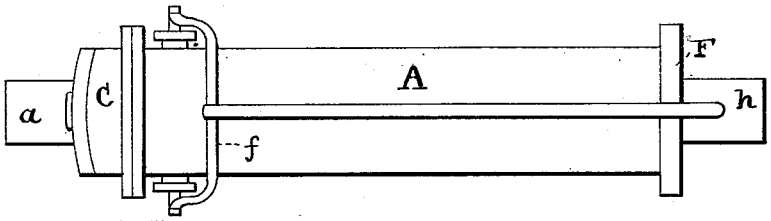
R. A. McCAULEY.

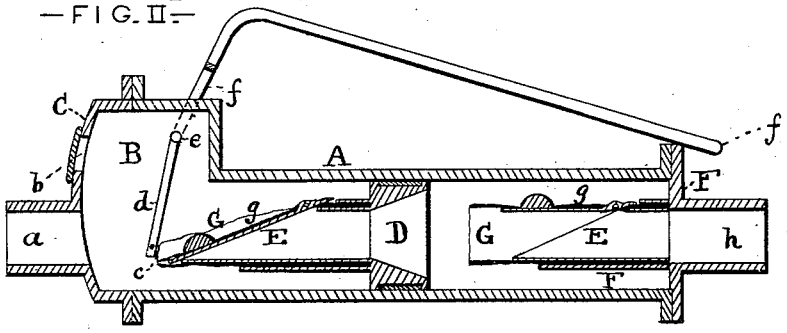
Pump.

No. 162,181. Patented April 20, 1875.

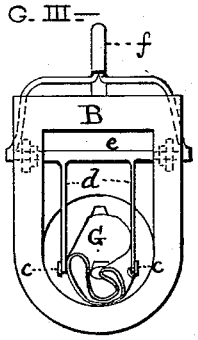
—FIG. I—



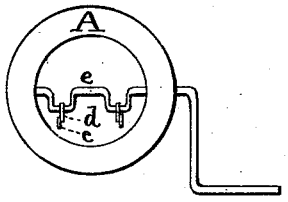
—FIG. II—



—FIG. III—



—FIG. IV—



—WITNESSES—

F. G. Daniels.

H. A. Daniels.

—INVENTOR—

Reuben A. McCauley,

by Howard & Howard,

Attorneys.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

REUBEN A. McCAULEY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **162,181**, dated April 20, 1875; application filed March 18, 1875.

To all whom it may concern:

Be it known that I, REUBEN A. McCAULEY, of the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Pumps, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to a pump specially adapted to the pumping of semi-liquid bodies and liquids containing straw, chips of wood, and the like, and constructed in such manner as to be operative in a vertical, horizontal, or inclined position.

In the description of my invention which follows due reference must be had to the accompanying drawing, forming a part of this specification, and in which—

Figure 1 is a plan of my improved pump. Fig. 2 is a longitudinal section of the same. Fig. 3 is a front view of the pump with the front head removed. Fig. 4 shows a modification in certain parts of the invention.

Similar letters of reference indicate similar parts in all the figures.

A is the cylindrical portion of the pump, and B a chamber formed at the end of the cylinder A to admit of the operation of the piston-actuating mechanism located therein. C is the front head, provided with the discharging-nozzle *a* and cleansing-aperture *b*. D is the piston, connected by means of the vibrating links *c* to the arms *d*, which arms are secured to the shaft *e*. The shaft *e* passes entirely through the chamber B, and is operated by means of a forked lever, *f*, connected therewith. E E are inclined valve-seats projecting from the back head F and the piston D, and fitted with weighted valves *g*, which are hinged thereto. G G are tubular extensions of the valve-seats, formed of some flexible material, and fastened to the seats and valves in such manner as to close around any obstructions lodging between the said valves and seats, thereby forming a tight joint. The back head F is provided with an induction-nozzle, *h*, to which hose may be connected.

The construction of my pump as described adapts it for operation in confined places, as its extreme length is considerably less than could be obtained if the usual mode of connecting the actuating mechanism with the pump-cylinder were employed; and as the opening from the induction to the eduction nozzle is unobstructed by rods or other parts it is peculiarly applicable to the pumping of viscous matter as well as that above alluded to.

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

1. In a pump, the chamber B, adapted to allow within it the operation of the mechanism forming the means of connection between the hand-lever and piston, substantially as herein specified.

2. The arms *d*, links *c*, and piston D, placed within the barrel A and chamber B of the pump, combined with the shaft *e* and forked lever *f*, substantially as and for the purposes set forth.

3. The piston D, and valve-seats E and valves *g*, in combination with the flexible tubular extension-pieces G, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name this 16th day of March, A. D. 1875.

REUBEN A. McCAULEY.

Witnesses:
JOS. H. AUDOUN,
W. H. ROBERT.