

C. N. Lewis,

Force Pump,

N^o 14,024.

Patented Jan. 1, 1856.

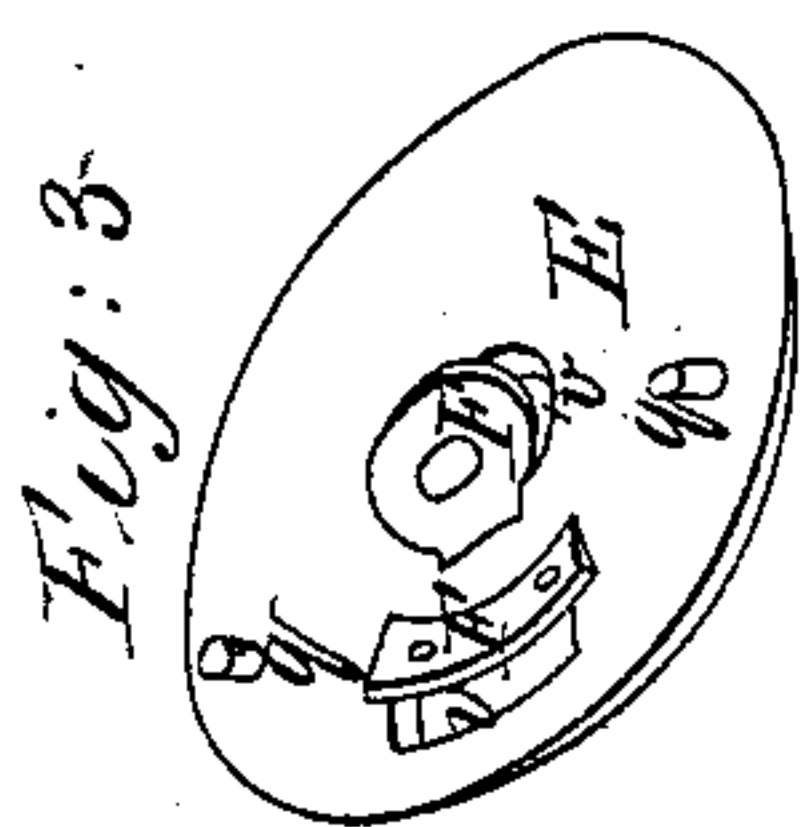


Fig: 4.

