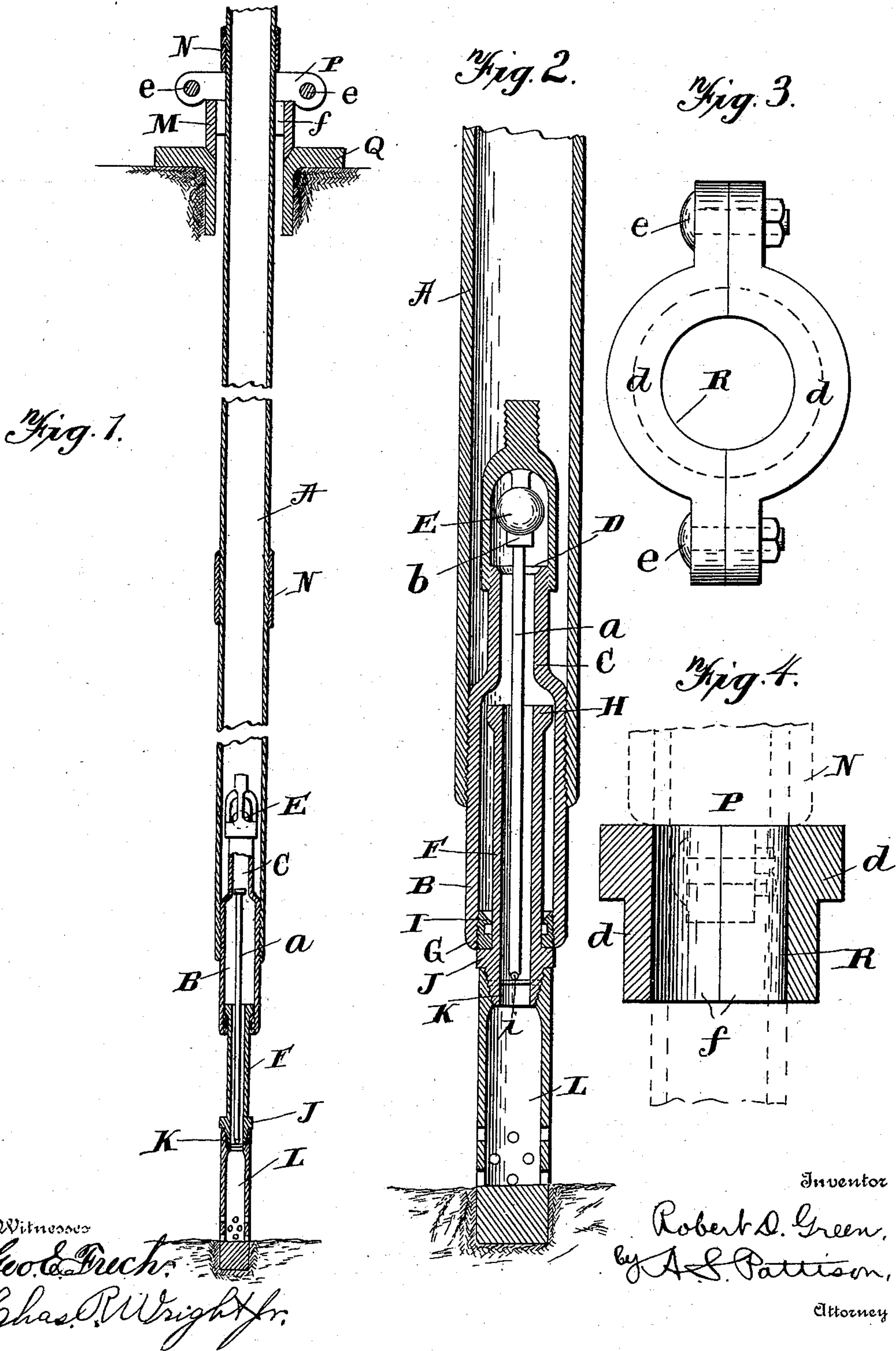


No. 654,729.

Patented July 31, 1900.

R. D. GREEN.  
ARTESIAN OR OIL WELL.  
(Application filed Apr. 7, 1900.)

(No Model.)





# UNITED STATES PATENT OFFICE.

ROBERT D. GREEN, OF CYCLONE, PENNSYLVANIA.

