E. Clamfitt,

Hydrant.

No. 109,587. Patented Nov. 29. 1870.

FIG. 1

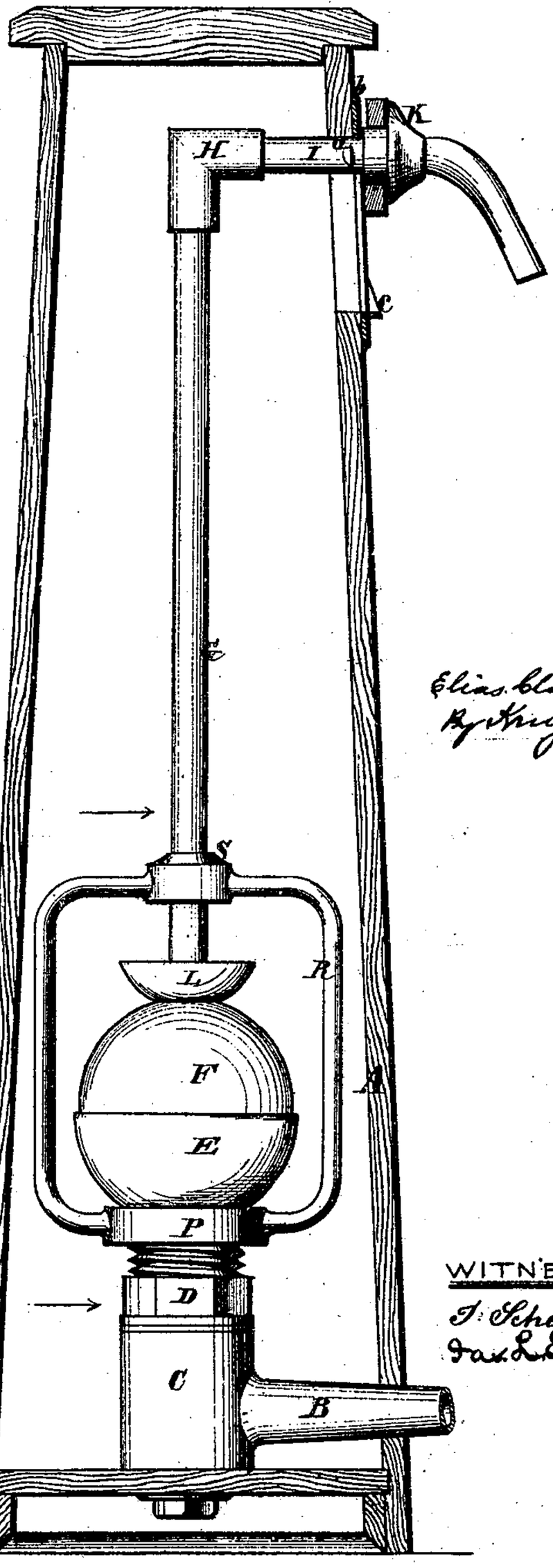

FIG. 2.

