

GEORGE W. PRESTON.

Pumps.

No. 126,574.

Patented May 7, 1872.

Fig. 1.

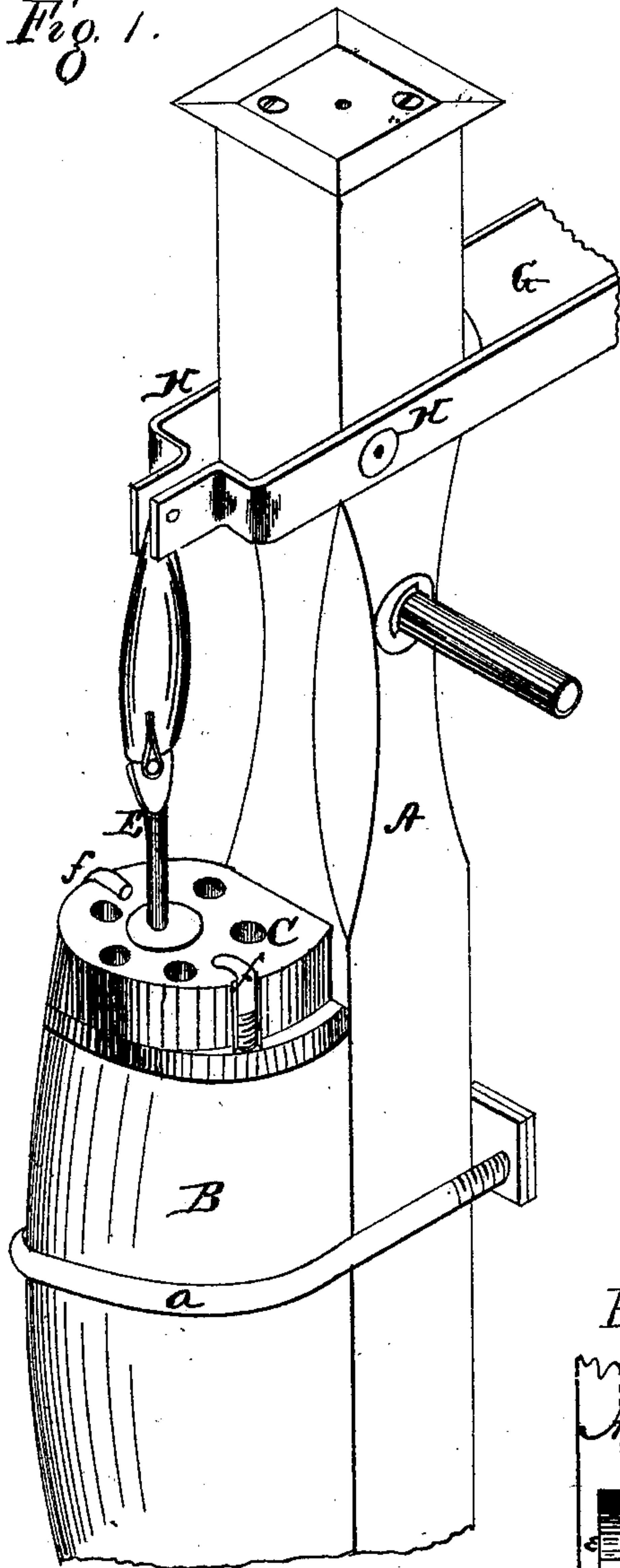


Fig. 2.

