

No. 640,413.

Patented Jan. 2, 1900.

W. PLOTTS.
BAILER.

(Application filed Jan. 29, 1896.)

(No Model.)

Fig. 1.

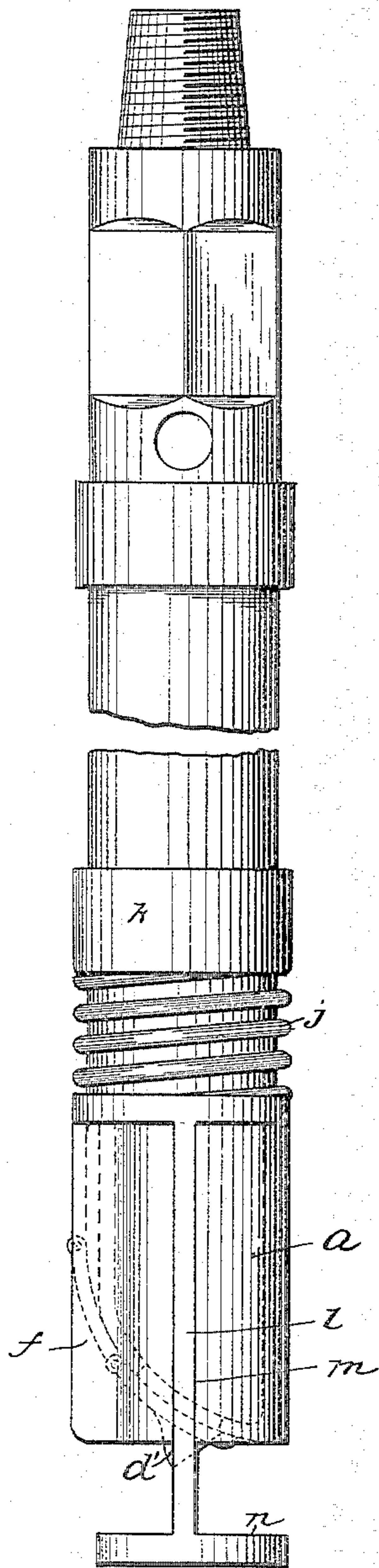


Fig. 2.

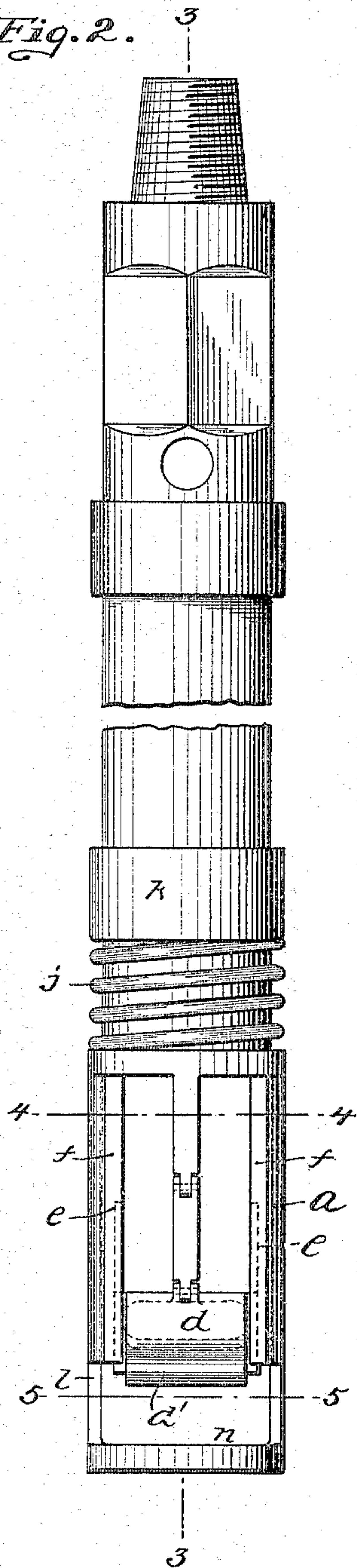


Fig. 3.

