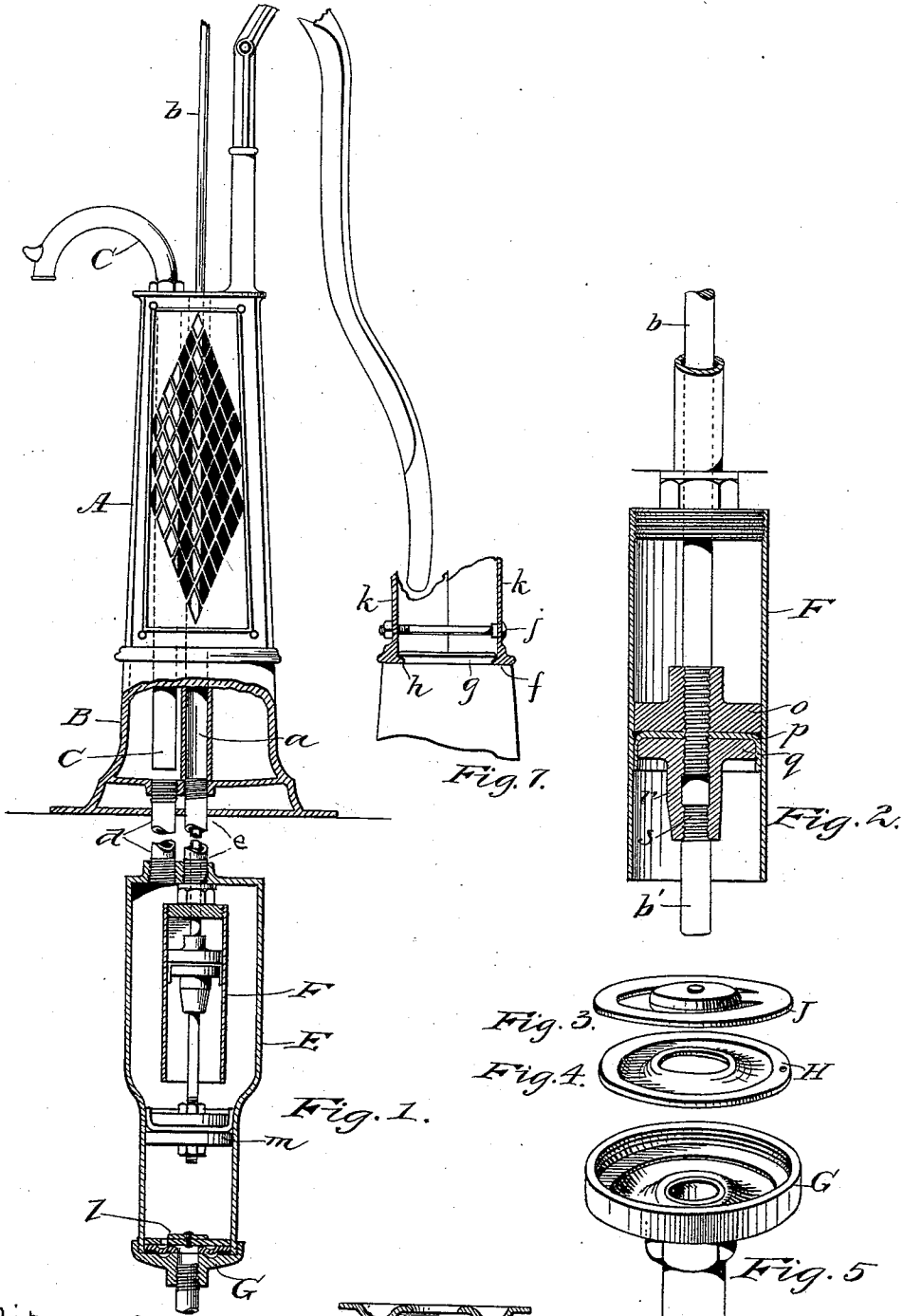


(No Model.)

