D. HUNT.

PUMP.

APPLICATION FILED MAR. 20, 1920.

1,374,923. Patented Apr. 19, 1921.

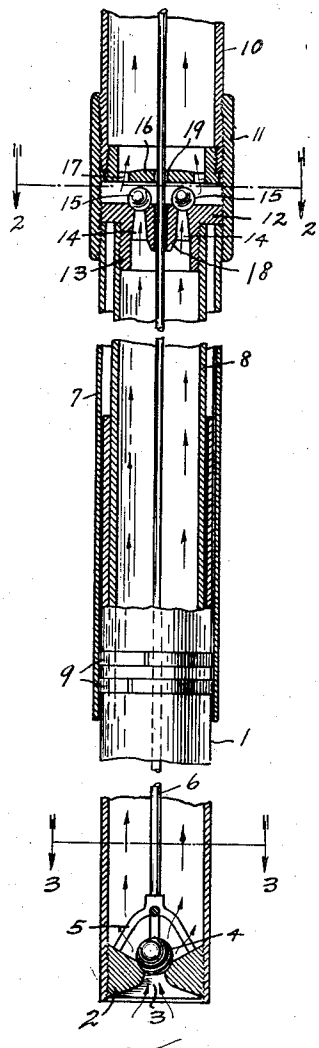


Fig. 1.

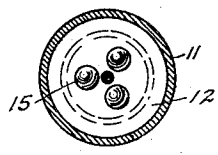


Fig. 2.

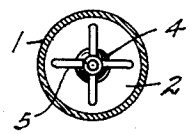


Fig. 3.

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DAVID HUNT, OF HOUSTON, TEXAS, ASSIGNOR OF ONE-HALF TO JOHN T. BOYLE, OF HOUSTON, TEXAS.

PUMP.

1,374,923. Specification of Letters Patent. Patented Apr. 19, 1921.

Application filed March 20, 1920. Serial No. 367,517.

To all whom it may concern:

Be it known that I, DAVID HUNT, citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Pumps, of which the following is a specification.

This invention relates to new and useful improvements in a pump.

One object of the invention is to provide a pump of the character described which is specially adapted for the purpose of pumping a fluid from deep wells such as oil or water wells.

Another object of the invention is to provide a pump of the character described which will readily operate to pump fluid laden with sand and which will not readily become sanded up or clogged with sand.

With the above and other objects in view, the invention has particular relation to certain novel features of construction, operation and arrangement of parts, an example of which is given in this specification and illustrated in the accompanying drawings wherein:—

Figure 1, is a vertical sectional view of the pump,

Fig. 2 is a transverse sectional view taken on the line 2, 2 of Fig. 1 and,

Fig. 3 is a transverse sectional view taken on the line 3, 3 of Fig. 1.

Referring now more particularly to the drawings wherein like numerals of reference designate similar parts in each of the figures, the numeral 1 refers to a traveling barrel which is tubular in form and within the lower end of which there is screwed a valve seat 2, having a central passageway 3, which is controlled by the valve 4. Fastened to this seat there is a cage 5, which retains said valve in place and a pump rod 6 is attached at its lower end to said cage through which the traveling barrel 1 is reciprocated up and down.

A standing barrel is provided consisting of the concentrically arranged pipe sections 7 and 8 which are spaced apart and between which the traveling barrel works.

Interposed between the traveling barrel and the outer section 7 are the expansion rings 9 forming a close fit between said barrels. The numeral 10 refers to the pipe to which the pump is connected and which extends to the top of the bore. The pump is connected to this pipe by means of the coupling 11 which is threaded on to the lower end of said pipe and into which the upper end of the section 7 is threaded. A valve seat 12 is threaded through said coupling 11 and has an annular depending outwardly threaded flange 13 on to which the upper end of the inner section 8 is threaded, and the construction described forms means for anchoring the concentric sections of the standing barrel and holding them in spaced relation to each other. The valve seat 12 has a plurality of fluid passageways 14 therethrough which are controlled by the ball valves 15 and has a central stuffing box 18 through which the rod 6 operates. Within the lower end of the pipe 10 there is secured a spider 16 which retains said valves against displacement and which has the fluid openings 17 therein, and a central bearing 19 for said rod 6.

The traveling barrel is reciprocated through the rod 6 from a suitable reciprocating mechanism located on the surface of the ground. Upon the downward movement of said traveling barrel, the valve 4 is lifted to permit said barrel to fill with the fluid to be pumped and upon upstroke the fluid is forced up through the passageways 14 lifting the valves 15 and passing on up through the spider 16 into the pipe 10 through which it is conveyed to the ground surface.

What I claim is:

1. A pump, including a standing barrel formed of concentrically arranged pipe sections, a valve seat having a plurality of fluid passageways therethrough and formed with a depending outwardly threaded flange, the upper end of the inner pipe section being threaded onto said flange, a discharge pipe, a coupling connecting said discharge pipe with said seat, the upper end of the outer pipe section being threaded into said coupling, valves controlling the passageways through said seat, a spider within said discharge pipe, provided with fluid passageways and spaced above said valve so as to limit the upward movement thereof, a tubular traveling barrel working between the sections of said standing barrel, an inlet valve carried by the lower end of said traveling barrel, and means for reciprocating said traveling barrel.

2. A pump, including a standing barrel formed of concentrically arranged pipe sections, a valve seat having a plurality of fluid

passageways therethrough and formed with a depending outwardly threaded flange, the upper end of the inner pipe section being threaded onto said flange, a discharge pipe, a coupling connecting said discharge pipe with said seat, the upper end of the outer pipe section being threaded into said coupling, valves controlling the passageways through said seat, a spider within said discharge pipe, provided with fluid passageways and spaced above said valve so as to limit the upward movement thereof, a tubular traveling barrel working between the sections of said standing barrel, an inlet valve carried by the lower end of said traveling barrel, and a pump rod connected to the inlet valve cage and working through central bearings in said valve seat and spider and through which the traveling barrel is reciprocated.

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

DAVID HUNT.

Witnesses:
E. V. HARDWAY,
A. ALLEN.