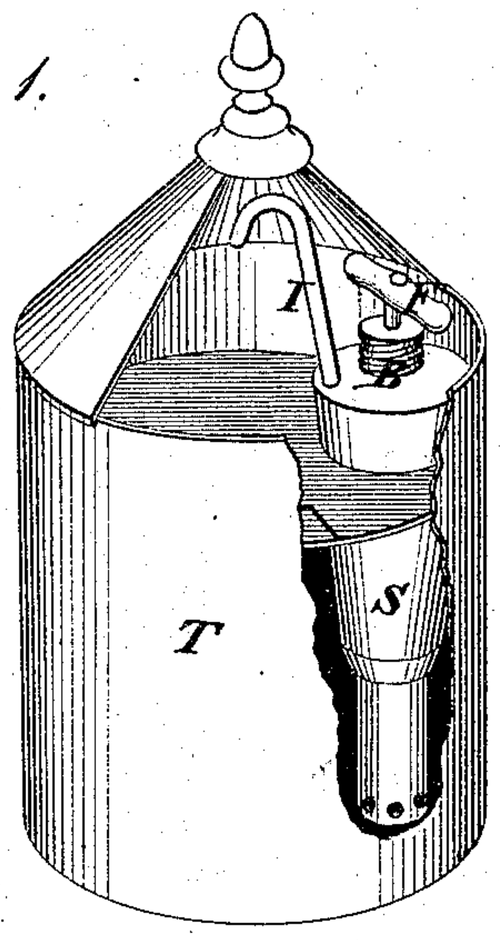
F. C. WILSON.

# Plungers for Oil-Measuring Pumps.

No. 157,901. Patented Dec. 15, 1874.

Fig. 1.



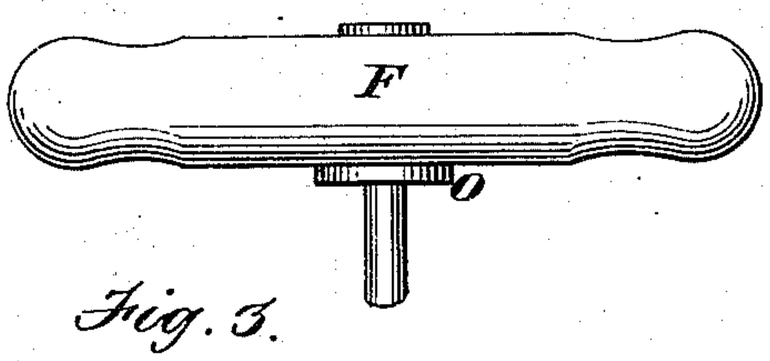




Fig. 2.

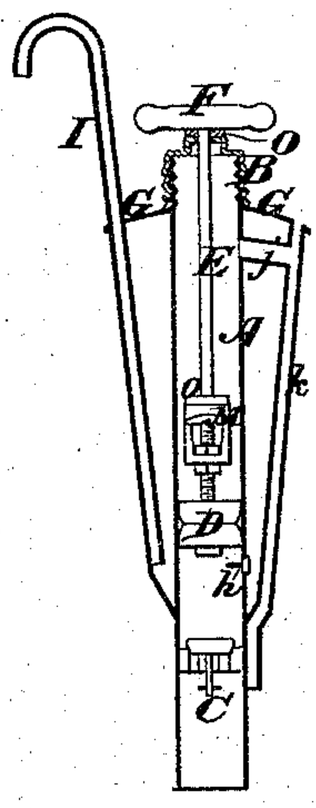



Fig. 3.

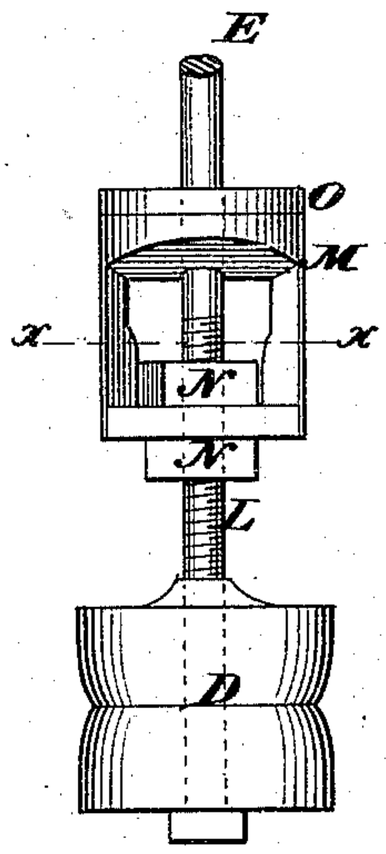
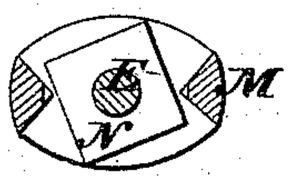



Fig. 4.




