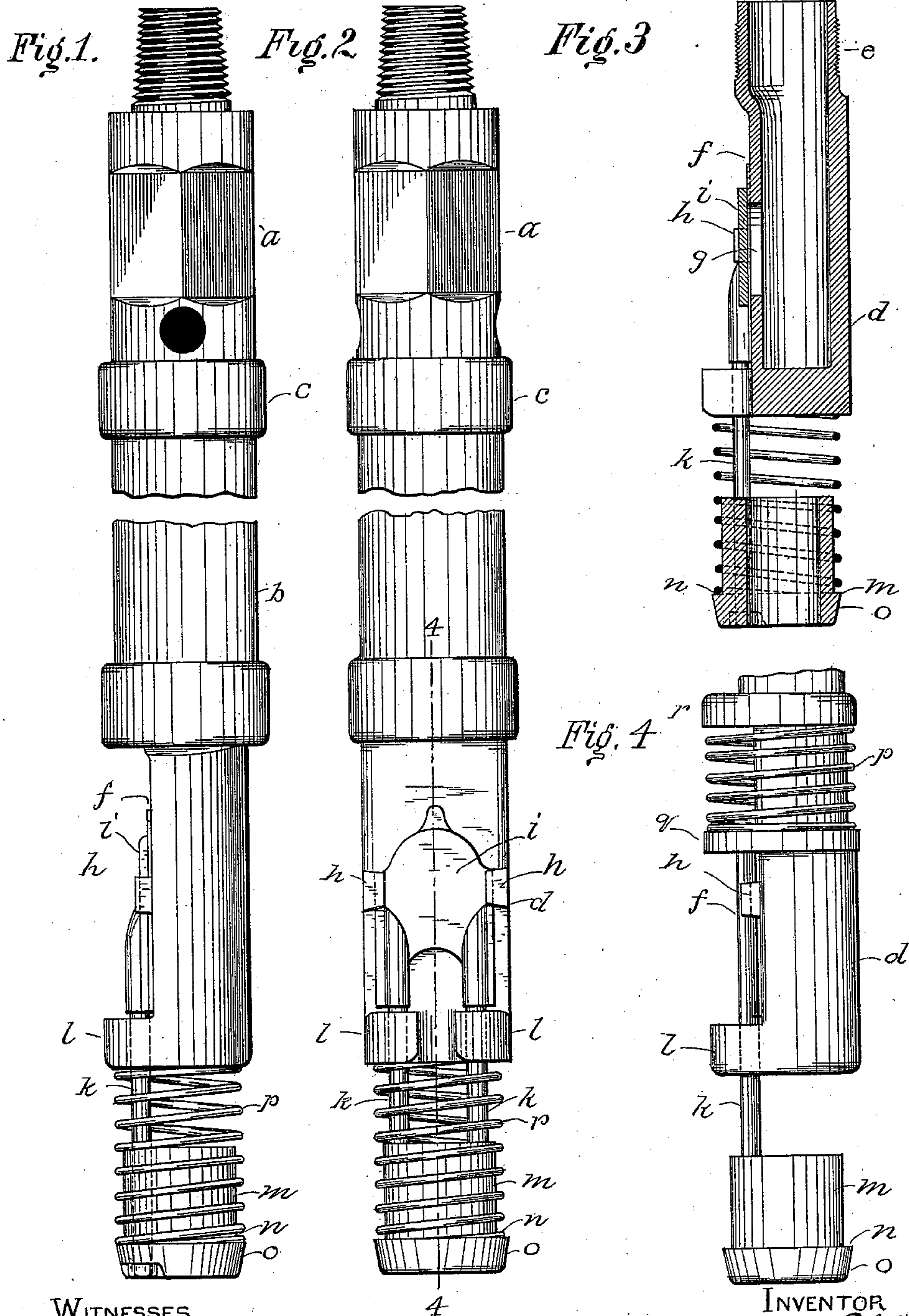


(No Model.)

W. PLOTTS.
BAILER FOR OIL OR ARTESIAN WELLS.

No. 532,815.

Patented Jan. 22, 1895.



WITNESSES
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UNITED STATES PATENT OFFICE.

WILLIAM PLOTTS, OF McDONALD, PENNSYLVANIA.

BAILER FOR OIL OR ARTESIAN WELLS.

