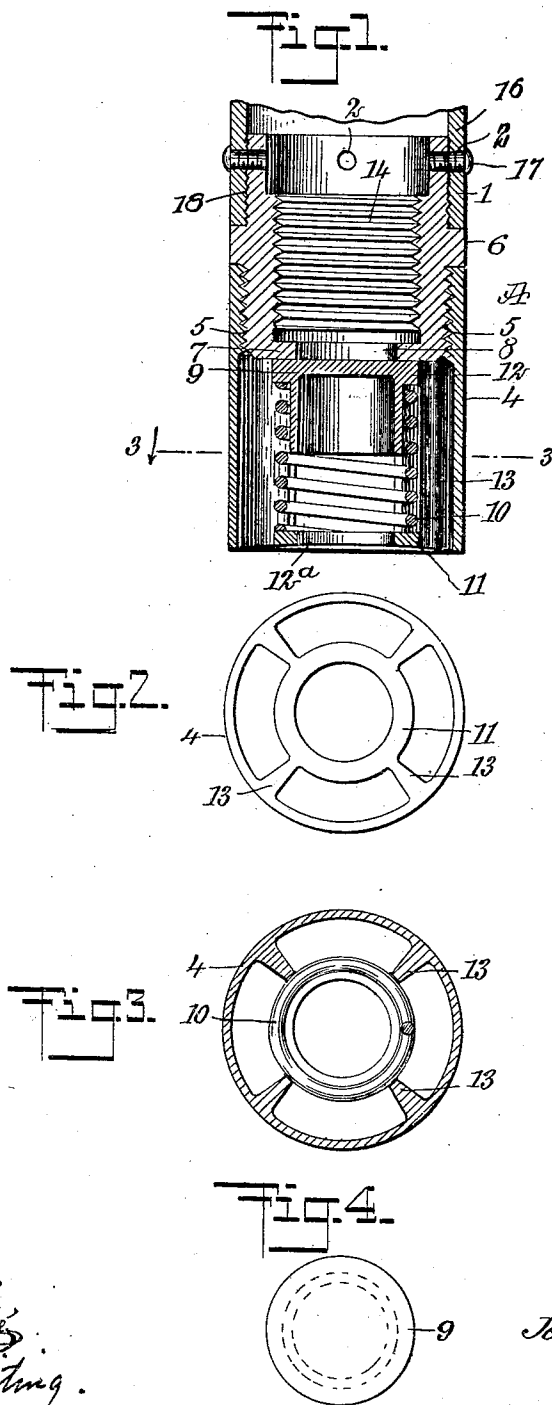


J. A. POLLARD.
 SELF CLOSING BOTTOM FOR WELL STRAINERS.
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WITNESSES
Ben Loffe
N. W. Hitting

INVENTOR
Jesse A. Pollard
 BY *Mum & Co*
 ATTORNEYS

UNITED STATES PATENT OFFICE.

JESSE ARTHUR POLLARD, OF OAKLAND, MISSISSIPPI.

SELF-CLOSING BOTTOM FOR WELL-STRAINERS.

941,205.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JESSE A. POLLARD, a citizen of the United States, and a resident of Oakland, in the county of Yalobusha and State of Mississippi, have invented a new and Improved Self-Closing Bottom for Well-Strainers, of which the following is a full, clear, and exact description.

This invention relates to self-closing bottoms for well strainers, which are adapted to be attached to a well strainer of any suitable type and to be lowered into a well, together with a strainer, by means of a force pipe, the latter being afterward removed.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which like reference characters denote corresponding parts in all the views, and in which—

Figure 1 is a vertical cross section through the strainer bottom; Fig. 2 is a bottom view of the device, showing the construction of the base; Fig. 3 is a horizontal cross section on the line 3—3 of Fig. 1; and Fig. 4 is a plan view of the valve.

Referring more particularly to the specific parts of the device, A is a casing which consists of an upper member 1 which is fastened to a strainer 16 by any suitable fastening means, such as bolts 17, through the openings 2 and a screw-threaded connection 18, and a lower member 4 fastened to the upper member by any suitable means, such as a screw-thread connection 5.

The upper member 1 has a cylindrical flange 6, which abuts against the lower member, and its outside surface forms a continuation of the outside surface of said lower member. The strainer body is also adapted to abut against this flange 6, and its outside surface forms a continuation of the surface of said flange and of said lower member of the casing. The whole will thus form a smooth exterior which will offer very slight resistance to its movement through sand or gravel.

