C. Barnes,

Ejecting Pump.

No. 57,035. Patented Aug. 7, 1866.

Fig. 2.

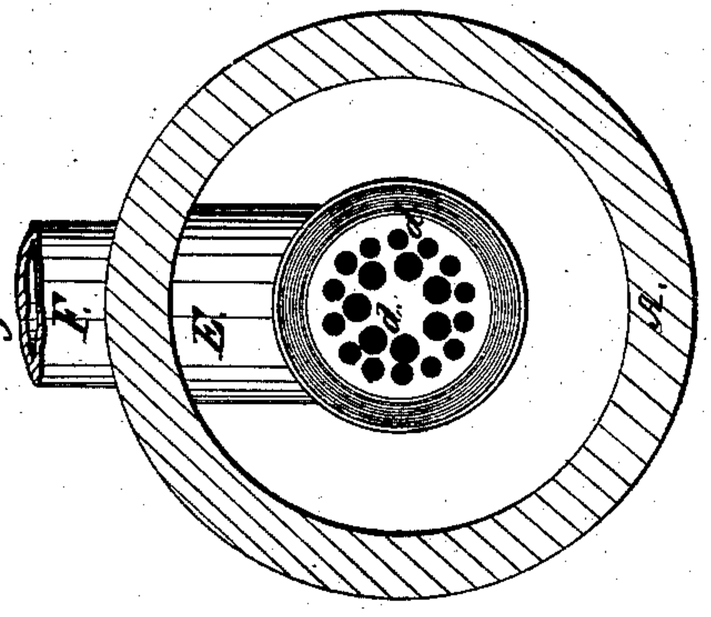


Fig. 1.

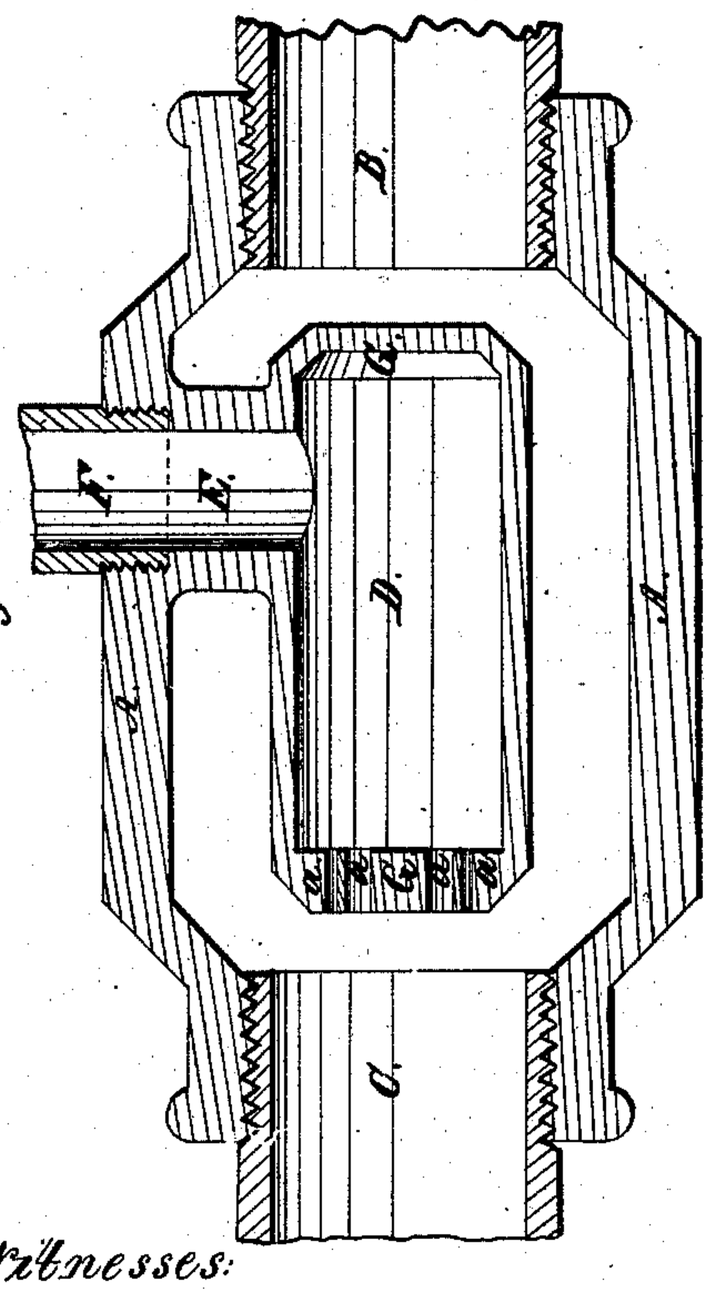
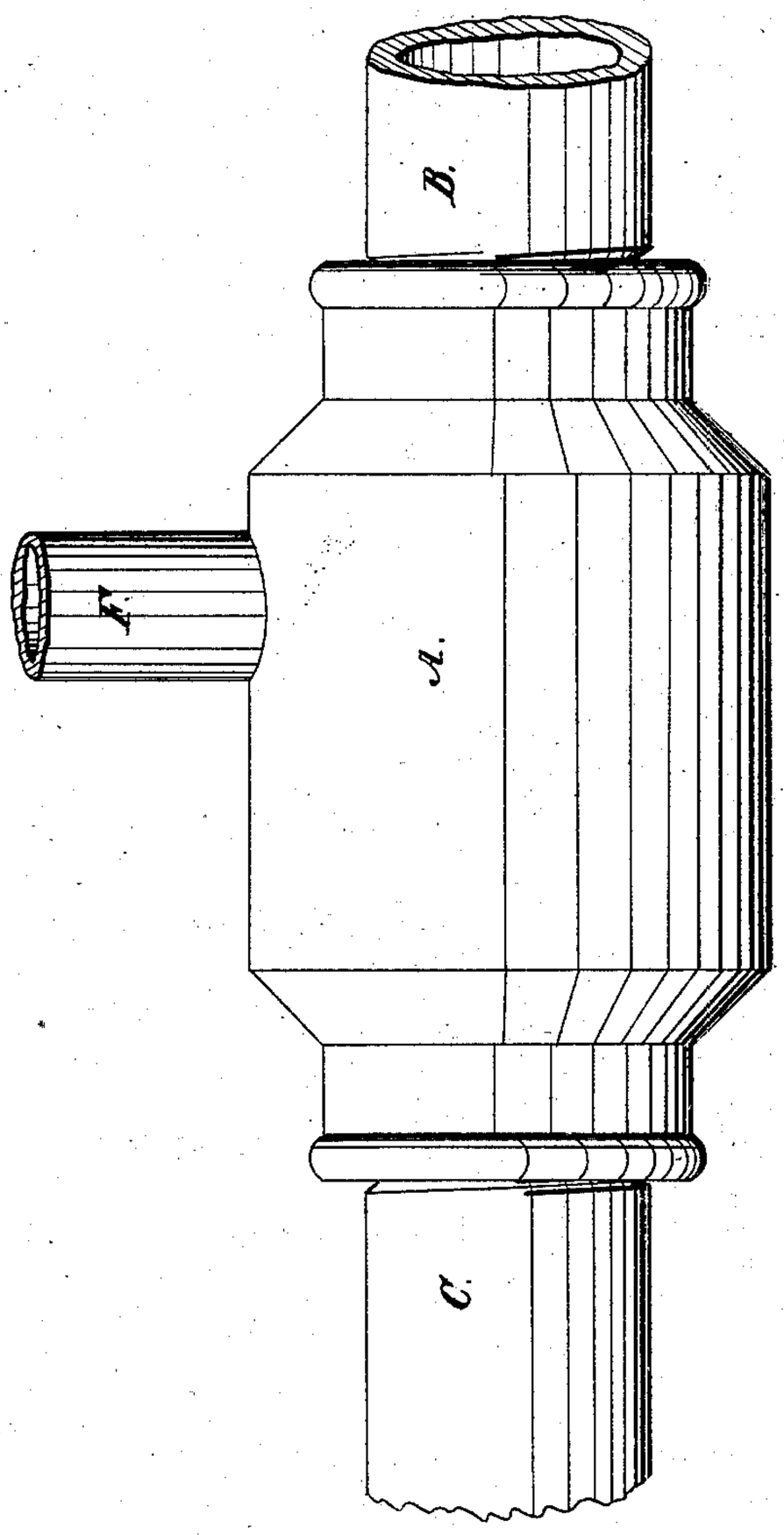