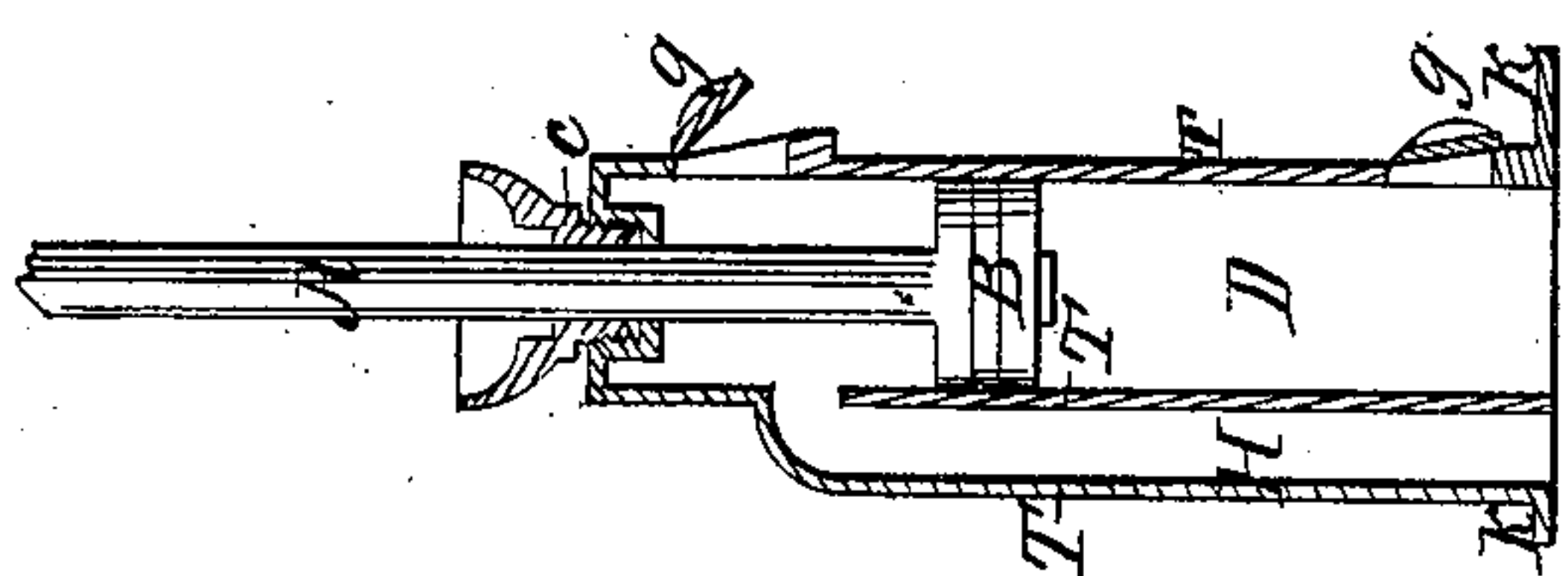


Fig: 5.

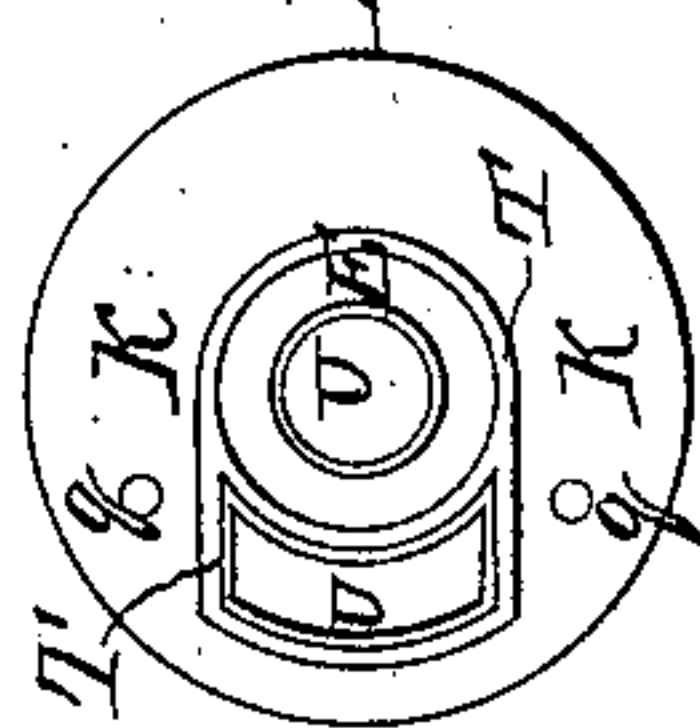


Fig: 2.