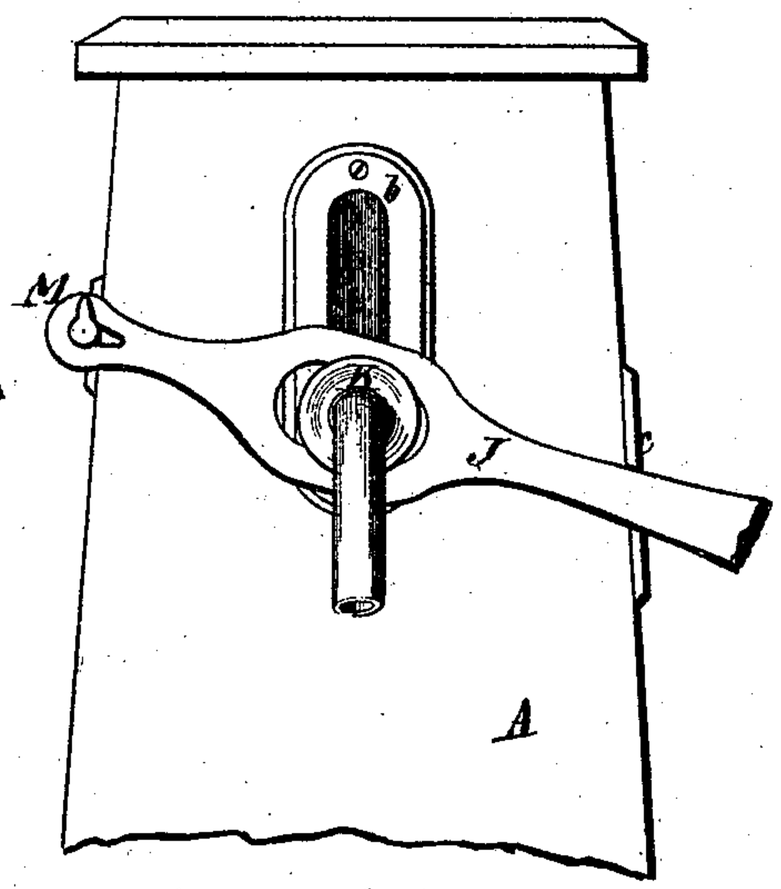

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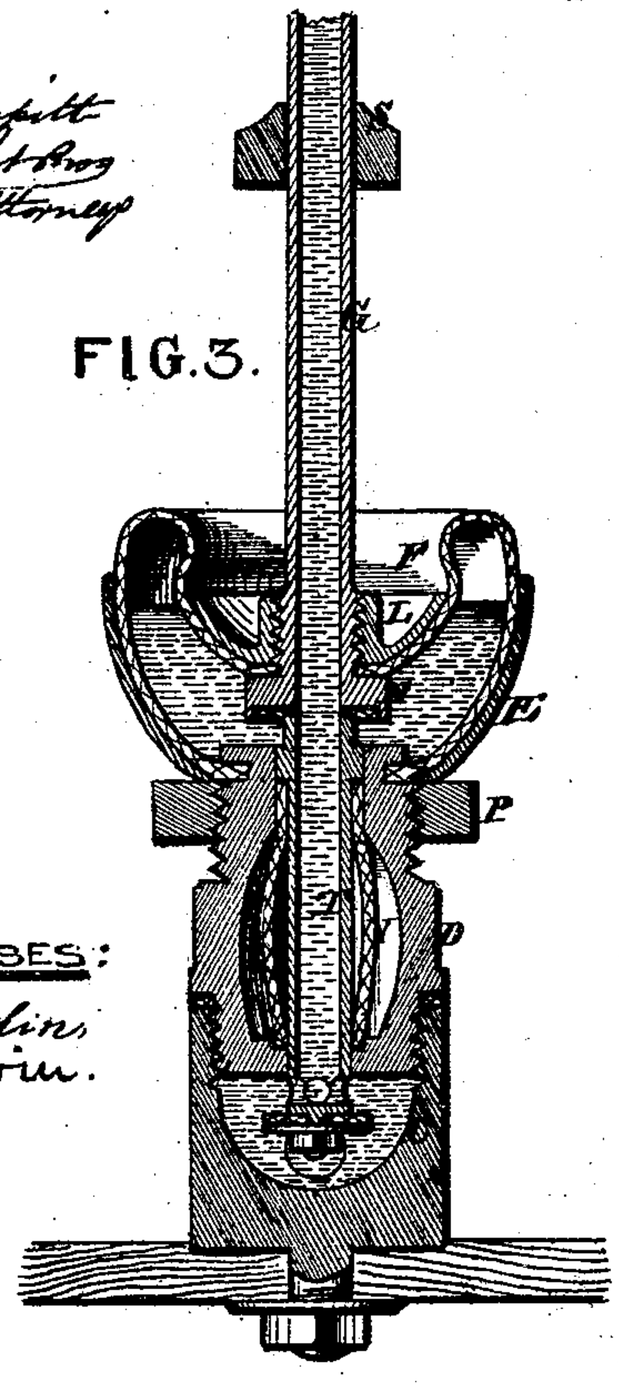
FIG. 3.



WITNESSES:

J. Scheitlin,
Jas. L. Ewin.

United States Patent Office.

ELIAS CLAMPITT, OF BALTIMORE, MARYLAND.

Letters Patent No. 109,587, dated November 29, 1870.

IMPROVEMENT IN HYDRANTS.

The Schedule referred to in these Letters Patent and making part of the same.

I, ELIAS CLAMPITT, of the city of Baltimore, in the State of Maryland, have invented an Improved Hydrant, of which the following is a specification.

Nature and Objects of the Invention.

The hydrant is one in which, when the discharge is stopped, the water in the discharge-pipe sinks into a chamber below the level of frost.

This chamber is, by preference, a hollow sphere of India rubber, which dilates to receive the water sinking from the discharge-pipe, and which is compressed to discharge its contents when the outward flow is resumed.

The bulb is not, for any length of time, in direct connection with the main.

When the discharge-pipe is depressed, the water-connection is accomplished and discharge takes place.