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES BARNES, OF CINCINNATI, OHIO, ASSIGNOR TO WARDEN, RENSFORD & CO., OF SAME PLACE.

IMPROVEMENT IN STEAM-JET PUMPS.

Specification forming part of Letters Patent No. **57,035**, dated August 7, 1866.

To all whom it may concern:

Be it known that I, CHARLES BARNES, of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Steam-Jet Water-Pumps; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention consists in a certain construction of steam-jet pump, in which the steam is made to issue through numerous orifices which collectively form the steam-jet when in action, the peculiar construction of the pump admitting also of the passage of the water in a direct line from supply to discharge, thus avoiding abrupt turns incident to the constructions hitherto given to this class of pumps.

In the accompanying drawings, Figure 1 is an axial section of a pump embodying my invention. Fig. 2 is a cross-section, and Fig. 3 an exterior view, of the same.

A is the casing, provided with supply and discharge pipes B C, the whole forming a continuous and direct passage for the water. D is the steam-jet tube, concentric with the casing A, and connected thereto by short tube E. The jet-tube D receives steam through a suitable pipe, F, and at the ends is provided with heads G and G′, the latter having numerous apertures, *d*, which collectively form the jet or steam issue.

I have discovered by careful experiment that by the use of the divided jet a great saving of steam is effected, and the stream of water is not so liable to be fitfully broken up, as with the single-tube issue.

It will be observed, by reference to Fig. 2, that the perforations collectively form an annular issue, the effect being that the greatest forcing power is applied at the sides of the discharge-pipe C, where resistance is offered by friction and most power needed.

I claim as new and of my invention—

A steam-jet water-pump constructed substantially as described, with jet-perforations *d* and a direct water-passage, A B C, as set forth, and for the purpose specified.

In testimony of which invention I hereunto set my hand.

CHAS. BARNES.

Witnesses:

OCTAVIUS KNIGHT,

JAMES H. LAYMAN.