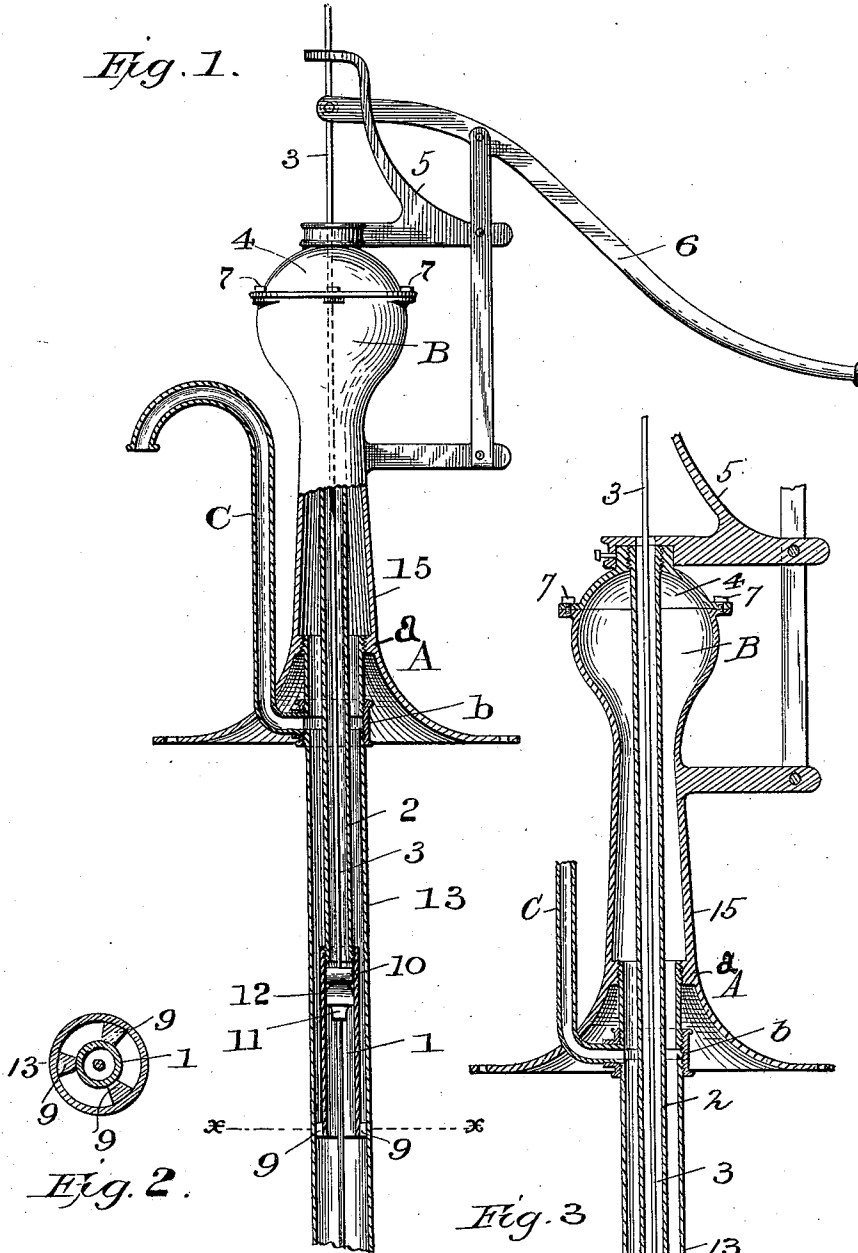


(No Model.)

O. P. OLSON.
PUMP.

No. 542,939.

Patented July 16, 1895.



WITNESSES:
F. L. Ouraud
J. S. Gregory

INVENTOR:
Olof P. Olson,
by J. Fred Reilly,
his Attorney.

UNITED STATES PATENT OFFICE.

OLOF P. OLSON, OF OSHKOSH, WISCONSIN.

PUMP.

SPECIFICATION forming part of Letters Patent No. 542,939, dated July 16, 1895.

Application filed January 3, 1895. Serial No. 533,727. (No model.)

To all whom it may concern:

Be it known that I, OLOF P. OLSON, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Pumps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to pumps especially designed for tubular wells, and aims to provide a pump which will be double acting and which will admit of the lower bucket being readily removed for purposes of repair or for any other required purpose, and which will at the same time combine simplicity of construction together with efficiency in use.

The improvement consists of the novel features which hereinafter will be more fully described and claimed, and which are shown in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of a pump embodying the invention. Fig. 2 is a cross-section on the line *xx* of Fig. 1. Fig. 3 is a central sectional view of the pump.

The standard 15 is tubular and has a flaring base A and an enlarged head B, approximately globular in shape, which, in connection with the body of the standard, forms an air-chamber to increase the efficiency of the pump and secure a continuous flow of fluid when the pump is in operation in the usual and well-known manner. A cap 4 closes the upper end of the standard and is fitted to the head B and secured in place by screws 7, which pass through the lower edge portion of the cap and screw into the head B. The well-tubing 13 is secured at its upper end by a screw-joint to an inner threaded flange *a* near the lower end of the standard and has the discharge-spout C attached thereto by means of a coupling *b*.

The upper pump barrel or cylinder 1 is attached to the lower end of a pipe or tubing 2, which is secured at its upper end to the cap 4. Lugs 9 exterior to the cylinder 1 touch the

sides of the tubing 13 and center the said cylinder and prevent any movement thereof in the well-tubing 13. The piston or plunger is composed of a bucket or head 10, a clamp-nut 11, and a leather packing 12, and is attached to a rod 3, by means of which the upper and lower plungers are operated from the wind-mill, handle 6, or other suitable power. The rod 3 is passed through a guide-bracket 5, secured to a standard 15.

It will be understood that the pump will be provided with a lower cylinder or barrel and a plunger to operate in conjunction therewith in the ordinary and well-known manner. These are not shown as their position and function is well understood.

The pump does not operate different from others of its class, but is constructed with reference to readily admit of access to the lower bucket by making provision for its removal through the well-tubing after the upper cylinder is withdrawn. It will be understood that when the pump-rod 3 is forced down the water in the cylinder 1 will be displaced and forced into the tubing 13 and out through the spout C, and on lifting the said rod the water or other fluid will be forced half into the cylinder 1 and half into the surrounding tubing 13. This operation is repeated at each complete movement of the rod, resulting in a continuous flow of the fluid, as is well known.

When it is desired to remove the lower bucket for purposes of repair or for any other purpose, the cap 4 is detached, the bracket 5 taken away, the handle 6 uncoupled, and the tubing 2, with the attached cylinder 1 and the pump-rod 3, are withdrawn, after which the lower bucket can be easily and readily removed in any convenient manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a double acting pump, a hollow standard or support having an upper globular portion forming an air space, a removable cap or cover for said globular portion, an interior flange formed near the bottom of said standard, a well tube supported by said flange, a pipe or tube extending through said standard and supported by said cap or cover, said pipe or tube being extended downward into said well tube, a barrel or cylinder secured on the lower

end of said pipe or tube, centering lugs projecting from the exterior of said barrel or cylinder, a piston rod working in said pipe or tube and projecting through the upper end
5 thereof, a guide bracket for said piston rod supported by said standard, a piston secured on said piston rod and adapted to work in said barrel or cylinder, means for operating said piston rod, and a discharge spout remov-

ably secured to said well tube and communicating therewith, substantially as set forth.

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

OLOF P. OLSON.

Witnesses:

H. R. McCOMB,
W. H. STROUD.