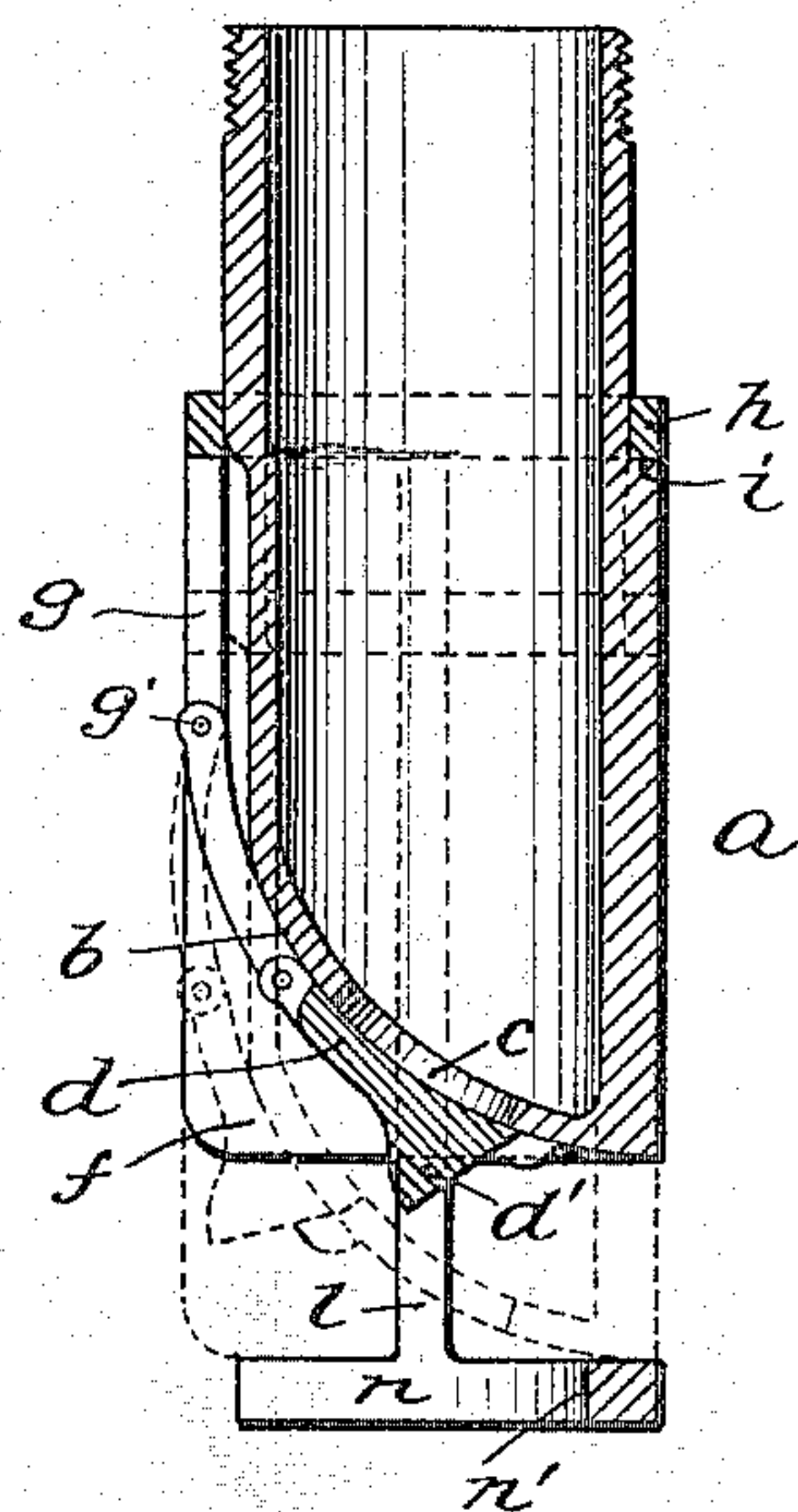


Fig. 4.

