S. D. EWING.

STANDING VALVE STRUCTURE.

APPLICATION FILED AUG. 20, 1917.

1,265,313. Patented May 7, 1918.

Fig. 2.

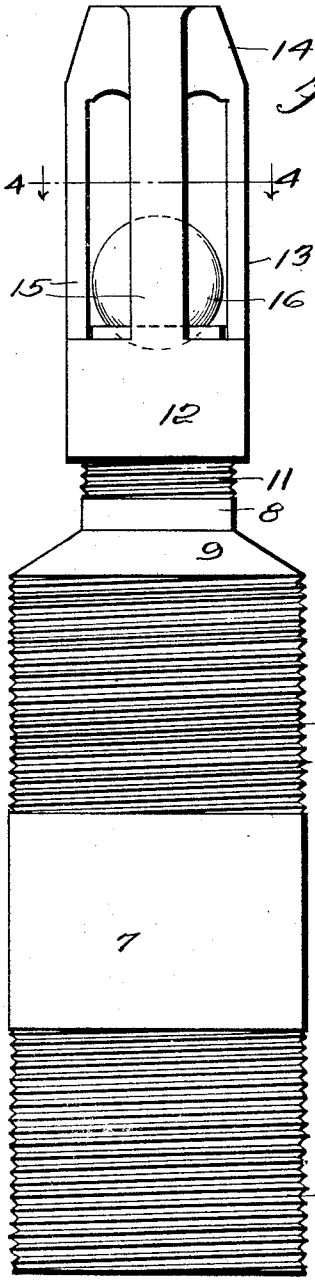


Fig. 4.

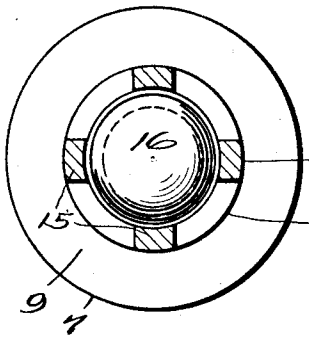


Fig. 1.

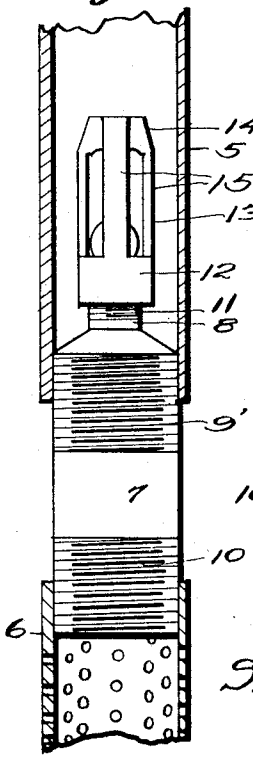
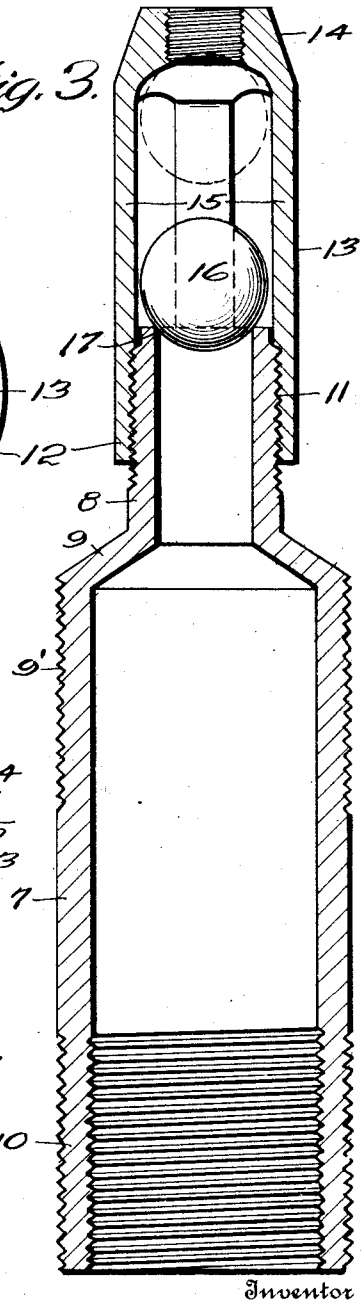


Fig. 3.



Witnesses

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STANDING-VALVE STRUCTURE.

1,265,313. Specification of Letters Patent. Patented May 7, 1918.

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To all whom it may concern:

Be it known that I, SAMUEL D. EWING, a citizen of the United States, residing at Sourlake, in the county of Hardin and State of Texas, have invented certain new and useful Improvements in Standing-Valve Structures, of which the following is a specification.

My invention relates to improvements in pumps, and has particular reference to a standing valve structure, to be interposed between the working barrel of the pump and the tubular strainer member.

An important object of the invention is to provide a device of the above mentioned character, which serves as a coupling between the working barrel and strainer member, to effectively exclude foreign matter therefrom.

A further object of the invention is to provide apparatus of the above mentioned character, which is simple in construction, strong and durable.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a central longitudinal sectional view through a portion of the pump, embodying my invention,

Fig. 2 is a side elevation of the standing valve structure,

Fig. 3 is a central longitudinal sectional view through the same, and,

Fig. 4 is a horizontal sectional view taken on line 4—4 of Fig. 1.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates the working barrel of the pump, the lower end of which is internally screw-threaded, as shown. The numeral 6 designates a tubular strainer member, the upper end of which is internally screw-threaded, as shown.

My improved standing valve structure comprises a tubular body portion 7, provided at its upper end with a reduced tubular extension 8, secured thereto by a shoulder 9. The upper end of the tubular body portion 7 is externally screw-threaded, as shown at 9′, to engage within the lower screw-threaded end of the barrel 5. The lower end of the tubular body portion 7 is open and is externally screw-threaded, as shown at 10, to engage within the internally screw-threaded upper end of the tubular strainer member 6.

The lower end of the tubular body portion 7 is internally screw-threaded, for engagement with a gas anchor (not shown).

The reduced tubular extension 8 is externally screw-threaded, as shown at 11, for engagement with the internally screw-threaded lower annular portion 12 of a valve cage 13. This valve cage is provided with a cap 14, secured to the lower annular portion 12, by means of spaced bars 15.

Arranged within the valve cage 13 is a ball valve 16, freely movable therein, and adapted to contact with a valve seat 17, formed upon the upper end of the tubular extension 8, as shown. From the foregoing description it is obvious that the tubular body portion 7 forms a strong and watertight coupling or connection between the working barrel and the tubular strainer member, whereby foreign matter is effectively excluded from the interior of the working barrel.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

In apparatus of the character described, the combination with the working barrel of a pump provided at its lower end with internal screw-threads, of a strainer element arranged beneath and disposed in end to end relation to the working barrel and spaced therefrom and internally screw-threaded, of a tubular coupling provided at its opposite ends with external screw-threads to engage with the internal screw-threads of the working barrel and strainer element whereby the ends of the tubular coupling project into the same for a suitable distance, a tubular exten-

sion having a substantially smaller diameter than the tubular coupling connected with the upper end thereof and arranged within the lower portion of the working barrel and provided at its upper end with a valve seat, a cage screw-threaded upon the tubular extension and having outlet openings formed therein, and a ball valve freely movable within the cage to contact with the valve seat.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL D. EWING.

Witnesses:
W. G. FULLER,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."