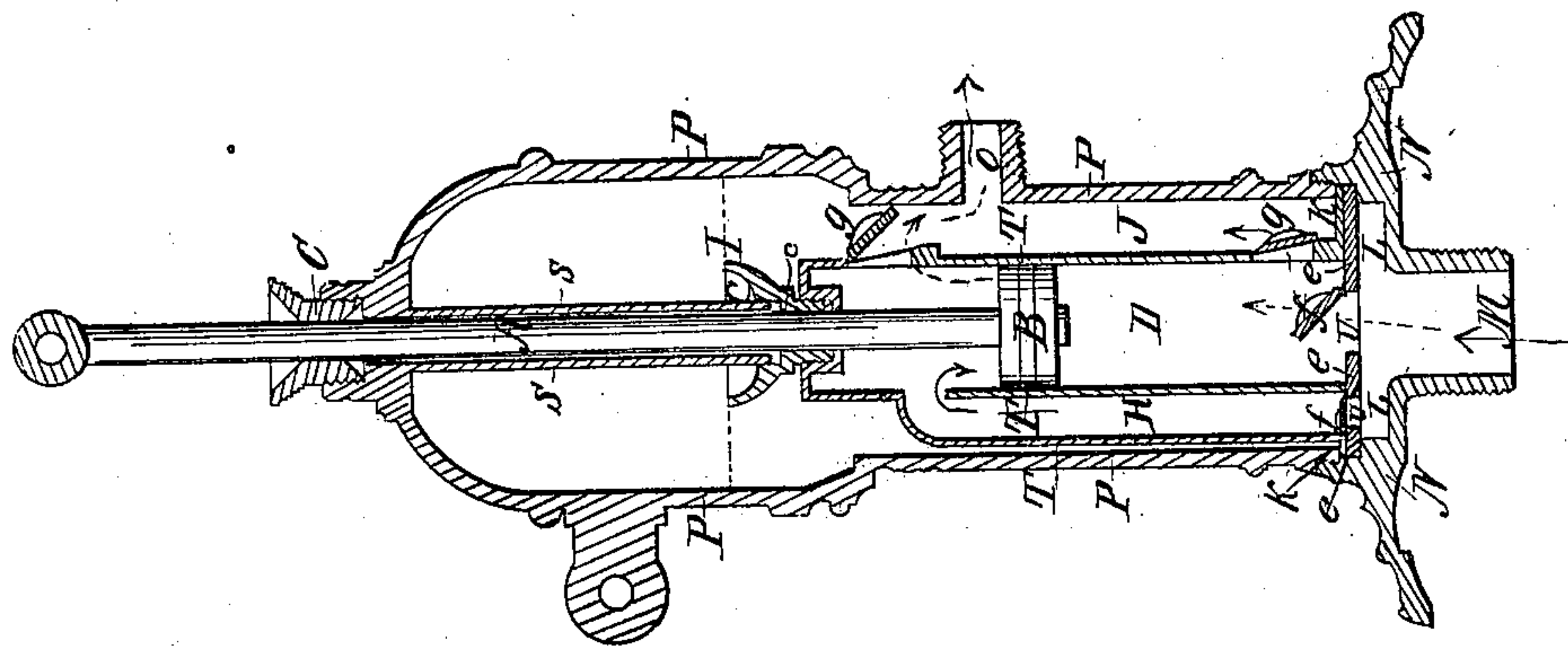
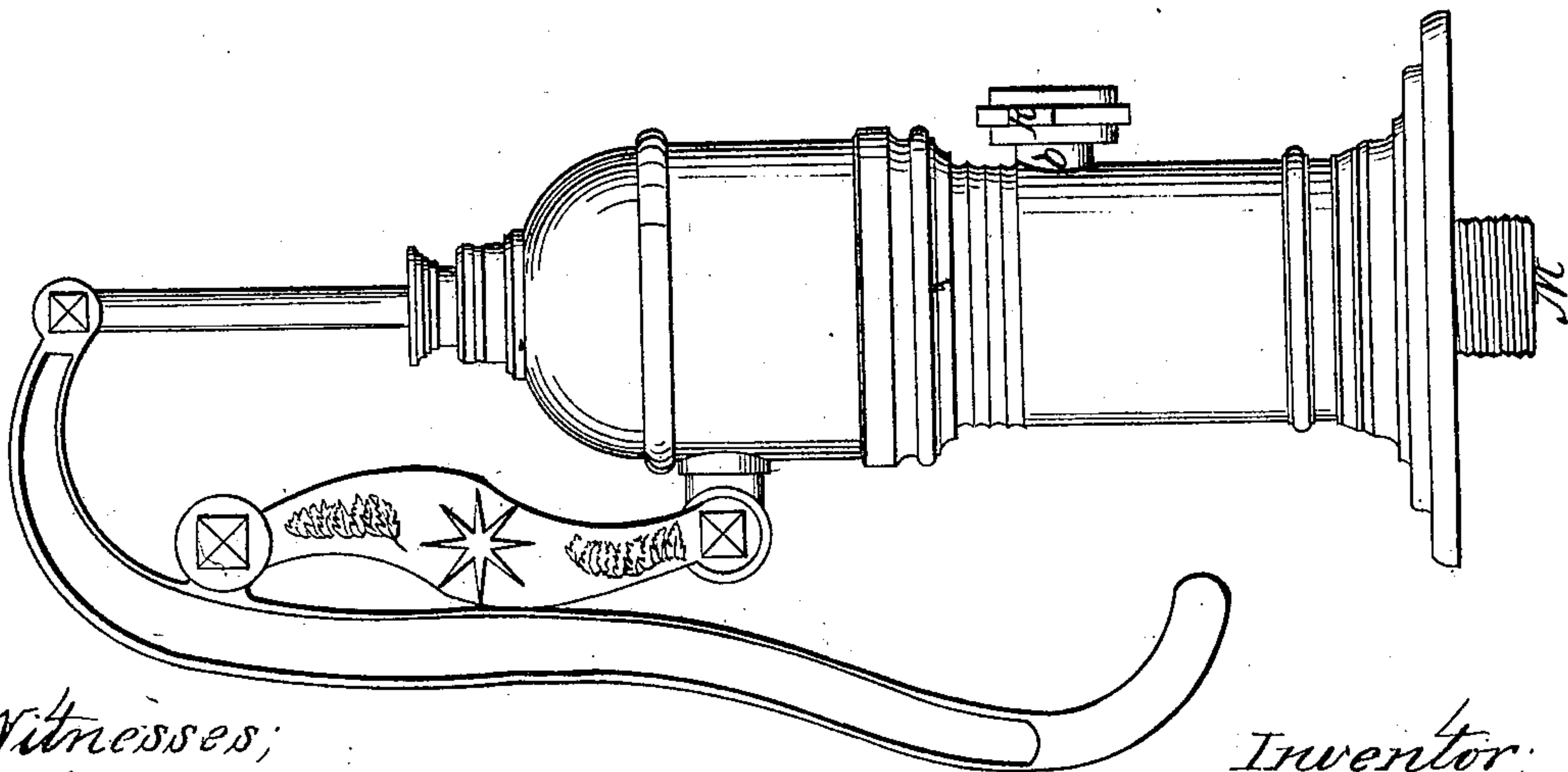