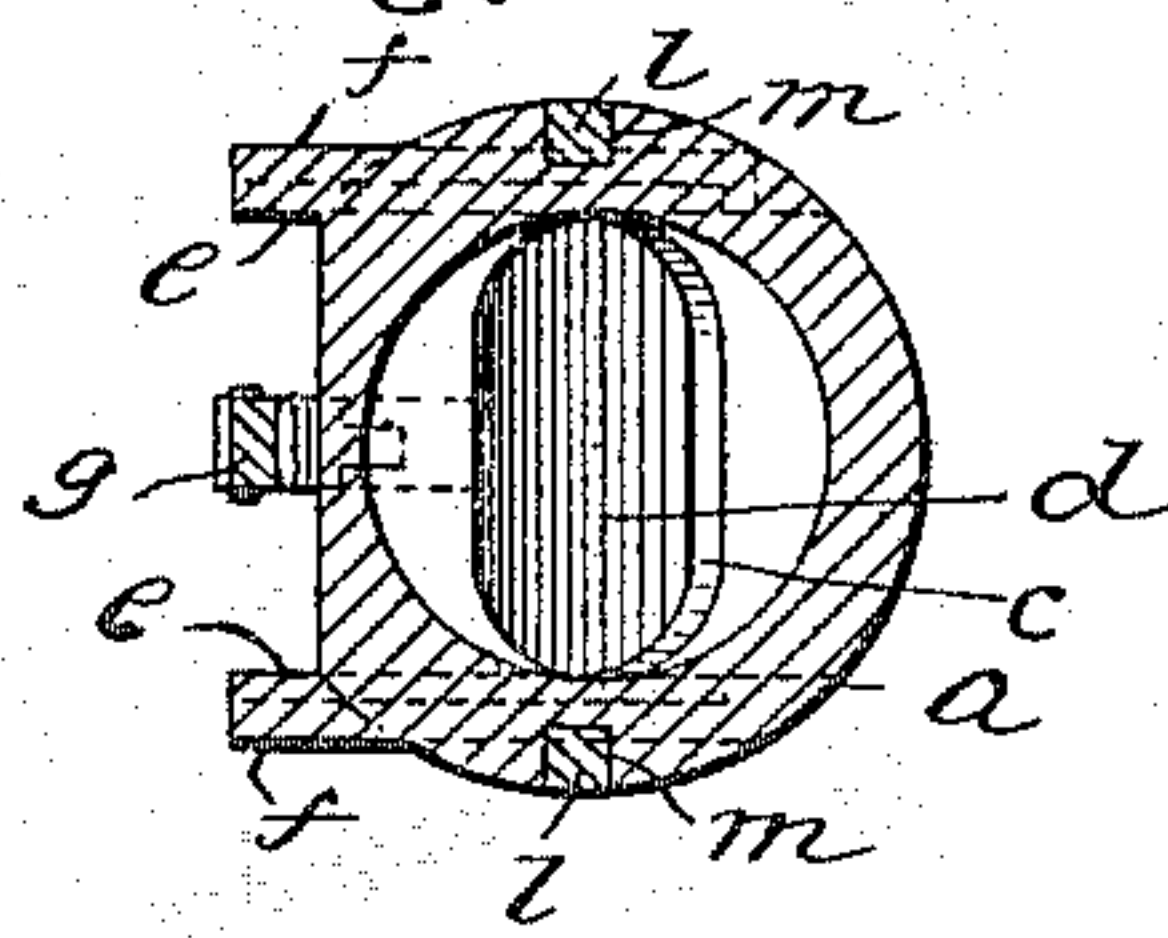
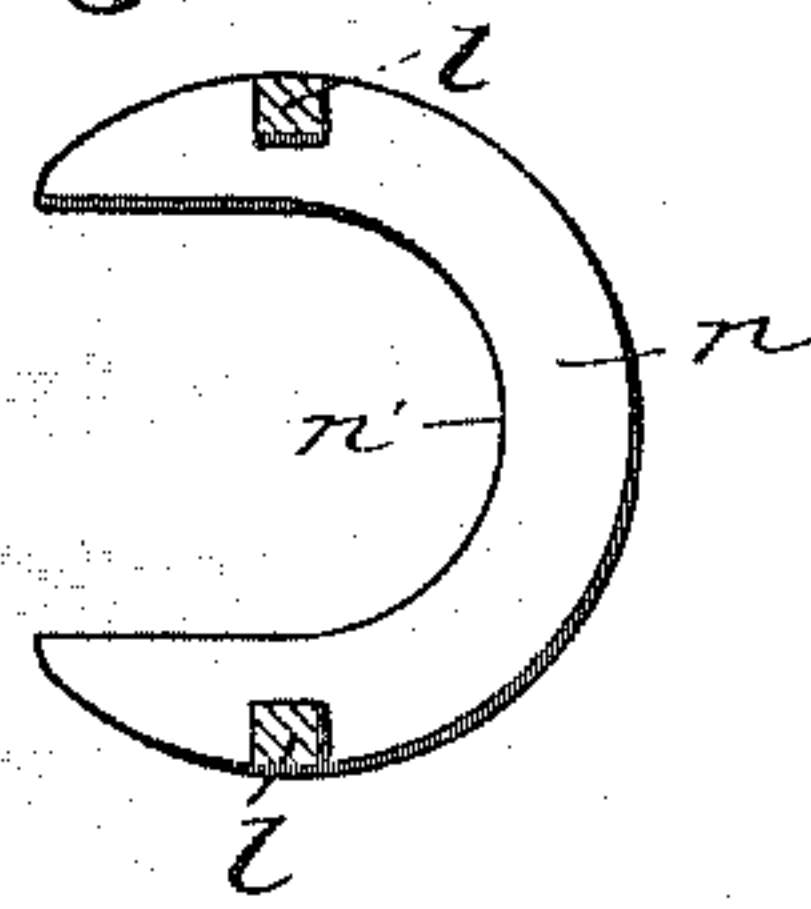


