

(No Model.)

H. M. WYETH.

FORCE PUMP.

No. 291,121.

Patented Jan. 1, 1884.

Fig. 1.

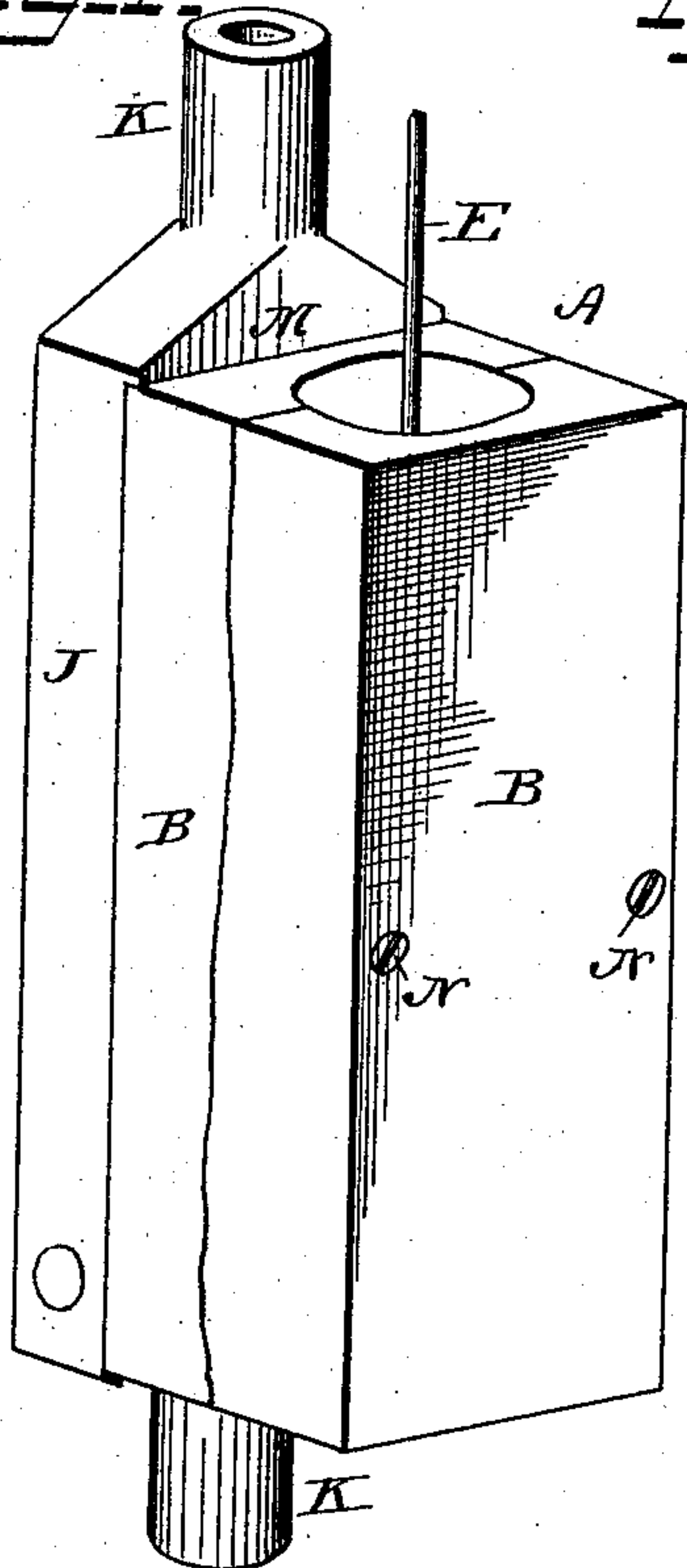


Fig. 2.

