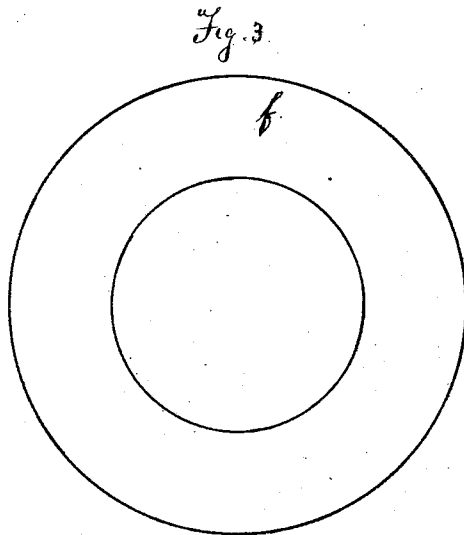
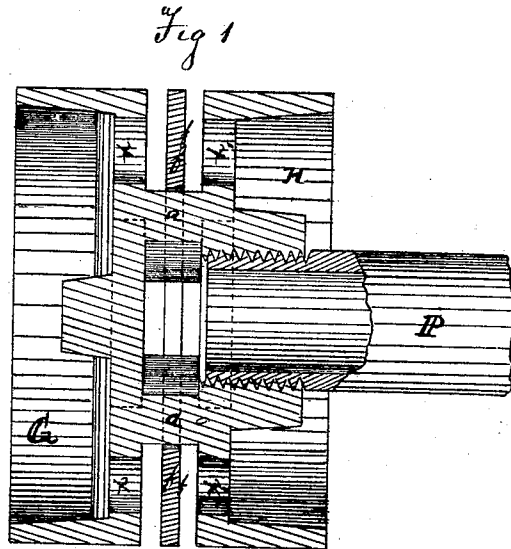
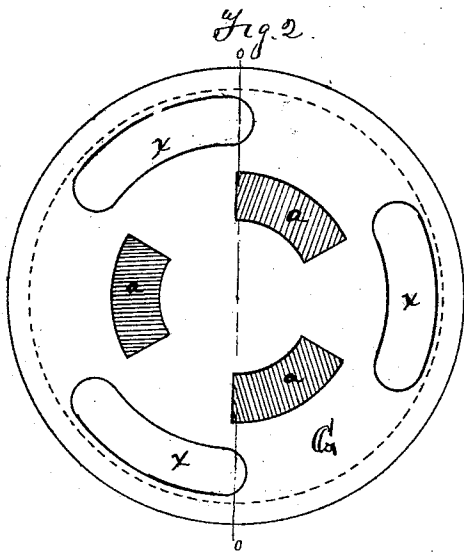


C. B. GILL.

Pump-Piston.

No. 127,594.

Patented June 4, 1872.



Witnesses
John J. H. H. H.
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Calvin B. Gill

UNITED STATES PATENT OFFICE.

CALVIN B. GILL, OF WEEDSPORT, NEW YORK.

IMPROVEMENT IN PUMP-PISTONS.

Specification forming part of Letters Patent No. 127,594, dated June 4, 1872.

SPECIFICATION.

I, CALVIN B. GILL, of Weedsport, in the county of Cayuga, in the State of New York, have invented certain Improvements in Pump-Pistons, of which the following is a specification:

The nature of my invention consists in making a plunger for pumps, having two heads joined together by two or more webs near their centers, and having a ring-valve between them to close their ports alternately.

Figure 1 is a vertical transverse section taken through Fig. 2 at line *o*. Fig. 2 is a transverse section, showing the position of webs *a* and ingress-ports *x*. Fig. 3 is a top view of the ring-valve used in this plunger.

The head H, Fig. 1, has an opening in the center to receive the exit-pipe P. There are three ingress-ports, *x'*, at equal distances apart, between the pipe P and the rim of the heads H. On the up-stroke (the piston being in a cylinder having a side passage) the water flows in through these ports and between the webs *a*, Figs. 1 and 2, up through the exit-pipe P, the ring-valve *f*, Figs. 1 and 3, closing the ingress-ports in the lower head G. The lower head G is similar in construction to H, only it is solid in the center, not requiring any opening. It has ingress-ports *x* similar to H, through which, on the down-stroke of the piston, the water passes; thence, between the webs *a*, into the exit-pipe P. These two heads, H and G, are held together by webs *a*, all being cast together. The valve *f*, Figs. 1 and 3, is a solid flat ring-valve, and is placed in position by the following device: The valve is first finished on its face sides, and the center opening is made sufficiently large to receive the webs *a*. The valve is then placed in the sand core, which is necessary to keep the two heads H and G apart

while being cast. After the casting is made the sand is cleaned off the ring-valve, and the face sides of heads H and G are turned up in a lathe so that the ring-valve will fit the seats exactly. This mode of making a piston-head and its valve is cheap and forms a reliable plunger. This plunger is used in a cylinder having a side passage.

The operation of this piston is as follows: Being placed in a cylinder having a side passage, on the down-stroke the ring-valve *f* is caused to rise and close the ingress-ports of head H. The water entering the ports *x* of the lower head G passes through, between the webs *a*, into the exit-pipe P. On the upward stroke the valve *f* is forced down and closes the ingress-ports of the lower head G, the water passing through the ports in the upper head H, and between the webs *a*, into the exit-pipe P.

I am aware that pump-pistons composed of two heads connected by webs, and fitted with an interposed valve, have been made prior to my invention; but this I do not claim broadly, my improvement consisting in the peculiar construction of the piston, as herein set forth.

What I claim as my invention, and desire to secure by Letters Patent, is—

The improved pump-piston herein described, composed of heads G H with openings *x*, and connected by webs *a a a* arranged in a circle near the center of the heads, and the ring-valve *f* surrounding the webs *a* and sliding thereon, when said parts G H *a* are made in one piece and united with the valve in the process of casting, as herein set forth.

CALVIN B. GILL.

Witnesses:

JAS. LORENZO GAGE,
A. BAINE.