

(No Model.)

H. DENNEY & W. H. BROMLEY. PUMP.

No. 586,354.

Patented July 13, 1897.

Fig. 1.

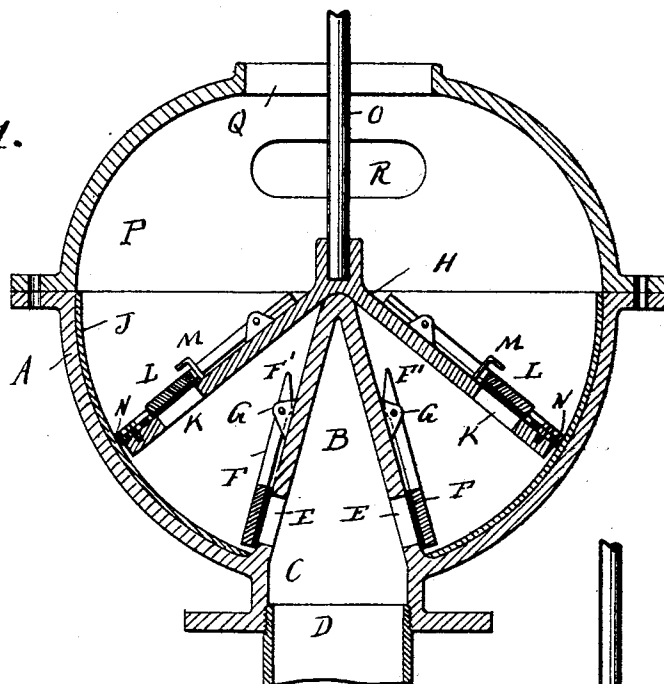


Fig. 2.

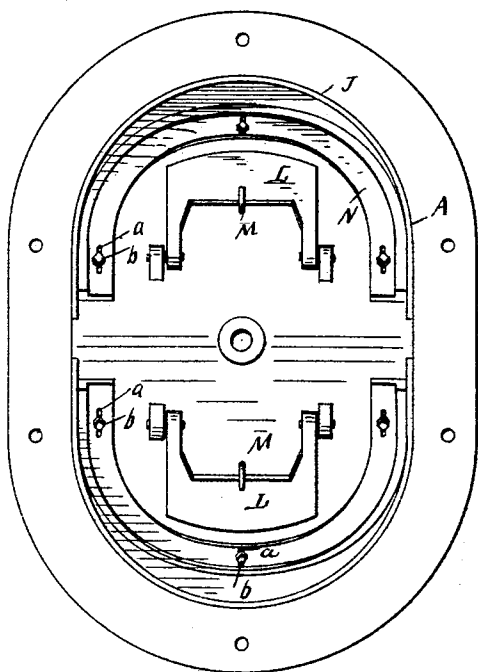
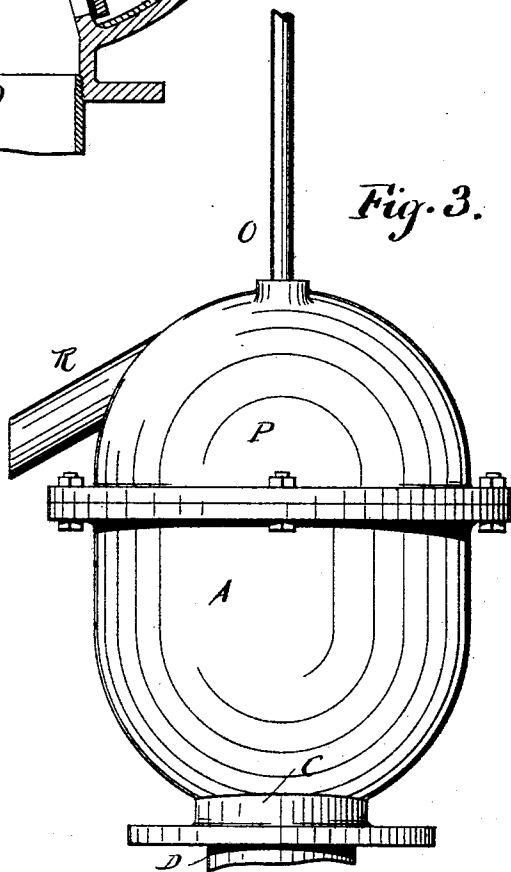


Fig. 3.