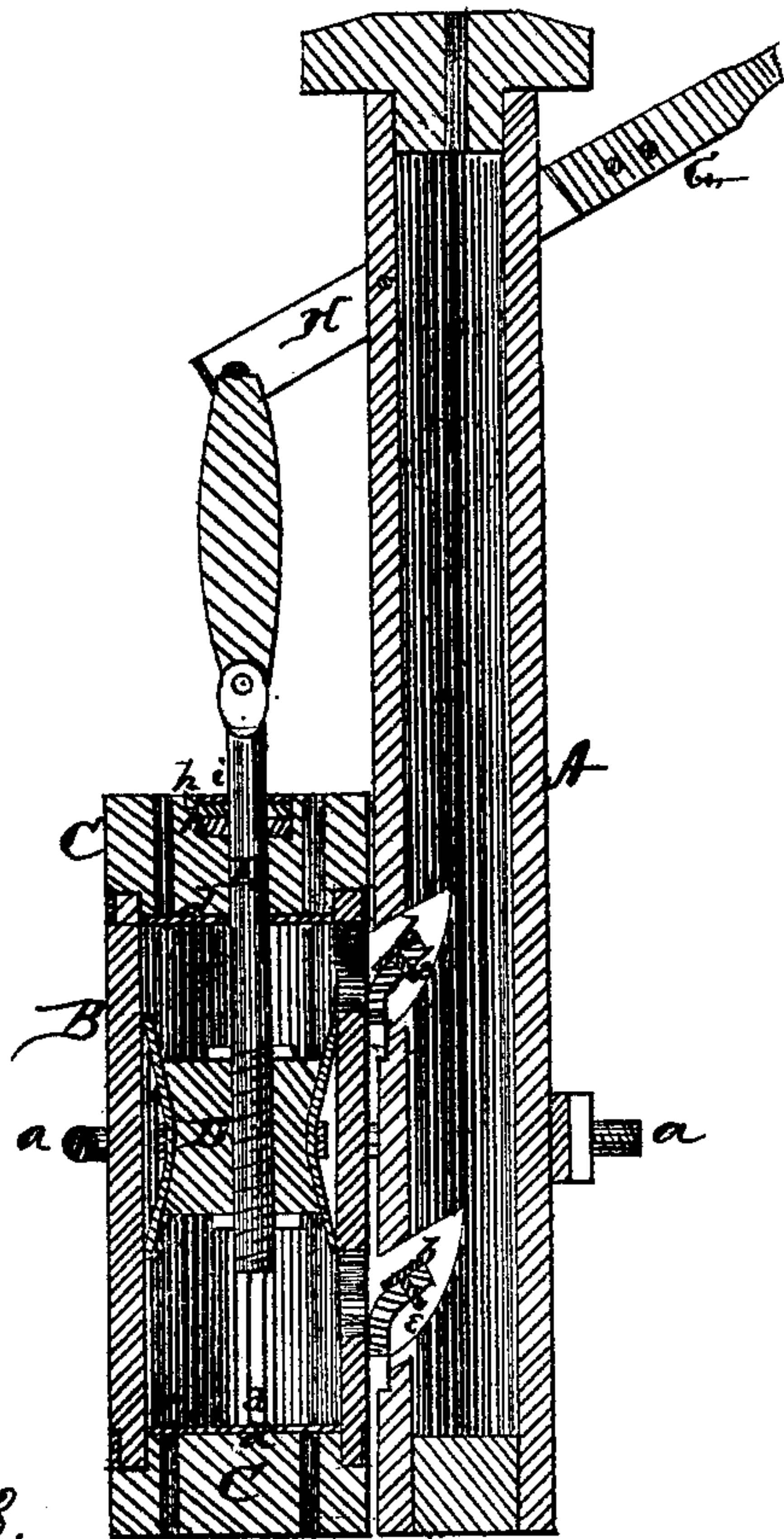
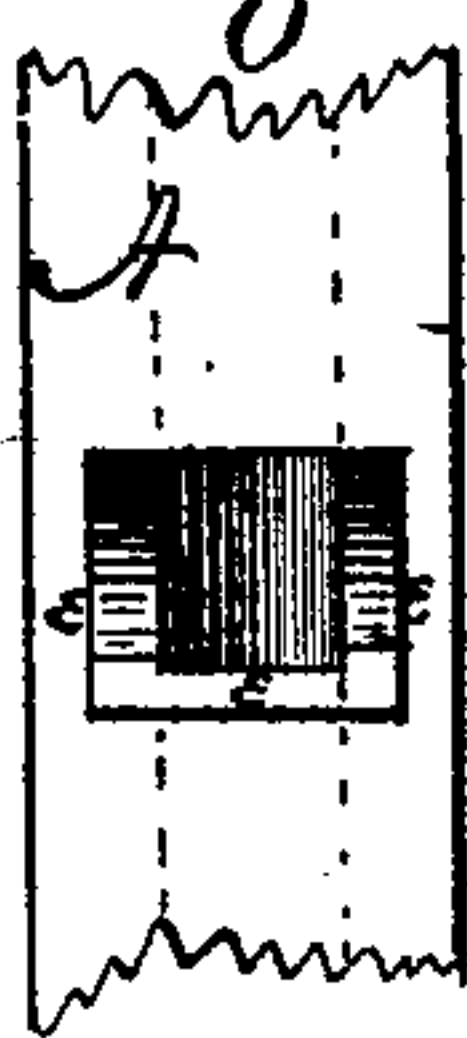


