(No Model.)

J. MORAN.

DEVICE FOR DRAWING STANDING VALVES IN WELLS.

No. 336,488. Patented Feb. 16, 1886.

Fig. 1.

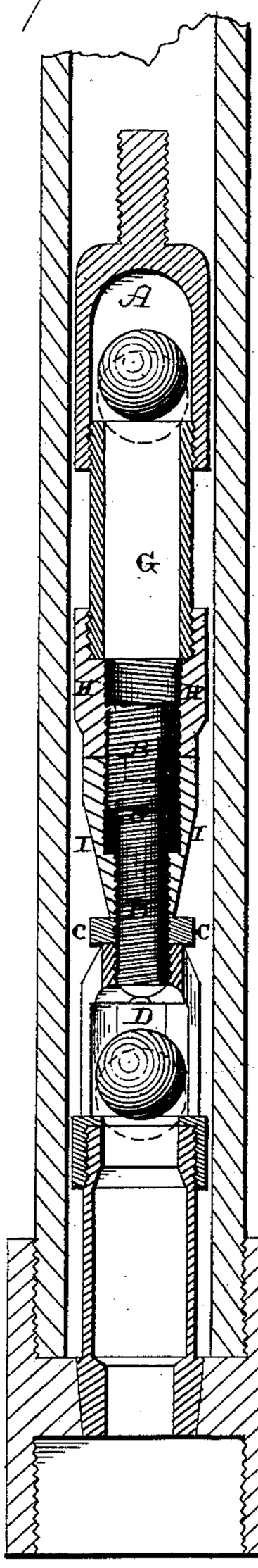


Fig. 2.

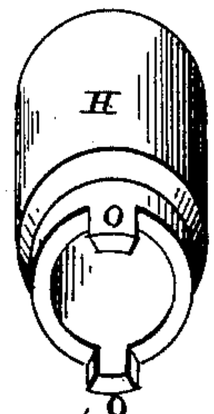
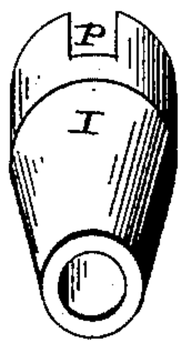


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN MORAN, OF BRADFORD, PENNSYLVANIA.

DEVICE FOR DRAWING STANDING VALVES IN WELLS.

SPECIFICATION forming part of Letters Patent No. 336,488, dated February 16, 1886.

Application filed August 13, 1885. Serial No. 174,352. (No model.)

To all whom it may concern:

Be it known that I, JOHN MORAN, of Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Drawing Standing Valves in Wells; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in devices for removing standing valves from wells; and it consists in the combination of the working valve and two sleeves which are internally screw-threaded and applied to a screw-threaded rod or bolt, the lower end of which rod screws into the cage of the standing valve, the two sleeves being made to connect the working and standing valves when it is desired to either lower the standing valve into place or raise it, as will be more fully described hereinafter.

The object of my invention is to produce a simple clutch which can be attached to the lower end of the working valve and then made to connect to the standing valve, so that it can be raised from its seat to allow rivets and other devices which may have fallen into the well to pass through the casing, and that without the trouble of having to remove any of the rods.

Figure 1 is a vertical section of a clutch embodying my invention, showing it attached to both the standing and the working valves. Figs. 2 and 3 are detail views of the two sleeves which form the clutch.

A represents the working valve, and D the standing valve, of the well. These are of the ordinary construction, and hence need not be more particularly described in this connection. Connected to the cage of the working valve A is a short tube, G, which is externally screw-threaded at its lower end, so as to make connection with the clutch, which is attached thereto, for the purpose of removing the standing valve. This clutch consists of the two short sleeves H I, which are both internally screw-threaded, and which are placed upon the screw-rod B. One of these sleeves, H, is provided with suitable projections, O, which fit in corresponding recesses, P, made in the upper edge of the lower sleeve, I, for the purpose of causing these two sleeves to always revolve in the same direction. The screw-rod B is provided with an enlarged head at its upper end, and this head is made to fit the screw-threaded opening which is made through the upper sleeve, H, and that part of the opening which is made in the lower one, I. The lower end of the screw-rod fits in the opening which is made through the lower portion of the sleeve I, the nut C, and the opening through the upper end of the cage of the standing valve D. It will be seen that the opening through the lower sleeve, I, is of unequal size, and that part which is made in its upper end is larger than that which is made through its lower end, and that the larger opening is made about the same depth as the length of the head upon the screw-bolt. In order to connect the two parts H I of the clamp together, it is necessary to turn the lower sleeve, I, upon the bolt B until its upper end comes about flush with the upper end of the head, and then the projections O upon the sleeve H can be made to enter the recess P in the upper end of the one I. When the upper sleeve, H, is turned, the two sleeves are made to revolve together, and then the two screwed downward upon the screw-rod B. When it is desired to remove the upper sleeve, H, from the rod, the two sleeves must be turned in such a manner that they will rise upward upon the rod until the upper one, H, becomes freed from the head of the screw; but when it is desired to remove the lower sleeve, I, it must be screwed downward upon the rod until it can be taken from its smaller end. The shoulder which is formed inside of the sleeve I serves as a stop to the sleeve, to prevent it from being moved upward beyond that point at which the sleeve H can readily be attached to the one I and the screw-rod.

Were it not for the shoulder on the screw-rod the sleeve I would follow the upward movement of the sleeve H as long as the two were in contact, or until the one I was freed from the screw, when it would drop off into the tubing. The shoulder acts as a stop to prevent the removal of the sleeve from the screw until the screw is first removed.

By means of the construction above described the screw-rod and sleeve I can be always left upon the top of the standing valve, so that it can be raised whenever so desired.

When it is desired to raise the standing valve, so as to let rivets and other similar devices fall through the bottom of the casing, a clamp, which is composed of the three parts B H I, is connected to the working valve, as shown, and then the valve is lowered until the lower end of the screw-rod enters the top of the cage of the standing valve, as shown. By turning around the rods which are connected to the working valve A this lower end of the screw is made to screw onto the cage of the valve D, and then the working valve and the standing valve can be raised upward together, and that without removing the rods or any other parts of the well. If it is desired, this clutch may be left upon the standing valve, so that the working valve can be lowered at any time that it is desired to lift the standing valve upward, or the clutch may be connected to the working valve, and then only lower the standing valve when it is desired to raise the standing valve upward. A jam-nut, C, is placed upon the lower end of the rod, as shown, between the lower sleeve, I, and the top of the working valve D.

Having thus described my invention, I claim—

The combination of the screw-rod B, having an enlarged upper end, the two sleeves H I, provided with recesses and projections to cause them to turn together, and the working and standing valves, substantially as shown and described.

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

JOHN MORAN.

Witnesses:
I. P. BOGGS,
MARK BECKWITH.