## ARTESIAN OR OIL WELL.

SPECIFICATION forming part of Letters Patent No. 654,729, dated July 31, 1900.

Application filed April 7, 1900. Serial No. 11,989. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT D. GREEN, a citizen of the United States, residing at Cyclone, in the county of McKean and State of Pennsylvania, have invented new and useful Improvements in Artesian or Oil Wells, of which the following is a specification.

My invention relates to improvements in Artesian or oil wells, and pertains to providing a dumping device for the lower end of the tubing, all of which will be fully described hereinafter, and particularly pointed out in the claims.

The object of my invention is to provide a dumping valve or barrel for the lower end of the tubing constituting the well, whereby the usual loss of oil in the pulling of the tubing or rods is prevented and by means of which also the sediment or sand collected within the tubing may be permitted to escape or be dumped therefrom without the necessity of pulling the tubing or removing the working barrel from the well, which is found to be of great utility.

In the accompanying drawings, Figure 1 is a vertical sectional view of an Artesian well, showing my invention applied thereto and supported in the position for the pumping of the oil. Fig. 2 is a similar view, the parts being shown in the position of dumping the oil or the collected sediment and sand from the lower end thereof. Fig. 3 is a top plan view of a supporting-ring for the tubing, which is situated at the upper end of the well.

Referring now to the drawings, A indicates the usual working barrel. My invention pertains to an attachment at the lower end of the working barrel; and it consists in providing what I term a "dumping-barrel" B, which has its upper end screw-threaded and fitting within the lower end of the working barrel. Projecting upward within the working barrel and supported, preferably, by the dumping-barrel B is a projecting tubular portion C, carrying at its upper end the usual standing valve D, provided with the usual valve E.

Situated within the dumping-barrel B and movable vertically or longitudinally therein is what I term a "dumping-valve," the said dumping-valve consisting of a small tube F, which passes freely through the lower contracted end G of the dumping-barrel B. The

upper end of this dumping valve or tube F is provided with a projecting flange H, formed to constitute a valve for engagement with the upper valve-seat I, formed at the upper edge of the contracted portion G, situated at and within the lower end of the dumping-barrel B. The lower end of the dumping tube or valve F is provided with an angular collar J and at a point below the said angular collar J with a tapered externally-screw-threaded lower end K, the said tapered screw-threaded end K adapted to be screwed into and connected with any desired form of anchor L.

Situated within the dumping-valve tube F and moving vertically therein is a rod *a*, having, preferably, at its upper end an enlargement *b*, which enlargement is adapted to engage the valve E of the standing valve D when the tubing is lowered into the position indicated in Fig. 2.

From this description it will be noted that when it is desired to dump the collected sediment and sand from the working barrel it is only necessary to lower the working barrel, as indicated in Fig. 2, which will cause the dumping-barrel B to telescope the valve-tube F and carry the upper enlarged end *b* of the rod *a* into engagement with the valve E and move it from its seat, which will permit the downward rush of the oil from the working barrel and carry with it the collected sediment and sand, as will be readily understood.

From this description it will be seen that I am enabled to remove the tubing from the well without losing the oil, and also am enabled to dump the collected sediment and sand therefrom without removing the tubing from the well.

For the purpose of supporting the tubing and enabling it to be elevated or lowered conveniently without removing any section of the tubing I provide at the upper end of the well and resting upon the upper end of the casing a ring M, which is sufficiently large to permit the passage therethrough not only of the tubing itself, but of the joints N therein. For the purpose of supporting the tubing by the engagement of a joint therein with a supporting member I provide a divided ring P, which consists of the two portions *d*, which are adapted to be clamped together by means of suitable clamping-bolts *e*. This ring P



preferably has a depending flange *f*, fitting within the upper end of the ring *M*, and the ring *M* has its lower end tapered, as shown at *g*, for resting within the upper end of the casing *Q*. The opening *R* in this supplemental supporting-ring *P* is of a size which will permit the tubing itself to pass therethrough, but which will not permit the joints thereof to pass through it, thus serving to support it by one of the joints resting thereon, as clearly illustrated in the drawings. When it is desired to either lower or raise the tubing for the purpose of withdrawing the tubing from the well or for the purpose of dumping the sediment therefrom, as hereinbefore stated, it is only necessary to lift the tubing sufficiently to enable the divided supplemental ring *P* to be lifted from the ring *M* and opened outward, when the tubing can either be raised or lowered one or more joints and the supplemental ring caused to embrace the tubing just below that joint which it is desired shall form the support of the tubing. From this it will be noticed that by means of a supplemental-divided ring it is not necessary to unscrew any of the joints of the tubing for the purpose of either lowering or raising it, which is necessary where a ring capable of being divided is not provided. This device is especially useful in connection with my dumping device, serving as means whereby the tubing can be readily lowered or raised.