Witnesses
L. F. Palmer.
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H. Denney & W. H. Bromley Inventors
By their Attorney Oscar F. Gunn.

UNITED STATES PATENT OFFICE.

HARMER DENNEY, OF NEW YORK, AND WILLIAM H. BROMLEY, OF NEW BRIGHTON, NEW YORK.

PUMP.

SPECIFICATION forming part of Letters Patent No. 586,354, dated July 13, 1897.

Application filed December 13, 1895. Serial No. 571,998. (No model.)

To all whom it may concern:

Be it known that we, HARMER DENNEY, residing in the city and county of New York, and WILLIAM H. BROMLEY, residing in New Brighton, in the county of Richmond, State of New York, citizens of the United States, have invented certain new and useful Improvements in Pumps, of which the following is a specification.

10 This invention relates to improvements in that class of pumps that are used for pumping impure water—such as, for example, bilge-pumps, pumps used for removing the water from sewer-trenches, and the like.

15 The object of our invention is to provide a new and improved pump of this kind which is simple in construction, strong and durable, of great capacity, and which can easily be taken apart and adjusted and cleaned in case it becomes clogged.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate like parts in all the figures, Figure 1 is a vertical longitudinal sectional view of our improved pump. Fig. 2 is a plan view of the same, the cover being removed. Fig. 3 is an end view of the pump.

The hollow body A of the pump is cast integral with a central transverse hollow partition B, decreasing in width from bottom to top, that is made triangular or wedge-shaped in cross-section, and from the bottom up to the top edge the end walls of the body are curved on a radius the center of which is at the top of said partition, the side walls being also curved from the upper edges to the longitudinal bottom central line of the body. The body is cast integral with the central flanged base C, with which the suction-pipe 30 D is connected, as shown in Fig. 1. The sides of said hollow partition are each provided with an inlet-port E, which can be closed by a flap-valve F, pivoted to lugs G on the walls of the partition above the port, said valve having extensions F' above the lugs G, which act as stops and prevent the valve from opening too far.

50 A V-shaped oscillating plunger H has the ends and sides of its two wings so shaped as to conform to the shape of the interior of the body A.

Each wing of the oscillating plunger H is provided with an outlet-port K, closed by a flap-valve L, pivoted on the upper side of the wing, which flap-valve is prevented from opening too far by a stop M.

A U-shaped flanged metal packing-piece N is mounted on the upper surface of each wing in such a manner that it can slide slightly in the direction of the length of its shanks, the said packing-piece having slots a, through which screws b pass into the wings, so that this packing-piece, which is loose and free to move at all times, adjusts itself automatically against the inner surface of the walls of the body A and forms the tight and close joint required for producing the required suction. In case grains of sand, muck, or pebbles are contained in the liquid pumped and accumulate on the walls of the body A the packing-piece can give and then again adjust itself automatically in place.

The packing-pieces N are so curved and shaped that they can fit snugly against the Babbitt-metal lining J of the body.

75 The oscillating plunger H rests loosely on the top edge of the partition B, on which it can rock, and a handle-rod O projects upward from said plunger.

The flanged cover P is bolted on the body A and is provided with a longitudinal top slot Q, through which the handle-rod O passes, and with a side outlet-spout R.

The operation is as follows: When one wing of the plunger is moved upward, the other moves down, and the upgoing wing creates a suction, whereby water is drawn through the suction-pipe D and the corresponding port E, the valve F of said port being raised by the incoming water. At the downstroke of said wing the water that has been drawn in is forced through the port K in the wing, the corresponding valve L being raised by the water, and flows off through the spout R.

90 The packing-piece N rests snugly against the lining of the body A and forms a close and tight joint without unduly increasing the friction.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a pump the combination with a hollow

body, of a wedge-shaped hollow transverse
partition in the same, which partition has inlet-
ports, valves for closing said ports a V-shaped
plunger mounted to rock on said partition
5 and having ports, valves for closing said ports
and a U-shaped sliding packing-piece on each
wing of said plunger, substantially as herein
shown and described.

In testimony that we claim the foregoing as

our invention we have signed our names, in the
presence of two witnesses, this 23d day of Oc-
tober, 1895.

HARMER DENNEY.
WILLIAM H. BROMLEY.

Witnesses:

OSCAR F. GUNZ,
EDW. F. HAEGELY.