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM PLOTTS, OF McDONALD, PENNSYLVANIA.

BAILER.

SPECIFICATION forming part of Letters Patent No. 640,413, dated January 2, 1900.

Application filed January 29, 1896. Serial No. 577,244. (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
5 a new and useful Improvement in Bailers; 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 cleaning of wells, prospecting for minerals, hydrographic operations,
10 or other purposes for which such a device may be found applicable.

The object of my invention is to improve on a certain type of bailer set forth in Letters Patent of the United States No. 532,815,
15 granted to me January 22, 1895, whereby the water is permitted to play freely around the bottom of the bailer to aid in washing the sand, sediment, &c., up into the bailer.

My invention comprises, generally stated, a bailer having a curved bottom with an opening therein, a cover sliding over said opening, and a crescent-shaped weight depending
20 from said bailer, and connections between said weight and the sliding cover, whereby said weight upon striking the bottom of the well is forced up and moves said cover.

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

Figure 1 is a side view of my improved bailer, partly in section. Fig. 2 is a front view. Fig. 3 is a section on line 3 3, Fig. 2.
35 Fig. 4 is a sectional plan on line 4 4, Fig. 2; and Fig. 5 is a section on line 5 5, Fig. 2.

Like letters indicate like parts in each of the figures.

As my invention relates only to the lower
40 end of the bailer, I have not deemed it necessary to describe the connections above, which were set forth in the Letters Patent hereinbefore referred to and which form no part of the present invention.

