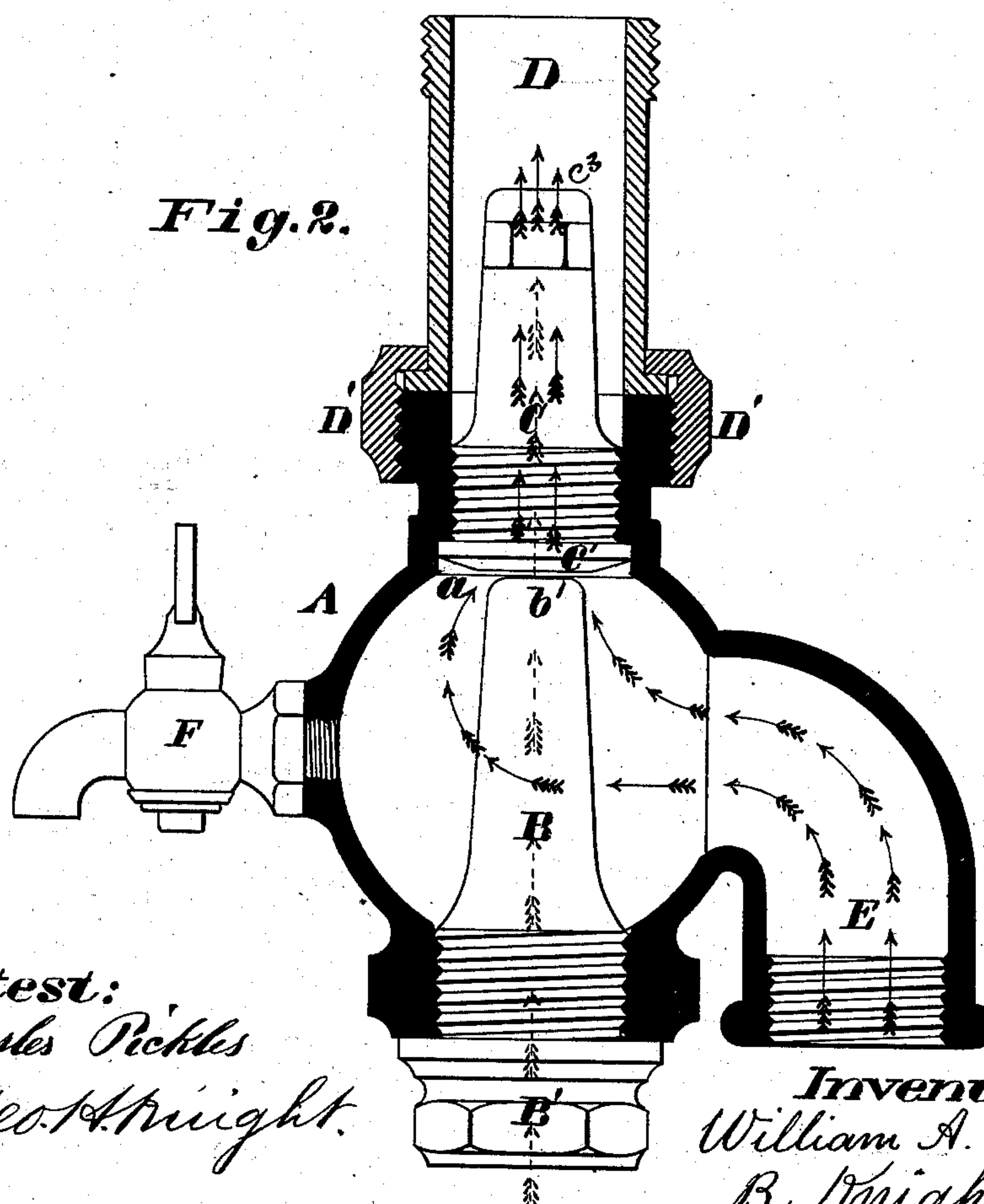
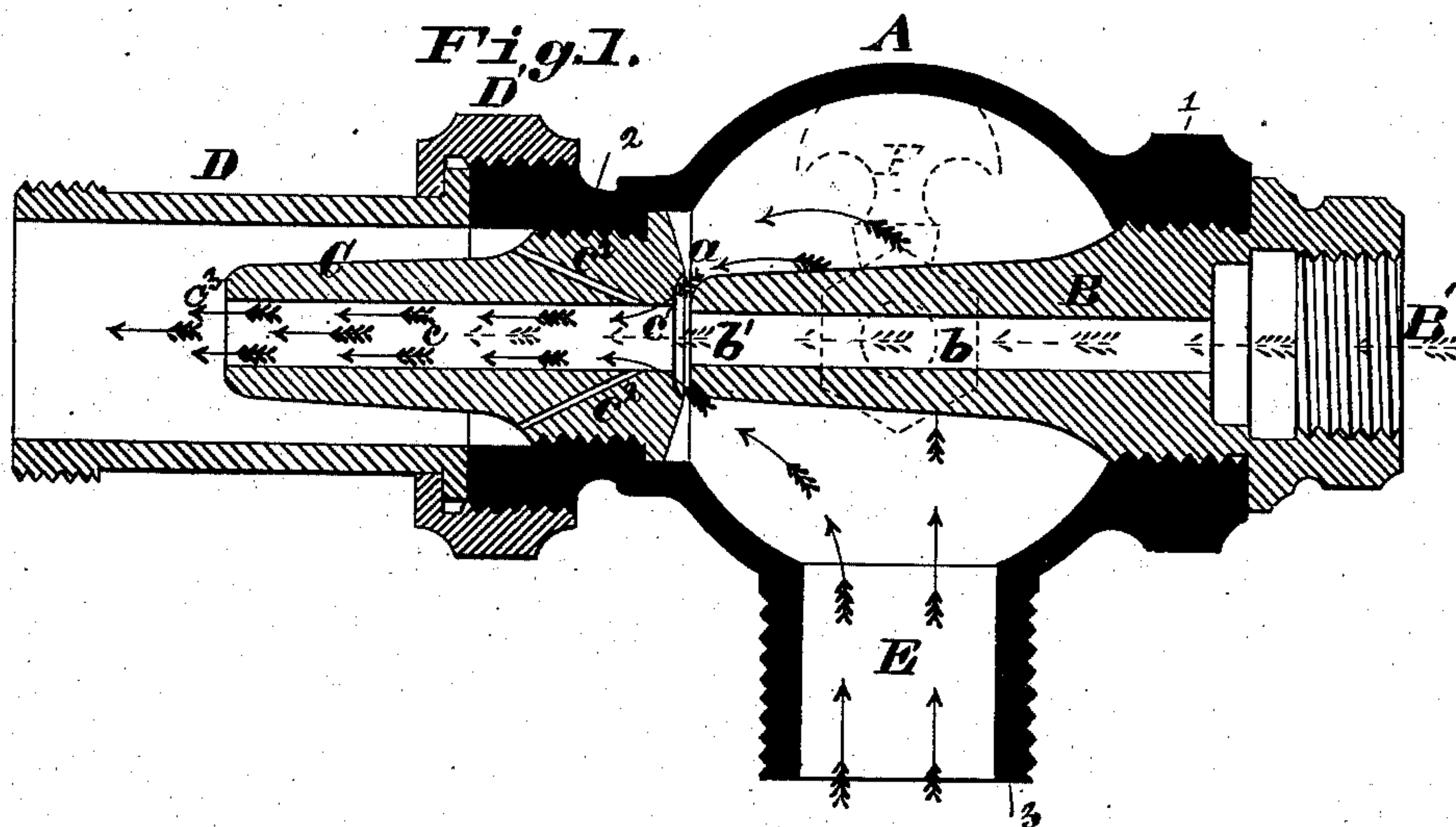


