

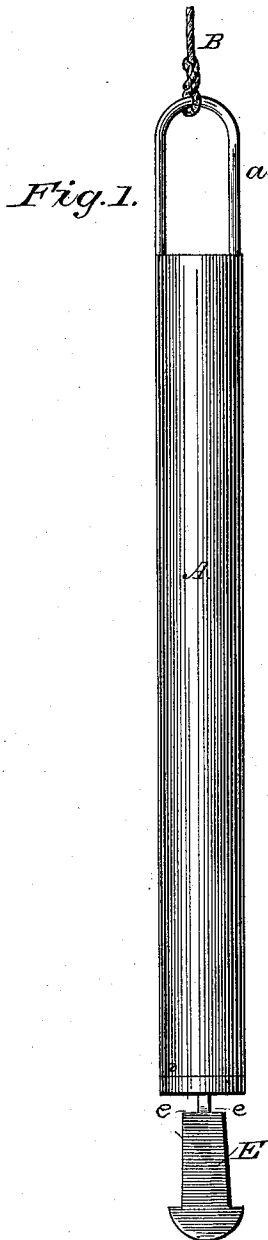
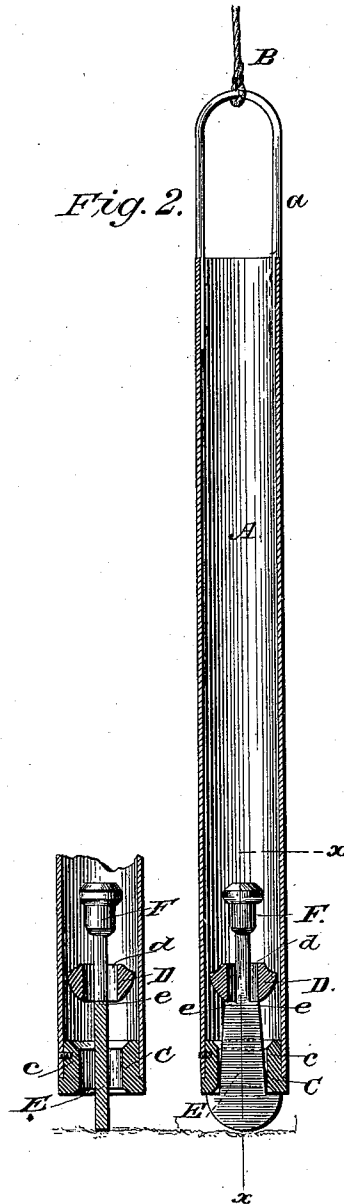
(No Model.)

D. F. BROWN.

BAILER.

No. 373,266.

Patented Nov. 15, 1887.



WITNESSES:
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UNITED STATES PATENT OFFICE.

DAVID FISHER BROWN, OF WASHINGTON, PENNSYLVANIA.

BAILER.

SPECIFICATION forming part of Letters Patent No. 373,266, dated November 15, 1887.

Application filed April 25, 1887. Serial No. 236,092. (No model.)

To all whom it may concern:

Be it known that I, DAVID FISHER BROWN, of Washington, in the county of Washington and State of Pennsylvania, have invented a new and useful Improvement in Bailers, of which the following is a specification.

My invention is an improved bailer intended especially for use in bailing the sediment out of oil and Artesian wells after they have been drilled, and relates particularly to that class of such bailers comprising a body or tube having its lower end provided with a valve-seated opening, a valve for closing said opening, and a dart or stem fixed to said valve and extended out of the tube or body.

The present invention consists in the improved construction of valves and tripping mechanism arranged and combined substantially as hereinafter described.

In the accompanying drawings, Figure 1 is a side view of the bailer with the parts in position for inserting the device in the well, and Fig. 2 is a sectional view of the device with the valve mechanism tripped as when the sediment is being received in or discharged from the bailer.

The bailer-tube A may be of ordinary construction, having a bail, *a*, at its upper end, or otherwise formed to facilitate the attachment of the hoisting-rope B, and provided within it, near its lower open end, with a valve-seat, *c*. It is usual to form this valve-seat in a short iron tube, C, which is secured in the lower end of the body of the tube, which body is ordinarily formed of heavy tin or similar sheet metal. The valve D is fitted to the seat *c*, and is formed with a central bore or opening, at the upper end of which is formed a valve-seat, *d*. The dart E extends through the opening in valve D, and has at its upper end a valve, F, fitted to the seat *d*. Below the valve D, and a short distance therefrom, the dart is formed with a shoulder or projection, *e*, which, when the dart is pushed up, engages the valve D and unseats the same. It will be noticed that the opening in valve D is larger than the portion of the dart which works through said opening, so that when valve F is unseated a vent will be formed through the said valve D.

In practice with the common bailer, which has but a single valve and the dart fixed to said valve, the sediment—especially when

thick and sandy—will not freely enter the bailer-tube, and when therein will not always dump, except with great difficulty, and frequently the bailer has to be turned end for end, which operation is likely to fracture or otherwise injure the bailer-tube, such tube, as before stated, being usually made of tin or similar sheet metal.

By my invention I provide two valves at the bottom, the one first to open being made small, and consequently meeting but slight resistance and opening easy, serving to start and loosen the sediment. On a further up-pushing of the dart the larger or main valve is raised by means of the shoulder on the dart.

In operation it will be understood the device is lowered into a well, the valve mechanism being in the position shown in Fig. 1. On striking the bottom of the well the dart trips the valves in the manner before described, and the parts take the position shown in Fig. 2, the bailer filling with the sediment and fluid. Then on elevating the bailer the valves will be closed and the sediment, &c., drawn out of the well, when by lowering the dart against a fixed object the valves will be opened and the contents of the bailer be discharged.

Having thus described my invention, what I claim as new is—

1. In a bailer, the combination, with the tube having an internal valve-seat, of the main valve fitted to said seat and having an opening formed through it, and a valve-seat at the upper end of said opening, and the dart extended through the opening of the main valve and provided at its upper end with a valve fitted to the seat formed in the main valve, and below the said valve with a projection arranged to engage and trip the main valve, substantially as set forth.

2. In a bailer, the tube having an internal valve-seat, combined with the main valve having an opening formed through it and provided with a seat for the valve of the dart, and the dart having a valve to close the opening in the main valve, and a projection or projections whereby to trip the main valve in the operation of the device, substantially as described, and for the purposes specified.

DAVID FISHER BROWN.

Witnesses:

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