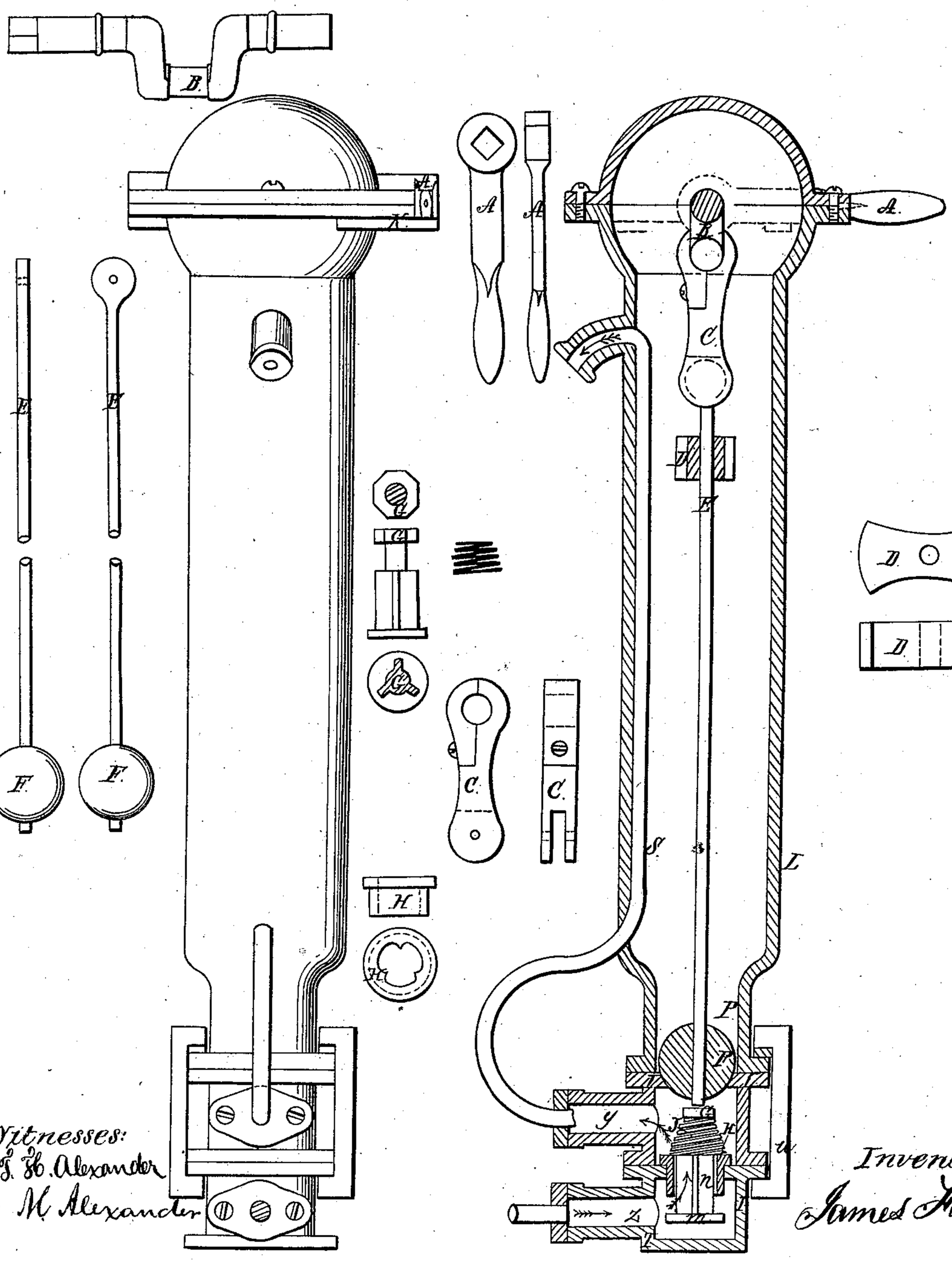
J. Fay,

Hydrant.

No. 24,290. Patented June 7, 1859.



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UNITED STATES PATENT OFFICE.

JAMES FAY, OF BALTIMORE, MARYLAND.

HYDRANT.

Specification of Letters Patent No. 24,290, dated June 7, 1859.

To all whom it may concern:

Be it known that I, JAMES FAY, of Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Hydrants; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the peculiar arrangment and construction of the several parts which will be hereinafter fully described.

In the figures L, represents the stock and P, represents a chamber, which are cast together in one piece. The object of casting the same in one piece is to simplify and cheapen their construction. The stock is of necessity made larger than the chamber P, and were the two cast separate and then bolted together the hydrant would be more complicated and expensive.

E, represents a rod which extends down into the stock and is provided with an india rubber ball on its lower extremity marked F, said ball being firmly secured to the rod and playing up and down with it. A connecting link C, connects the upper end of said rod E, with a crank B, and a handle A, by means of which it is operated.

D, represents a guide through which the rod E, passes.

To the lower end of the chamber P are secured two boxes I, and T, by means of a clamp *u*. A thimble H, screws into the top of box T, and through said thimble passes a valve stem *n*. To the lower end of the valve stem is a valve *m*. To the upper end of said stem is a nut G. Between the nut G, and the thimble H, surrounding the valve stem is a coiled wire spring J, which serves to hold the valve *m*, tight against the bottom of the thimble. The rod E, presses with its lower end, when it is desired, upon the nut G, and bears the stem and valve down.

Z, is a pipe which admits the water to box T, and *y*, is a pipe which allows it to escape from box I.

S, is a pipe which connects with pipe *y*, and entering the stock above the chamber P conducts the water up through the stock to an exit pipe at or near the top of the stock.

In operating this hydrant, I turn down the handle A, in such a manner as to depress the rod E, the ball F, fitting tightly in the chamber P. The lower end of rod E, bears upon the stem *n*, and removes the valve *m*, from the bottom of the thimble. The water then passes in at pipe *z*, up through thimble H, and out at pipes *y*, and S. When pressure is removed from rod E, the spring J, together with the force of the water, presses the valve *m*, up to the thimble and thus prevents the flow of water. One of the greatest advantages of this arrangement is the thimble and valve being in a direct line with the bore of the stock, a socket wrench may be applied at any time to nut G, and the thimble and valve can be removed, cleaned, or renewed, and returned to their proper position, without clogging up the hydrant. The water is drawn from pipe S, by means of the ball F, playing in chamber P.

It will be seen that the stock L, being much larger than the chamber P, when the ball F, is raised out of the chamber it does not touch the sides of the stock and cannot possibly wear. The chamber P, is made sufficiently deep to contain as much water as the pipe S, so that when the ball rises it draws the water from said pipe. The opening in the top of the box I is made annular and much smaller, or some smaller, than the diameter of the ball, so that when the ball is pressed down it forms a tight joint, fitting in the opening in the top of box I, before the rod E, presses upon nut G, and as the rod presses harder to open the valve the pressure of the ball is greater on the opening so that when the water rushes in it cannot have strength enough to force a passage by the ball, the ball not depending upon its fit in the chamber P.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:—

The arrangement of the stock L, and chamber P, as constructed, with the india rubber ball F, rod E, opening in the top of box I, nut G, spring J, valve stem *n*, valve *m*, and thimble H, the several parts being used and operating conjointly, substantially in the manner and for the purpose herein specified.

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