The bottom of said upper member has an annular flange, as at 7, forming an opening 8. The under side of the flange 7 forms the seat for a valve 9 which is adapted to close the opening 8 and is held yieldingly against said seat by means of a spring 10, which is

supported by the upper surface of the base 11. The valve 9 may be of any suitable form or material, but preferably is hollow and cylindrical, and has a flange 12, against which the spring 10 bears. The spring 10 and the valve 9 are guided and retained in place by ribs 13 which extend from just below the screw thread 5 to the base of the lower member of the casing. These ribs leave passages between them for the flow of the sinking fluid. The base 11 is dished out or countersunk as at 12^a, so that in forcing the device into the earth, the outer edges will come in contact with the material first.

Within the upper member 1 is any suitable detachable fastening means, such as a screw-thread 14, to which may be attached a force pipe for forcing the whole device through the sand, and which may be readily removed after the whole is lowered sufficiently.

In the operation of the device, the strainer bottom is attached to any suitable strainer, and a force pipe inserted through the strainer and attached to said bottom by means of the screw-thread 14, the whole being driven into the well. A fluid is forced through the force pipe and out through the valve 9 in the bottom of the strainer, thus removing sand and other material from below the strainer bottom, giving it an easier and unobstructed passage through said material.

When the strainer with its bottom has reached the place desired, the force pipe is unscrewed and withdrawn; the valve 9 now closes, and the fluid to be raised necessarily has to go through the strainer.

If it is desired to remove the strainer from an exhaust well, a rod or pipe is inserted through the strainer and secured into the bottom thereof and the whole withdrawn, thus all the strain in inserting and removing the strainer from a well is carried by the bottom, and prevents said strainer, which is necessarily weak from its perforations, from being jammed to pieces.

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

1. A strainer bottom, comprising an upper member adapted to be secured to a strainer, a lower member connected to said upper member and having a countersunk base, and a valve supported on said base and engaging said upper member.

2. A strainer bottom comprising an upper

member adapted to be secured to a strainer, a lower member having a screw-threaded engagement with said upper member and having a countersunk base, and a valve supported on said base and engaging said upper member.

3. A strainer bottom, comprising an upper member adapted to be secured to a strainer, a lower member connected to said upper member and having a countersunk perforated base, and a valve supported on said base and engaging said upper member.

4. A strainer bottom, comprising an upper member adapted to be secured to a strainer, a lower member connected to said upper member and having a countersunk base, a spring resting on said base, and a valve normally pressed by said spring, into engagement with said upper member.

5. A strainer bottom, comprising an upper member adapted to be secured to a strainer, a lower member connected to said upper member and having a countersunk perforated base, a spring resting on said base, and a valve normally pressed by said spring, into engagement with said upper member.

6. A strainer bottom, comprising an upper member, means for securing said upper member to a strainer, a lower member connected to said upper member and having a countersunk base, and a valve supported on said base and engaging said upper member.

7. A strainer bottom, comprising an upper member adapted to be secured to a strainer, a lower member connected to said upper member and having a countersunk base, an inwardly-extending flange on said upper member, and a valve supported on said base and adapted to engage said flange on said upper member.

8. A strainer bottom, comprising an upper member adapted to be secured to a strainer and having fastening means adapted to engage a force rod, a lower member connected to said upper member and having

a countersunk base, and a valve supported on said base and engaging said upper member.

9. A strainer bottom, comprising an upper member adapted to be secured to a strainer, a lower member connected to said upper member and having a countersunk base, a spring resting on said base, a valve normally pressed by a spring, into engagement with said upper member, and ribs on said lower member adapted to retain said spring in position.

10. A strainer bottom, comprising an upper member adapted to be secured to a strainer, a lower member connected to said upper member, a countersunk base on said lower member, and a valve supported on said base and engaging said upper member.

11. A strainer bottom, comprising an upper member having fastening means adapted to engage a force rod, an annular flange on said upper member, means for attaching said upper member to a strainer, a lower member connected to said upper member and having a countersunk base, and a valve supported on said base and engaging said upper member.

12. A strainer bottom, comprising an upper member having fastening means thereon adapted to engage a force rod, an annular flange on said upper member forming a valve seat, a lower member having a screw-threaded engagement with said upper member and having a countersunk base, a spring supported on said base, a valve supported by said spring and normally pressed into engagement with said annular flange, and inwardly-extending guide ribs for said valve and said spring on said lower member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JESSE ARTHUR POLLARD.

Witnesses:

J. A. SAYLE,

A. M. KUYKENDALL.