(Model.)

W. A. REID.  
Steam Jet Pump.

No. 242,982.

Patented June 14, 1881.



*Attest:*

*Charles Pickles*

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# UNITED STATES PATENT OFFICE.

WILLIAM A. REID, OF ST. LOUIS, MISSOURI.

## STEAM JET-PUMP.

SPECIFICATION forming part of Letters Patent No. 242,982, dated June 14, 1881.

Application filed March 8, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. REID, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Steam Jet-Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a device for drawing water from a well or other source by means of suction, and then forcing it from there to the place desired against hydrostatic pressure.

My invention consists in the arrangement of parts, as hereinafter set forth and claimed.

In the drawings, Figure 1 is a longitudinal section of my improvement, showing it as applied for taking water from a well through the means of a straight vertical pipe and forcing it horizontally against pressure to the place desired. Fig. 2 is a longitudinal section, showing the jets or nozzles in side view and the induction water-pipe bent to receive a hose, the application of the pump in this case being to flood roofs or floors in case of fire, and in all other cases where it is desired to force water in a vertical direction.

A is the globular body having branches 1, 2, and 3, the branches 1 and 2, located at opposite sides, being screw-threaded internally to receive the steam-jet B and discharge-jet C. The jets have straight-sided passages or ways *b* and *c* respectively, the passage *c* being of larger diameter than that *b*. The inner end, *b'*, of the steam-jet B is in close proximity to the excavated or recessed end *c'* of the jet C, the said end conforming to the curve of the receiver-chamber and to the rounded end *b'* of the jet B, and the nozzles or jets are so arranged in the body A that the end *b'* of the jet B is close to the delivery side *a* of the body A. Thus it will be seen that a strong suction and force will be formed, as a very small amount of the steam will escape entering the discharge-jet. The rear of the discharge-jet has one or

more perforations, *c*<sup>2</sup>, (I have shown two,) to allow the escape of a small portion of water. The direction of the holes *c*<sup>2</sup> is outward and forward from the inner surface of the jet, the angle being of any suitable pitch. The purpose of these holes is to relieve the friction caused by expansion, which occurs in this and all other steam-jet pumps of this class, and also serves as a complete drainage to the pipe between the end *c*<sup>3</sup> of the jet and the perforations. Thus the water cannot remain in this portion of the pipe when the pump ceases to work, and endanger the bursting of the pipe by the freezing of the water. The forward end of the nozzle or jet C is formed with a portion to receive a wrench for screwing it in.

D is the union connected to the discharge-orifice by means of connecting-nut D'.

The neck E of the induction-port is screw-threaded to receive the water-induction pipe.

The steam-jet B is screw-threaded at B' to receive the steam-induction pipe or hose.

The direction of the steam and water is shown by arrows.

F is a blow-off cock for cleaning out the pump.

Having thus described my invention, the following is what I claim as new therein, and desire to secure by Letters Patent:

The combination of the globular body A, having branches 1 2 3, the steam-jet B, having straight-sided passage *b*, and rounded end *b'*, in close proximity to the delivery side *a* of the receiver-chamber, and the combined steam and water jet C, having straight-sided passage *c*, of larger diameter than passage *b*, diverging openings *c*<sup>2</sup>, and excavated or recessed end *c'*, conforming to the end *b'* of the jet B, the branch 3, adapted to form the water-inlet, and the whole constructed and arranged substantially as shown and described.

WM. A. REID.

Witnesses:

J. E. KNIGHT,  
GEO. H. KNIGHT.