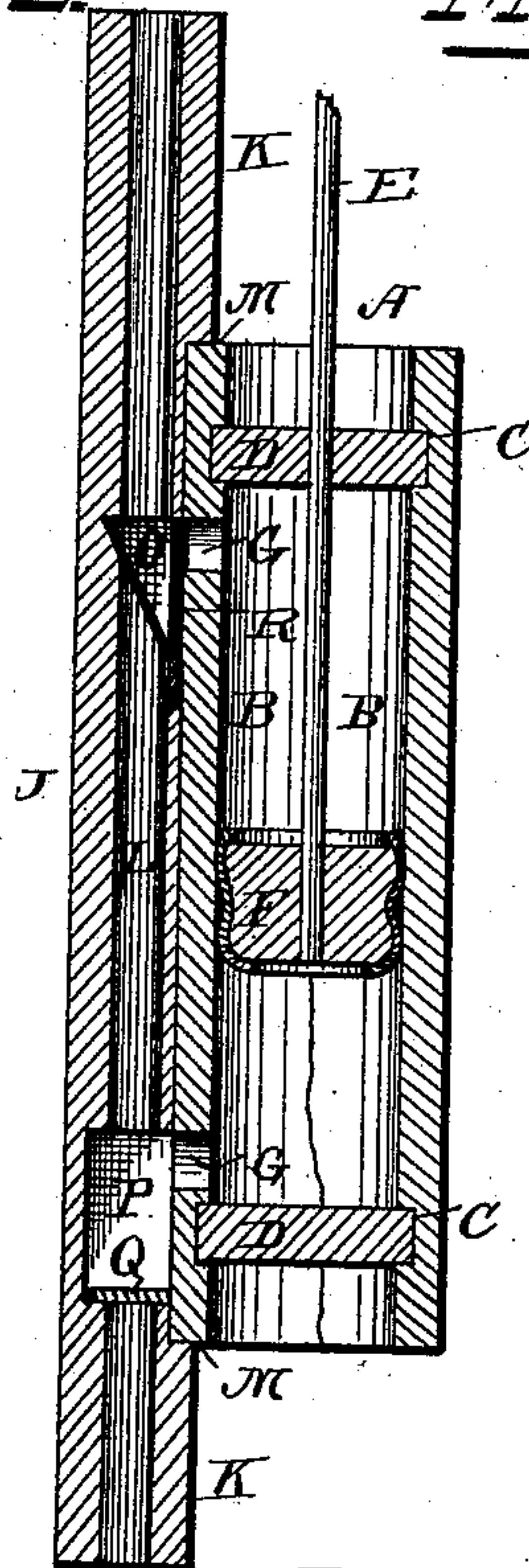


Fig. 4.

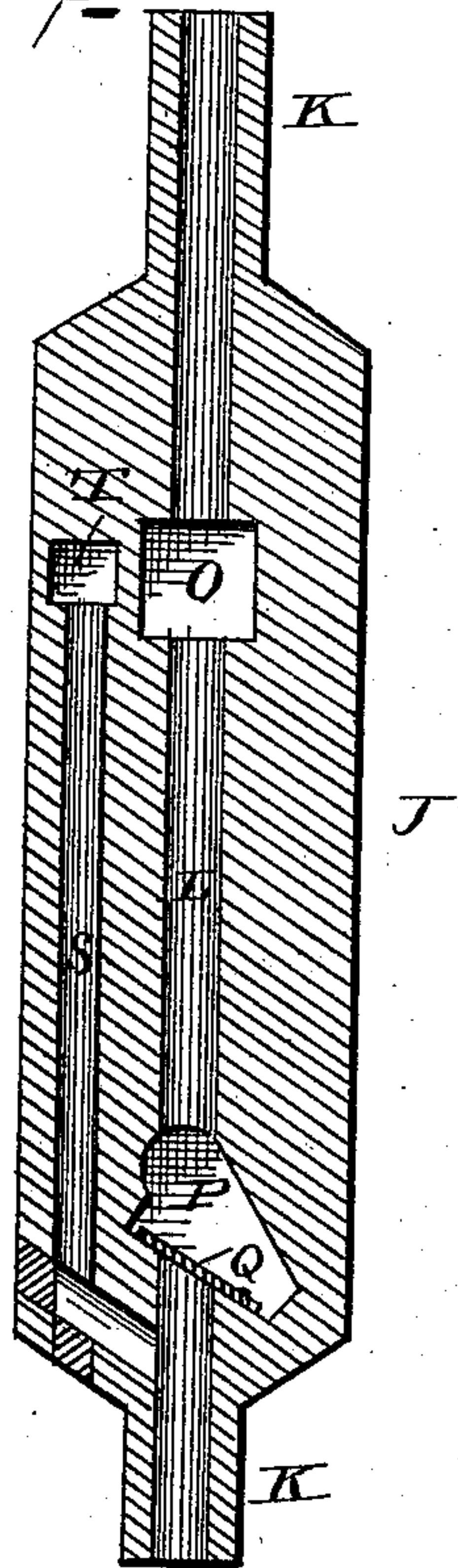


Fig. 3.