Witnesses.

C. F. Brown

Nathan K. Ellsworth

Inventor
F. C. Wilson
by his Attys.
Wills & Ellsworth

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

# UNITED STATES PATENT OFFICE.

F. CORTEZ WILSON, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN PLUNGERS FOR OIL-MEASURING PUMPS.

Specification forming part of Letters Patent No. **157,901**, dated December 15, 1874; application filed February 6, 1874.

*To all whom it may concern:*

Be it known that I, F. CORTEZ WILSON, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Plungers for Oil-Pumps; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view of an oil tank and pump. Fig. 2 is a vertical section of the pump, showing my improved plunger. Fig. 3 is an elevation of the plunger removed from the pump; and Fig. 4 is a transverse section in the line *x x*, Fig. 3.

Similar letters of reference in the accompanying drawings denotes the same parts.

My invention relates to that class of pumps which are employed for discharging oils and other liquids from tanks and cans, and has for its primary object to measure the quantity of liquid by the strokes of the pump, and thereby dispense with the measuring-vessels ordinarily employed. To this end the invention consists, first, in combining an adjustable yoke or stop with the plunger, arranged within the pump-barrel, for the purpose of regulating the height to which the plunger shall rise, starting always from the same point, and to protect the stop against casual outside displacement. It also consists in the provision of means for adjusting and locking the yoke upon the plunger-rod, and in the combination of various parts, as I will now proceed to describe.

In the accompanying drawings, T is the oil-tank, preferably of the kind made by the Shipping-Can Manufacturing Company, of Chicago, Illinois, although any other form may be used; and S is the pump set into the top of the tank, as shown. The pump is composed of a tubular cylinder, A, covered by a screw-cap, B, and provided with a valve, C, and a single plunger, D, attached to a rod, E, and operated by a handle, F. G is a tapering jacket, surrounding the upper portion of the cylinder, so as to form an oil-chamber, into which the oil is discharged through a valved opening, *h*, in the wall of the cylinder, between the valve C and plunger. I is the discharge-spout, extending nearly down to the bottom of the oil-chamber, and *j* is an escape-pipe or drip-tube, extending from the wall of the cylinder nearly at the top of the oil-chamber out through the wall thereof, so as to discharge into a tube or channel, K. This channel extends down the side of the jacket and cylinder, to deliver back into the tank such oil as may casually rise above the plunger.

The pump thus far described forms the subject of a patent granted to John G. Evenden, June 17, 1873; and while I prefer to apply my improved plunger thereto, I also contemplate its use in pumps of other descriptions.

In carrying out my invention I cut a screw-thread, L, upon the plunger-rod, extending an inch or two (more or less) above the plunger. A stop, M, constructed in the form of a yoke, is slipped upon the rod so as to rest upon a nut, N, screwed thereon, a second nut, N, within the yoke serving to hold the latter against the first. The sides of the yoke are made angular transversely, so as to carry the upper nut, and form a sort of wrench for turning it when necessary. By operating the two nuts the position of the yoke is adjusted upon the rod to lengthen or shorten the distance between the yoke and the handle, so as to regulate the length of the plunger-stroke. For example, by placing the stop at a certain point two strokes of the plunger will discharge one pint of oil, four strokes a quart, or sixteen strokes a gallon, &c. By this means, therefore, with the stop set to the point determined by experience or by graduations upon the piston-rod, the requisite quantity of liquid may be measured without the use of the ordinary measuring-vessels. Certain highly inflammable oils cannot be measured at night with ordinary measuring-vessels without danger of ignition from the light necessary to be used in drawing the oil. By my invention this danger is avoided, as it is only requisite to count the strokes of the pump, which can be done in the dark as well as in the light. Such oils, therefore, which could not heretofore be handled at night, can be measured by my improved plunger without the least danger. The length of the stop M is such as to extend above the screw-thread on the plunger-rod, and, therefore, prevents such thread from cutting out

and wearing the screw-cap. It also prevents the plunger from passing above the air-passage *j*. O O are leather or other suitable washers or cushions placed upon the plunger-rod, one upon the head of the stop, and the other against the under side of the handle F, or against the outer surface of the screw-cap. These washers deaden the force of the blows of the handle and stop against the cap, and prevent the latter from being broken or otherwise injured thereby.

I claim as my invention—

1. The stop M and nuts N N, in combination with the screw-threaded rod of the pump-plunger, substantially as described.

2. The stop M, constructed in the form of a yoke, to carry and turn the upper nut and cover the screw-thread, substantially as described.

3. The plunger of a hand-pump for liquid-vessels, provided with an adjustable stop, arranged upon the rod within the pump-barrel, substantially as described, for the purpose specified.

F. CORTEZ WILSON.

Witnesses:
N. K. ELLSWORTH,
E. A. ELLSWORTH.