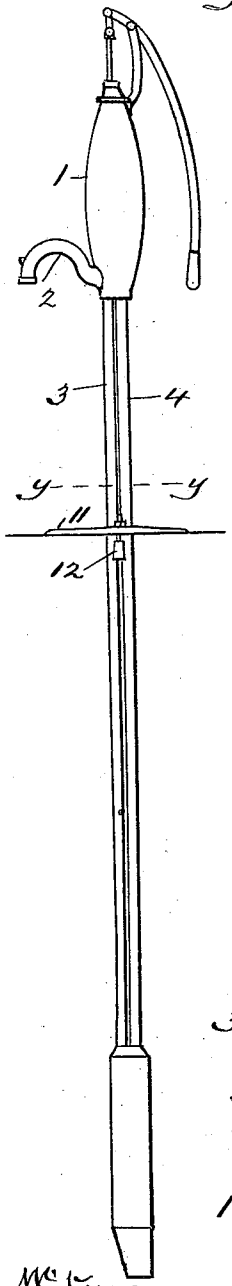
(No Model.)

M. C. HARRISON

PUMP.

No. 554,684. Patented Feb. 18, 1896.

Fig. 1.



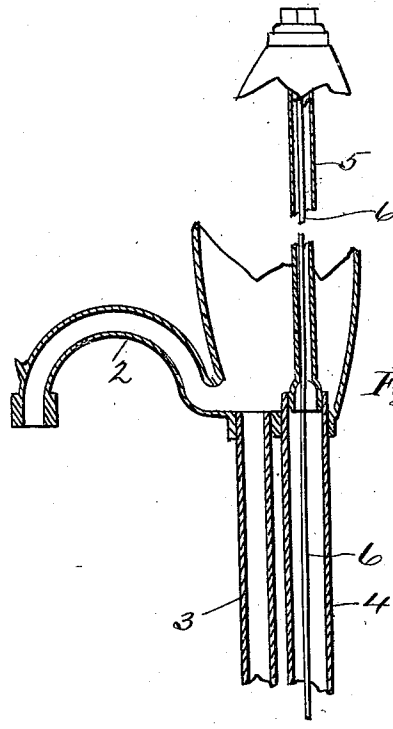


Fig. 2.

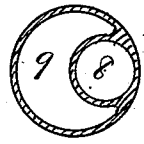


Fig. 3.

Fig. 4.

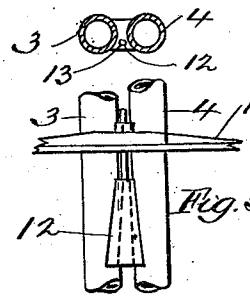
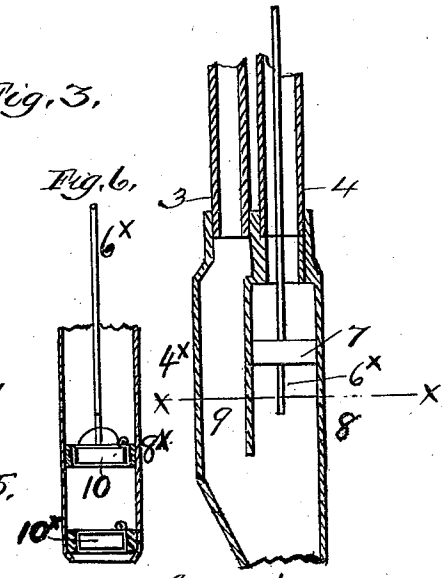


Fig. 5.

Fig. 6.



Witnesses:
M. E. Harrison.
J. A. Herron.

Inventor.
M. C. Harrison.
Per. O. D. Lewis Atty.

ANDREW B. GRAHAM, PHOTO-LITHO. WASHINGTON, D.C.

UNITED STATES PATENT OFFICE.

MOSES C. HARRISON, OF PITTSBURG, PENNSYLVANIA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 554,684, dated February 18, 1896.

Application filed June 8, 1894. Serial No. 513,862. (No model.)

To all whom it may concern:

Be it known that I, MOSES C. HARRISON, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved force-pump; and it consists in certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of my improved pump, which is constructed and arranged in accordance with my invention. Fig. 2 is an enlarged side sectional elevation of the same. Fig. 3 is a sectional plan view taken on the line *x x*. Fig. 4 is a sectional plan view taken on the line *y y*, showing the wedge for attaching the base-plate in position. Fig. 5 is a side elevation of the same. Fig. 6 is a detached sectional view of the valve on the downward extension of the plunger-rod.

To put my invention into practice I construct an air-chamber consisting of an annular tapering oblong shell 1, of a suitable size and form of construction, and attach thereto two pipes 3 and 4, leading down into the well. This air-chamber 1 is formed with an integral spout or discharge-opening 2, in communication with one of the pipes 3, and is fitted with an interior pipe or casing 5. This pipe or casing 5 extends from the top of the air-chamber 1 and is connected to the top of the pipe 4, and is adapted to inclose the sucker-rod 6 to prevent the escape of the water from the top of the said air-chamber 1. The two pipes 3 and 4 are connected together at the base with a chamber $4^{\times}$, divided into two compartments, the one, 8, in which the plunger 7 is made to operate, and the other compartment, 9, to convey the water to the pipe 3 and air-chamber 1, this divided chamber $4^{\times}$ extending some distance farther downward into a contracted undivided form $8^{\times}$, as shown in Fig. 6, as does also the plunger-rod, as at $6^{\times}$, provided with an ordinary sucker-valve 10. This plunger-chamber 8 has in its lower or bottom end an inlet-valve $10^{\times}$ and may, if desired, be brass lined or simply bored smooth for the proper working of the plunger 7.

To attach the base-plate in position I provide a wedge-shaped piece 12, adapted to be arranged between the two pipes 3 and 4, and provided with a bolt 13 which projects upward through the base-plate and fitted with a nut in a manner that when the said wedge is drawn upward the pipes 3 and 4 will be sprung sufficiently by the action of the wedge to cause them to bind against the base-plate 11, and thereby hold the pump at any desired position.

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

The combination, with the pump barrels or pipes, and the base-plate, of the wedge-shaped piece arranged between and adapted to spread apart said pump barrels or pipes and provided with a nutted bolt extending up through said base-plate, with its nut resting on said base-plate, substantially as set forth.

In testimony that I claim the foregoing I hereunto affix my signature this 24th day of April, A. D. 1894.

MOSES C. HARRISON. [L. S.]

In presence of—
ALBERT J. WALKER,
M. E. HARRISON.