

J. ROBERTS.

Improvement in Pumps.

No. 119,650.

Fig. 1.

Patented Oct. 3, 1871.

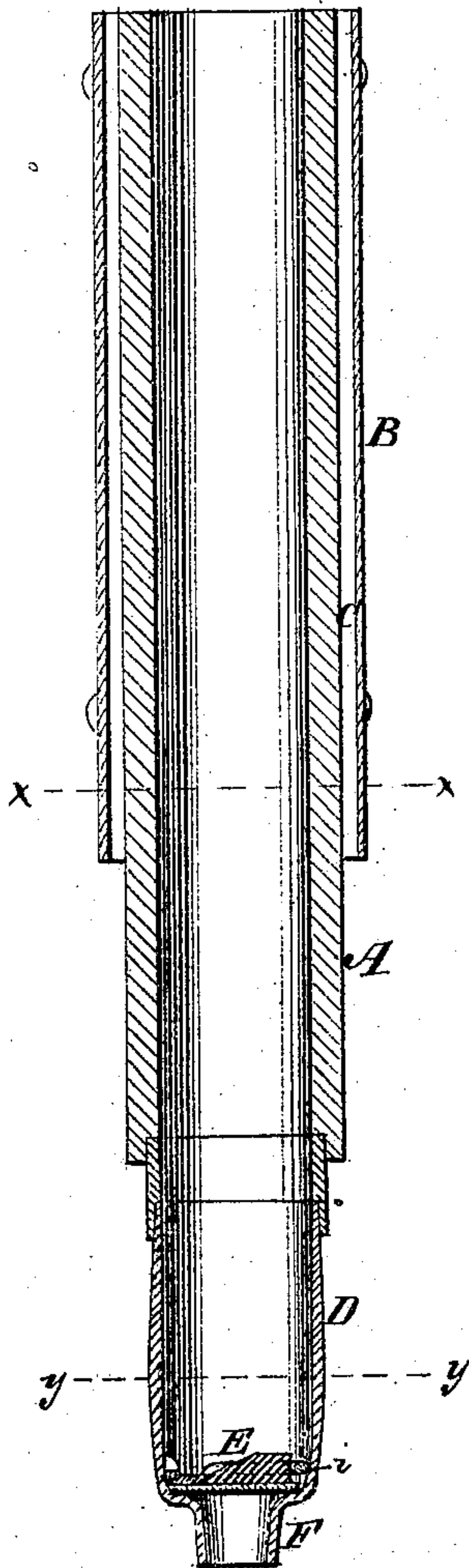


Fig. 2.

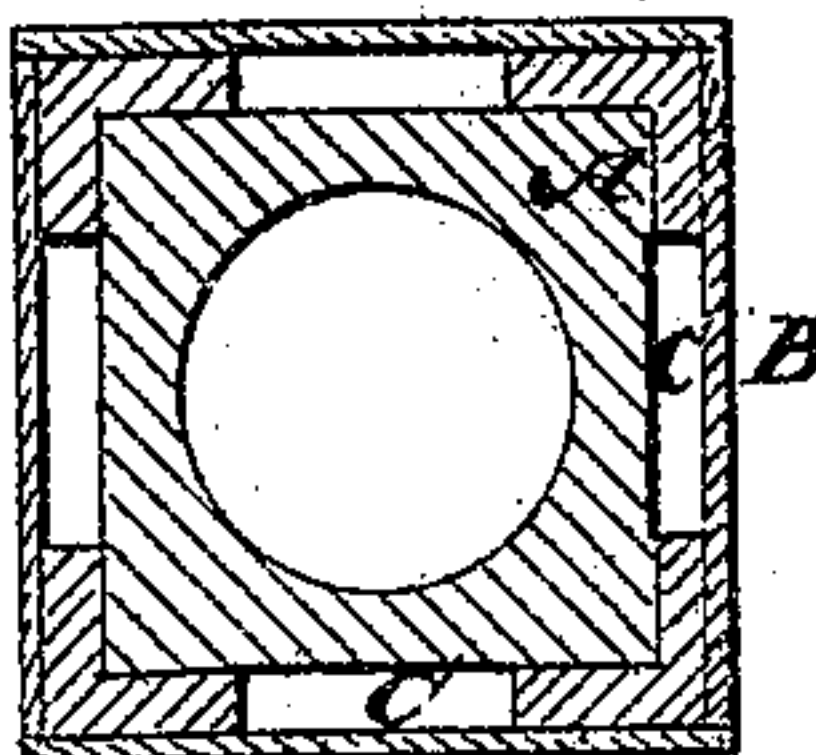
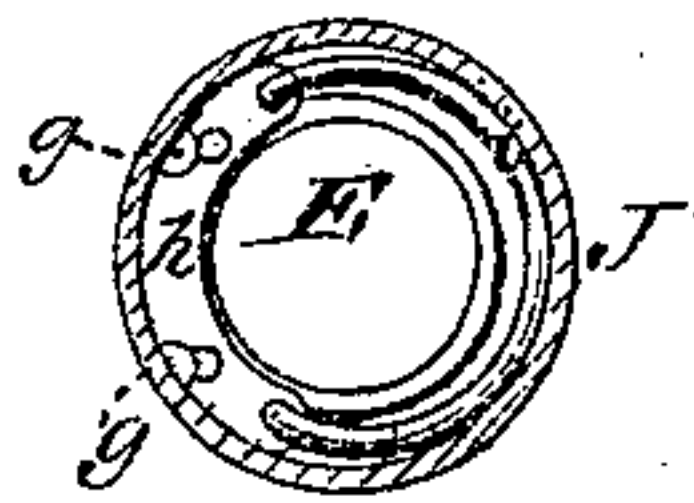


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN ROBERTS, OF NEW MADISON, OHIO.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 119,650, dated October 3, 1871.

To all whom it may concern:

Be it known that I, JOHN ROBERTS, of New Madison, in the county of Darke and State of Ohio, have invented a new and useful Improvement in Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to an improved mode of securing valves in pump-cylinders. I describe hereinafter the means for securing the valve, and also specify the construction of a pump-stock and cylinder such as I prefer to use with my improvement.

In the accompanying drawing, Figure 1 is a longitudinal section. Fig. 2 is a cross-section taken on the line *x x* of Fig. 1. Fig. 3 is a cross-section on the line *y y* of Fig. 1, showing the valve.

Similar letters of reference indicate corresponding parts.

A is the stock. B is a casing around the stock. C represents air-cells formed by the casing B. D is the cylinder. E is the valve. The casing sur-

rounds the stock, but is not in contact therewith, as seen in Fig. 2. There is an air-cell, C, on each side of the stock. This casing protects the stock from the sun and prevents its cracking or checking while the air is allowed to circulate through the cells. The cylinder D is placed below the frost, and the valve is placed in the bottom of the cylinder. F is an extension for connecting the upper stock with a lower stock or with tubing. Near the lower end of the cylinder, on the inside, are small knobs *g*, beneath which the valve-plate *h* is confined. *i* is a spring, the ends of which are connected with the valve-plate. The bow J of the spring is made to press against the side of the cylinder, which holds the valve to its place by the friction thus produced. The valve plays freely inside of the spring, as seen in Fig. 3. The cylinder D is of cast-iron or other suitable metal.

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

The mode of securing the valve E in the cylinder by means of an annular plate, *h*, spring *i*, and knobs *g*, substantially as described.

Witnesses:

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