S. M. CHASE.
PUMP.

No. 526,070.

Patented Sept. 18, 1894.



Witnesses:—
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UNITED STATES PATENT OFFICE.

SHERWOOD M. CHASE, OF CANTON, OHIO.

PUMP.

SPECIFICATION forming part of Letters Patent No. 526,070, dated September 18, 1894.

Application filed February 23, 1894. Serial No. 501,089. (No model.)

To all whom it may concern:

Be it known that I, SHERWOOD M. CHASE, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in pumps and consists of certain features of construction and combination of parts as will be hereinafter described and pointed out in the claim.

Figure 1, of the accompanying drawings is a side view partly sectional of a pump illustrating my invention; Fig. 2, a longitudinal section through the upper cylinder; Fig. 3, a perspective of the valve; Fig. 4, a similar view of the valve seat; Fig. 5, a similar view of the bottom portion of cylinder; Fig. 6, a cross section of valve seat; Fig. 7, a side view partly sectional of a portion of the stand.

Referring to Fig. 1, A represents the stand, at the bottom portion of which forms an air chamber B, having a central pipe *a* extending therethrough which is cast integral with that part of the base that forms the air chamber, said pipe providing a passage through the air chamber for the sucker rod *b*. The discharge pipe C is passed down through the stock to a point about one inch above the bottom of the air chamber. The air chamber B, is connected with pump cylinder by a pipe *d* through which the water flows from the pump cylinder E to the air chamber B. A pipe *e* forms a central support for the pump cylinder and a continuation of the passage *a* for the sucker rod.

The upper portion of the air chamber is provided with an offset as shown at *f*. In the outer edge of said offset is provided a groove *g*, adapted to receive an inwardly projected flange *h* at the lower end of the upper portion or sides *k* of the stand. Bolts *j*, are passed through the sides *k* which clamp the sides together, the flanges *h* in the grooves *g* as shown in Fig. 7.

The pump cylinder E has two internal diameters. In the lower and smaller is placed the foot valve *l* and the lift valve *m*. In the

upper and larger portion of the chamber and central thereto is placed cylinder F of less diameter than the lower portion of the cylinder E, in which is operated the lift valve *m*. In the cylinder F is provided a piston the space or flow between the size of the two cylinders being the limit of discharge.

Referring to Fig. 2, the lower end portion of the sucker rod *b* is threaded as shown on which is turned a piston head *o* against which is placed a leather disk *p*. A follower *q*, having a threaded aperture is turned onto the end of the rod *b* against the disk *p*, the outer edge portion of which is turned over the edge of the follower to form a bucket packing. The follower *q* has a sleeve extension *r*, the end portion threaded to receive a similar thread on the end portion *s*, of the sucker rod *b'*, thus forming a piston that is of easy access for repairs and that serves as a coupler for the sucker rod below the head.

Fig. 5, is an enlarged view of the lower head G, of the cylinder E, which serves as a support for the valve seat H, which is made of non-corrosive metal, preferably aluminium bronze, and is of the form in cross section Fig. 6. The ogee form for the aluminium bronze valve seat is preferred for the reason that gravel or sand that may be raised with the water will not lodge on the face of the valve, but will fall back into the depression about the face of the valve.

Having thus fully described the nature and object of my invention, what I claim, and desire to secure by Letters Patent, is—

The combination on a pump stand of the side plates *k*, the air chamber B forming the base of the stand A, having integral therewith and therethrough a pipe portion *a*, and a discharge pipe projected into said chamber to a point a distance above the bottom, the shoulder *f* at the top of the air chamber and grooves *g* to receive the flange *h* of the plates *k*, substantially as described and for the purpose set forth.

In testimony whereof I have hereunto set my hand this 19th day of February, A. D. 1894.

SHERWOOD M. CHASE.

Witnesses:

W. K. MILLER,
BURT A. MILLER.