SPECIFICATION forming part of Letters Patent No. 532,815, dated January 22, 1895.

Application filed April 24, 1894. Serial No. 508,802. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PLOTTS, a resident of McDonald, in the county of Washington and State of Pennsylvania, have invented a new and useful Improvement in Bailers for Oil or Artesian Wells; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to bailers for use in connection with the drilling of wells, prospecting for minerals, hydrographic operations, or other purposes for which such a device may be found applicable.

The object of my invention is to make certain improvements on a device set forth in Letters Patent of the United States granted to me on April 25, 1893, No. 496,323.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved bailer. Fig. 2 is a like view taken at right angles to that shown in Fig. 1. Fig. 3 is a vertical section on the line 4—4 Fig. 2. Fig. 4 is a modified form of my invention.

Like letters indicate like parts in each of the figures.

The pin-substitute *a* is similar to the one illustrated in the Letters Patent hereinbefore mentioned, but any suitable form of a pin-substitute may be employed.

As my invention relates to the bailer bottom it is not deemed necessary to refer more particularly to the pin-substitute.

The pipe *b* which forms the shell of the bailer is connected to the pin-substitute *a* by means of the collar *c*. The bottom *d* of the bailer is provided with the threaded end *e* by which it is secured to the pipe *b*. The bottom *d* is formed with the recessed portion *f*, and in said recessed portion is the opening *g* leading into the interior of said bottom. At the sides of the opening *g* are the guides *h*, and fitting within said guides and vertically movable therein is the valve *i*. Extending from the valve *i* are the guide-rods *k*, said guide-rods *k* passing down through the lugs *l* on the bottom *d*, and free to slide in said lugs. Secured to said guide-rods *k* is the weight *m*. A shoulder *n* is formed on the weight *m* by means of a ring *o* secured to said weight. In-

terposed between said shoulder *n* and the lower face of the bottom *d* is the spring *p*, said spring, together with the weight *m*, acting to draw the valve *i* normally over the opening *g* to close same.

In Fig. 4 I have illustrated my invention in another form, in which the spring *p* is arranged above the opening *g* and is interposed between the lugs *q* and a shoulder *r* formed on the bottom.

Where my improved bailer is employed in connection with oil wells, as it is lowered into the well the valve *i* is prevented from rising by the weight *m* and spring *p*, while the bailer is passing through the fluid in the well. When, however, the bailer strikes the bottom of the well, the resistance offered by the spring *p* will be overcome, whereupon the bailer will slide down the rods *k*. This will cause the valve *i* to ascend and expose the opening *g*. The weight of the column of fluid in the well will force the sediment into the shell. When the bailer is raised the combined action of the weight *m* and spring *p* will immediately cause the valve *i* to descend and close the opening *g*. By this construction the closing of the valve is always assured when the bailer is raised, while upon its descent into the well the same assurance is given that the valve will remain closed until the bailer strikes the bottom of the well.

While I have described my invention and illustrated it as applicable to oil and like wells, yet it is to be understood that its form may be varied to suit other purposes, such as prospecting for minerals, hydrographic operations, &c.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A bailer having an opening formed therein and guides on the outer face of said bailer at each side of said opening, a sliding valve engaging with said guides and controlling said opening, and a spring interposed between an abutment on said bailer and a shoulder on said valve, substantially as and for the purposes set forth.

2. A bailer having an opening formed therein and guides on each side thereof, a sliding valve engaging therewith, a rod on said valve passing through a suitable guide on said bailer, and a spring interposed between an

abutment on said bailer and a shoulder at the end of said rod, substantially as and for the purposes set forth.

3. A bailer having an opening formed therein and guides on each side thereof, a sliding valve engaging therewith, a rod on said valve passing through a suitable guide on said bailer, a weight on the end of said rod, and a spring interposed between an abutment on
10 said bailer and a ring secured to said weight, substantially as and for the purposes set forth.

4. A bailer having an opening therein and guides on the outer face of said bailer at each side of said opening, and a sliding weighted valve engaging with said guides, substantially
15 as and for the purposes set forth.

In testimony whereof I, the said WILLIAM PLOTTS, have hereunto set my hand.

WILLIAM PLOTTS.

Witnesses:

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ROBT. D. TOTTEN.