The bailer *a* has the curved bottom *b*, which is formed by the front face of the bailer being curved inwardly toward the rear face, and this bottom *b* has the opening *c* formed therein.
45 By having the bottom curved in this manner with the opening in it said opening faces toward the bottom of the well, which permits of the sediment from the bottom of the well

being washed up from below into said opening in the manner more fully hereinafter set forth. This opening *c* is opened and closed
55 by the cover *d*, said cover being adapted to slide in the guides *e*, formed on the inner faces of the sides *f*. The cover *d* has the hood *d'* formed thereon, which projects beyond the regular line of the cover for the
60 purpose hereinafter set forth. Connected to the cover *d* is the strap *g*, which has a hinged joint, as at *g'*, to permit of a certain amount of play on its part, as will more fully appear in the description of the operation of the
65 bailer. The upper end of the strap *g* is connected to the movable ring or collar *h*, which rests upon the shoulder *i*. A spring *j* is interposed between the ring *h* and the head *k*.

Attached to the ring *h* are the rods *l*, said
70 rods fitting in grooves *m*, formed to receive them in the sides *f*. The lower ends of the rods *l* are connected to the weight *n*. This weight *n* is preferably in the form of a crescent with the concave recess *n'*, which is in
75 line with openings *c*. I do not limit myself, however, to the crescent-shaped weight; but as the bore of the well is round that is the most suitable shape for that purpose.

The operation of the bailer is as follows:
80 When the bailer is lowered into an oil-well, for instance, the weight *n* strikes the bottom and begins to ascend. As the weight is forced up, the ring *h* is raised and compresses the spring *j*. The ascent of the ring *h* pulls on
85 the strap *g* and draws the cover *d* from the opening *c*. When the cover *d* has been withdrawn to the full extent, the weight *n* will be in the position shown in dotted lines, Fig. 3. The weight of the column of fluid will
90 force the sediment into the bailer through the opening *c*. With the opening *c* facing the bottom of the well and the weight, with the recess *n'* in line therewith, there is full opportunity for the water to wash the sediment up
95 into the bailer. The hood *d'* on the cover *d* prevents the water from entering the opening *c* too directly and compels it to descend below said hood to wash up the sediment from the
100 concave recess *n'* into said opening. By the employment of the crescent-shaped weight the bottom of the well is not shut off by said weight, as in the case where a weight forming a complete circle is employed which covers

the bottom of the well. By my invention the water is free to wash the sediment from the bottom of the well by working in the recess of the weight. When the bailer is full, it is raised, whereupon the weight *n*, assisted by the spring *j*, slides the cover over the opening *c* to prevent the escape of the contents.

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

10 1. A bailer having a curved bottom extending entirely across the body of the bailer with an opening formed therein, a cover over said opening, and mechanism for sliding said cover, substantially as set forth.

15 2. A bailer having a downwardly and inwardly inclined surface with an opening formed therein, a sliding cover over said opening, a weight, rods connecting said weight with a vertically-movable ring, a spring interposed between said ring and a suitable abutment on said bailer, and a hinged strap connecting said ring and cover, substantially as set forth.

25 3. A bailer having an opening therein, a cover over said opening, a vertically-movable

weight below said bailer, said weight having a recess formed therein in line with said opening, and connections between said weight and said cover, substantially as set forth.

4. A bailer having an opening therein, a cover over said opening, a vertically-movable crescent-shaped weight below said bailer, the space inclosed by said crescent-shaped weight being in line with said openings and connections between said weight and said cover, substantially as set forth.

5. A bailer having a downwardly and inwardly curved surface with an opening formed therein, a cover over said opening, a vertically-movable weight below said bailer, said weight having a recess therein in line with said opening, and connections between said weight and said cover, substantially as set forth.

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

WILLIAM PLOTTS.

Witnesses:

ROBT. D. TOTTEN,
ROBERT C. TOTTEN.