Fig: 1.



Witnesses;
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Inventor;
Charles C. Lewis

UNITED STATES PATENT OFFICE.

CHARLES N. LEWIS, OF SENECA FALLS, NEW YORK.

PUMP.

Specification of Letters Patent No. 14,024, dated January 1, 1856.

To all whom it may concern:

Be it known that I, CHARLES N. LEWIS, of Seneca Falls, in the county of Seneca and State of new York, have invented a new and useful Improvement in Double-Acting Force-Pumps; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings and to the letters of reference marked thereon.

My improvement consist in a new arrangement and construction of the several parts of the above named pumps by which their construction is much facilitated and at the same time their efficiency and ease of action is greatly increased.

In the accompanying drawings Figure 1, is a perspective view of the entire pump. Fig. 2 is a vertical section through the middle. Fig. 4, is a vertical section through the middle of the interior cylinder. Fig. 5 is a plan of the same, and Fig. 3 is a perspective view of what I term the valve plate.

The same letters refer to similar parts in each.

The interior cylinder D in which a solid piston B moves, has upon its side a water way H opening into its upper part of nearly as great a sectional area as the cylinder on the bottom of it is cast a flange K, K, extending out from the cylinder and water way until it meets the sides of the base N. This interior cylinder is placed immediately on the valve plate E which fits within the sides of the base N. And has upon it the two induction valves F, F. Two projections or pins *q, q*, are cast upon the valve plate E, which fit into two poles *q, q*, in the flanges K and hold the two together.

Over the interior cylinder and extending above it, is the outer case P, P, P, P. It forms a large air chamber and outward passage for the water. It screws into the base N, N, or is fastened to it by bolts and resting upon the flange K, K, and the valve plate E, E, binds the whole securely together.

A tube S, S, around the stem A of the piston B is attached to the top of the case and

extends down to the bottom of the basin C so that its lower end shall always be under the surface of the water within such basin. This basin may be made upon the screw to the packing box as represented in the drawings or it may be made by a depression on the top of the inside cylinder. It serves to retain sufficient water to make a water packing for the joint made by the passage of the stem to the piston through the tops of the inside cylinder and the outside case.

By the above arrangement the following advantages are obtained 1st. The valves can be fitted to the detached valve plate E more conveniently than if it were required to handle for that purpose the whole pump. And in case of injury they can be easily replaced or repaired. 2d. By means of the detached plate the necessity of using a dry sand core to make the water chamber L, L, in the casting is avoided. 3. All the working parts of the pump are inclosed in water by which they will be made tight and effective although they may be too much worn or too imperfectly made to be absolutely air tight. 4th. All narrow and contracted passages for the water are avoided. It is released into the pump and discharged from it in the most direct manner. The water chamber L, L, supplies the induction valves and all violent agitation and unnecessary motions to the water are obviated, and 5th. A large air chamber is provided in the most compact and neat form and the whole is put together in the simplest manner and may be readily taken apart and any portion of it replaced.

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

The basin C or its equivalent for the uses and purposes above set forth and in combination and connection therewith I claim the arrangement and construction of said pump as above specified.

CHARLES N. LEWIS.

Witnesses:

ELISHA FOOTE,

OBADIAH B. LATHERNY.