By reference to the drawings it will be noted that the independently vertically arranged rod *a* has its lower end in engagement with transverse pins *i*, passing through the tapered lower end *K* of the tube *F*, and these pins serve to support the rod when the working barrel is lowered, whereby the upper end of the rod will unseat the standing valve *D*.

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

1. An Artesian well comprising a working barrel having at its lower end a standing valve, and a telescoping member passing through the lower end thereof and projecting therein and adapted to lift the standing valve from its seat when the working barrel is lowered, substantially as described.

2. An Artesian well comprising a working barrel, a standing valve therein, a supplemental or dumping valve barrel carried by the working barrel below the standing valve, and a member passing through the lower end of the working barrel, and of a length sufficient to engage the standing valve when the working barrel is lowered, substantially as described.

3. An oil-well comprising a vertically-movable working barrel, a standing valve at the lower portion thereof, a supplemental dumping-valve barrel below the standing valve, a tube passing within the dumping-valve barrel, the said tube carrying means adapted to engage the standing valve when the working barrel is lowered for the purpose of unseating

the standing valve and dumping the collected sediment or sand therefrom, substantially as described.

4. An oil-well comprising a vertically-movable working barrel, an attachment therefor comprising a supplemental valve-barrel carrying a standing valve, and a tube within the supplemental barrel, the said tube carrying means at its upper end adapted to engage the standing valve when the working barrel is lowered, substantially as described.

5. An oil-well comprising a working barrel, a standing valve therefor and at the lower end thereof, and a member vertically movable in relation to the working barrel and adapted to engage and unseat the standing valve when the working barrel is lowered, substantially as described.

6. An Artesian well comprising a vertically-movable working barrel, a standing valve in the lower end thereof, and a tube carrying an upwardly-projecting member adapted to engage and unseat the standing valve when the working barrel is lowered, substantially as described.

7. An Artesian well comprising a working barrel having at its lower end a standing valve, and a tube carrying an upwardly-projecting member adapted to engage and unseat the standing valve when the working barrel is lowered, substantially as described.

8. An Artesian well comprising a working barrel, an anchor at the lower end thereof, the working barrel having a standing valve at the lower end thereof, an independent tube having its lower end connected with the anchor and its upper end adapted to telescope the working barrel, the tube carrying means adapted to engage and unseat the standing valve when the working barrel is lowered, substantially as described.

9. An oil-well comprising a vertically-movable working barrel, a relatively-stationary telescoping member at the lower end of the well, the working barrel carrying a standing valve, the telescoping member adapted to unseat the standing valve when the working barrel is lowered, and means at the upper end of the well for supporting the working barrel, substantially as described.

10. An Artesian well comprising a working barrel, a relatively-stationary tube at the lower end of the well adapted to telescope the working barrel, the working barrel having a standing valve, the said stationary tube carrying therein a vertically-arranged rod with an upwardly-projecting end adapted to engage the standing valve and unseat it when the working barrel is lowered, substantially as described.

11. An Artesian well comprising a vertically-movable working barrel, a relatively-stationary dumping member, a standing valve carried by the working barrel and adapted to be unseated by the dumping member, and a supporting means at the upper end of the well comprising a ring *M* of sufficient size to



5 permit the working barrel and its joints to pass therethrough, and a divided ring P having a relatively-smaller opening which will not permit the joints of the tube to pass through it, substantially as described.

10 12. An Artesian well comprising a working barrel having at its lower end a standing valve, a member projecting within the working barrel and adapted to engage the said valve, one of said members being vertically movable in respect to the other, whereby the

standing valve is adapted to be unseated by the relative movement thereof, substantially as described.

In testimony whereof I have hereunto set 15 my hand in the presence of two subscribing witnesses.

ROBERT D. GREEN.

Witnesses:

FRANK R. FOSTER,  
A. M. BOARDMAN.