Fig. 3.



Witnesses:

*W. D. Newman*  
*C. L. Everett*

Inventor

*Geo. W. Preston.*  
*per Manufacturer*

Attorneys.

# UNITED STATES PATENT OFFICE.

GEORGE W. PRESTON, OF CLYDE, OHIO.

## IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 126,574, dated May 7, 1872.

*To all whom it may concern:*

Be it known that I, GEORGE W. PRESTON, of Clyde, in the county of Sandusky and in the State of Ohio, have invented certain new and useful Improvements in Pumps; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a force-pump, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view, and Fig. 2 a longitudinal vertical section of my force-pump. Fig. 3 is a view of a part of the pump-stock.

A represents the pump-stock, to which the cylinder B is attached by a bent rod, *a*, or clip, or other suitable means. In the cylinder B are two valves, *b b*, opening from their upper ends inward into the pump-stock A, thereby giving the water an upward tendency from each valve, and thus saving fully one-fourth the power it takes to force the water through an angle of forty-five degrees, as all other pumps do. These valves open just far enough to allow the water to escape with ease from the cylinder. Shoulders *e e* are left upon each side of the pump-stock to prevent the valves from opening too far, a groove being left in the center so that the pressure of water in the pump-stock or tube will close the valves as the alternate pressure ceases in the cylinder, caused by the motion of the handle or lever. The cylinder B is provided with perforated movable heads C C, so constructed as to allow the water free access into the cylinder, and have valves *d d* upon the inside, fitting so tight as to allow no water to escape except through the pump-stock. The heads C C are fitted tight in the cylinder, and

are secured there by means of flanged bolts or screws *f f* attached to the cylinder. To remove the heads it only requires a half turn of these bolts, leaving the flanges outward; the heads can then be removed with ease, thus saving the necessity of injuring the cylinder in removing the head. D represents the piston or plunger, connected by a rod, E, with the handle G. This rod passes through a stuffing-box, *h*, provided with a metal cap, *i*, placed in the top head C of the cylinder. This stuffing-box prevents the escape of water with the motion of the piston-rod. The handle G is provided with two angular metal bars, H H, which are pivoted to the pump-stock and the piston-rod E, attached between its outer ends. By thus having the handle on the opposite side of the pump-stock from the piston-rod at least one-third more power is given to the action.

By the combination of these different parts a simple and yet powerful and efficient pump is formed, which a child can work with ease.

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

1. The perforated movable heads C C provided with interior valves *d d*, and attached to the ends of the cylinder B by means of flanged bolts or screws *f f*, substantially as and for the purposes herein set forth.

2. The within-described force-pump, consisting of the pump-stock A with shoulders *e e*, cylinder B with valves *b b*, perforated heads C C with flanged bolts *f f*, valves *d d*, stuffing-box *h*, plunger D, rod E, bars H H, and handle G, all constructed and arranged substantially as herein shown and described, and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of February, 1872.

GEO. W. PRESTON.

Witnesses:

J. B. BUSH,  
BASIL MEEK.