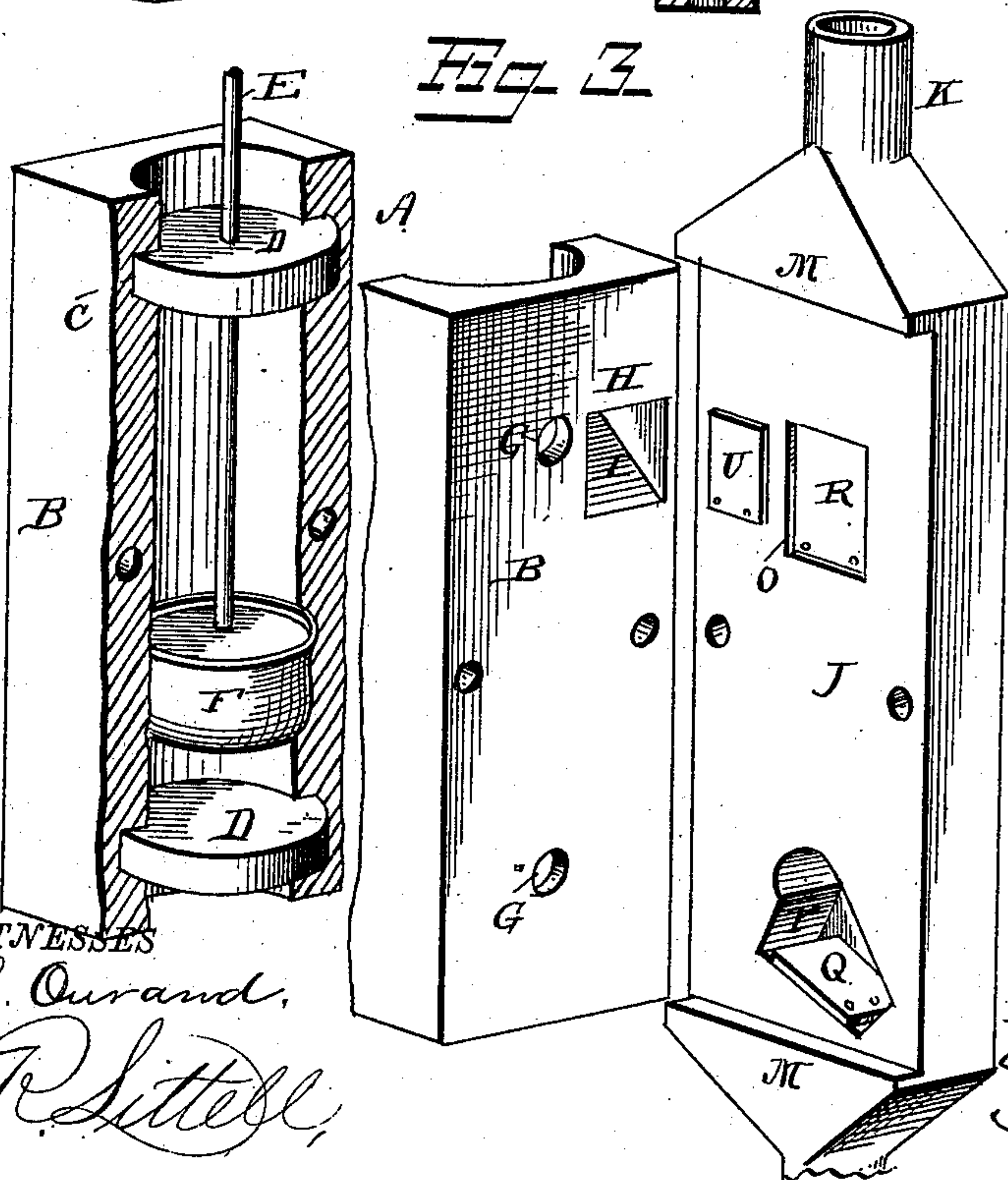
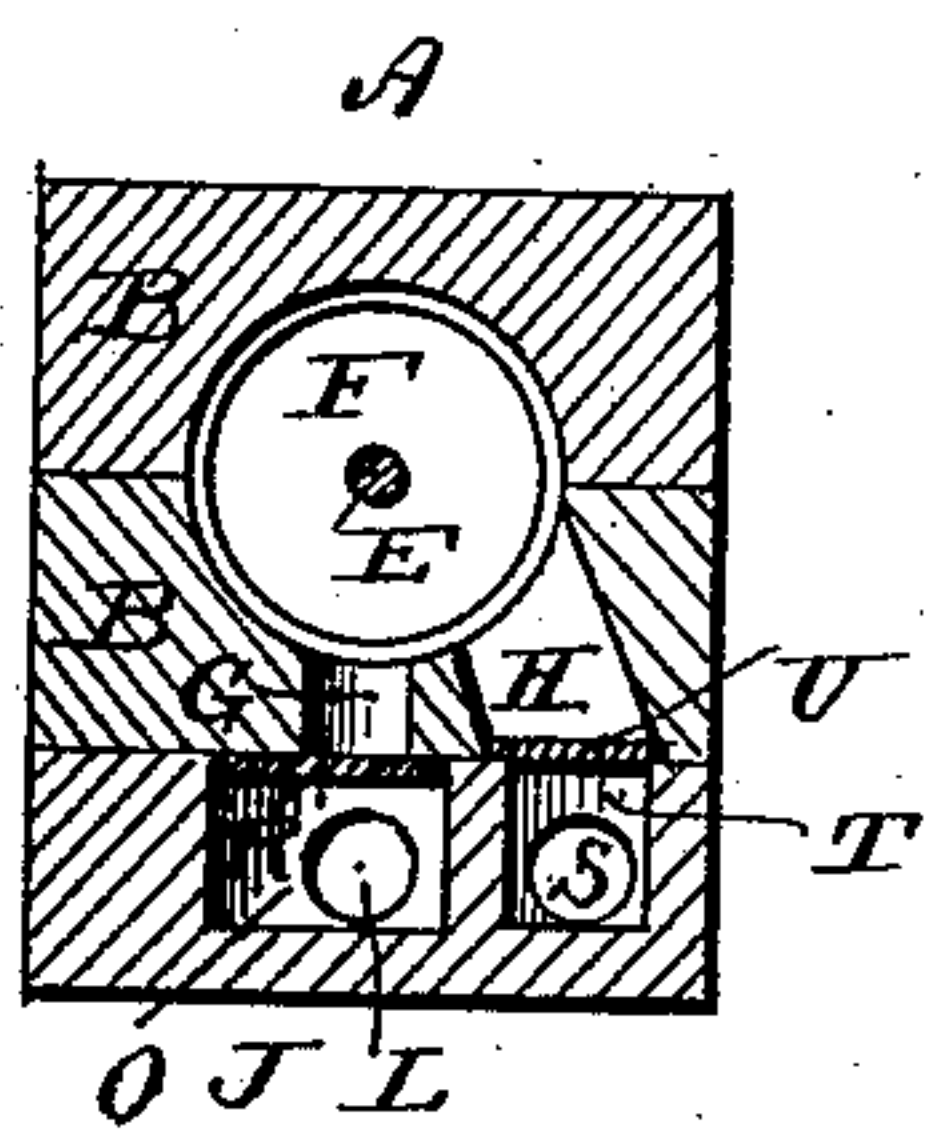


Fig. 5.



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# UNITED STATES PATENT OFFICE.

HENRY M. WYETH, OF SALT LAKE CITY, UTAH TERRITORY.

## FORCE-PUMP.

SPECIFICATION forming part of Letters Patent No. 291,121, dated January 1, 1884.

Application filed June 27, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. WYETH, of Salt Lake City, in the county of Salt Lake and Territory of Utah, have invented certain new and useful Improvements in Force-Pumps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a perspective view of my improved pump. Fig. 2 is a vertical transverse sectional view. Fig. 3 is a perspective view, showing the parts composing the pump detached from each other. Fig. 4 is a vertical sectional view through the conducting-pipes, and Fig. 5 is a horizontal sectional view of the pump.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to an improved double-acting force-pump; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A represents the cylinder of my improved pump, which is constructed in the following manner: A block of wood of suitable dimensions is bored longitudinally in direction of the grain, and is then split into two pieces, B B. The ends of said pieces are grooved upon the inside, as at C, to receive the heads D, one of which has an opening for the rod E of the plunger F. The latter and the heads are put into position, and the pieces B B may now again be put together, completing the cylinder. One side of the latter is provided, near the upper and lower ends, with openings G G, and near its upper end with an additional opening, H, the lower side of which is beveled or inclined, as at I.

J is a suitable flat block, trimmed at the ends to form extensions K, to which pipes may be attached. A perforation or bore, L, extends longitudinally through the block and extensions, as shown. Near its upper and lower ends the block J has transverse flanges M, between which the cylinder-block A is fitted, the said blocks A J being connected by

bolts N, which also serve to secure the parts B B of cylinder A tightly together.

Formed in the block J are recesses or valve-chambers O P, arranged opposite the upper and lower openings G in the cylinder, and connecting said openings with the bore L.

Q is a check-valve arranged in chamber P, opening upward.

R is a check-valve arranged in chamber O, and adapted to close the upper opening G. A channel, S, connects the bore L, below valve Q, with a chamber, T, adjoining the opening H, and having a valve, U, opening into the cylinder.

The operation of my invention will be readily understood. The pump may be immersed or arranged above the water-surface, as may be desired. On the upstroke of the plunger the valve R closes the end of bore L, opening into chamber O. Valve U closes the chamber T, and the water passes chamber P and valve Q into the lower end of the cylinder. On the downstroke the valve Q is closed, and the water from the lower part of the cylinder is forced up through pipe L, past valve R, which at this time closes the upper opening G. At the same time water passes through channel S, openings T H, and valve U into the cylinder above the piston, the next upstroke of which forces it over valve R, out through the bore L.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with the cylinder A, constructed as described, of the block J, having the water-passages L and S, and valves, and provided with flanges M and the bolts N, as and for the purpose set forth.

2. As an improvement in pumps, the combination of the cylinder A, having openings G G H and plunger F, with the block J, having bore L, channel S, chambers O P T, and valves R Q U, all arranged and operating substantially as described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY M. WYETH.

Witnesses:

JNO. A. BAILEY,  
M. K. PARSONS.