When the pipe is raised, the water-connection with the main is interrupted and the expanding bulb receives the subsiding water from the discharge-pipe. There is no "waste," as it is termed.

The elevation of the discharge-pipe is performed by a spring, which also acts as a packing in the duct between the main and the bulb.

The handle is hinged to a stud without the intervention of screws or nuts.

The nozzle is a bent tube, which screws into an elbow on the discharge-pipe; a stud and rose on the nozzle-pipe, and a plate attached to the face of the box, keep the nozzle at a proper extent of protrusion.

A yoke forms a guide for the discharge-pipe, and at its lower portion forms a part of the clamp which holds the elastic reservoir in position.

Description of the Accompanying Drawing.

Figure 1 is a side elevation, one side of the hydrant-box being removed.

Figure 2 is a front elevation of the upper part of the box, showing the handle.

Figure 3 is a section, on an enlarged scale, showing the construction of the parts immediately concerned in the opening and closing of the water-connection.

General Description.

A is the boxing in which the hydrant is contained.

B is the pipe connecting with the main, and discharging its contents into the box C, which forms the base of the apparatus to be described.

D is an upper box, screwing into box C, and supporting the cup E, which holds the hollow ball F, the latter being of India rubber, and containing the water which subsides from the discharge-pipe when the handle is raised and the main connection severed.

G is the discharge-pipe, which has an elbow, H, and a nozzle I.

On the latter are a stud, *a*, and a rose or boss, K, which are on the respective sides of the plate *b*, to keep the nozzle from slipping out or in beyond the assigned limits.

The handle J has a long slot at the point where it incloses the pipe I, and another opening where it is hinged to the stud M. The latter has a projecting lug, which only allows the handle to be attached when the latter is raised vertically; being then brought into the position shown in fig. 2, the lug prevents the handle from slipping off, and thus a cheap, convenient, and effective connection is obtained without a screw and nut, the usual mode of attachment.

The handle being in the position shown in fig. 2, the nozzle I is to be inserted through the slot, and then screwed into the elbow H.

The stud is passed through the opening in the plate *b*, when the nozzle is turned sidewise, and the latter being then turned spout down, the stud catches behind the plate *b* and prevents the spout from being pulled out, while the boss K keeps it from being pushed in.

The depression of the pipe G causes the discharge of the water, as will be presently explained, and the lifting of the pipe stops the flow.

When the handle is depressed, it may be caught beneath a notched plate, and the flow is thus made continuous without the trouble of holding it.

F is a hollow sphere of India rubber or other flexible material, having openings in the top and bottom.

The edges of the upper orifice are clamped between a cup-shaped disk, L, and an enlargement, N, on the foot of pipe G.

This elastic bulb sits in a cup, E, which preserves its form to some extent when compressed, as shown in fig. 3.

The edge of the lower orifice in the bulb is clamped in a groove around the upper portion of the box D by the rising of the collar P, on which are erected the yoke R and guiding-sleeve S, through which the pipe G slips as the handle J is raised and lowered.

T is a short pipe, which is open at its upper end, and at the lower end has side orifices, which allow it to communicate with the main when depressed, as shown in fig. 3; but, when the pressure of the pipe G is withdrawn, the elasticity of the gum cylinder V raises the pipe T, and the holes in its lower end are closed by the contact of the bottom of the box D, into which it slips.

When the handle is depressed, the connection is made with the main, as shown in fig. 3, the water flowing up the pipe to the discharge.

When the handle J is raised, the spring V raises the pipe T and closes the openings in the lower end of said pipe.

The raising of pipe G restores the bulb F to its full capacity, and the water subsiding in the pipe G fills the bulb, which is placed below the access of frost.

When the handle is again depressed, the contents of the bulb are driven up the pipe G, which then comes in contact with the top of the pipe T, and, by depressing it, causes the water of the main to flow through the connected pipes T G to the nozzle.

Claims.

What I claim as new is—

1. The reservoir of pliable material F, to hold the subsiding water when the issue of water is stopped.

2. The gum packing V around the stem T, to prevent direct access between the main and the reservoir F, also to raise the said stem T.

3. The hydrant-nozzle I, secured in the frame or casing by the stud *a* and plate *b*, and screwed into the elbow of the delivery-pipe, all substantially as described.

4. In combination with the nozzle I, and as a means of operating the same, the handle J, slotted as represented, and secured to the frame or casing by means of the stud M, as described.

5. The yoke P R S, combined with the delivery-pipe G and reservoir F, as described.

6. The handle J, pivoted, as set forth, with an oblong slot, in combination with the nozzle and pipe, and a valve operated by a downward pressure derived from said handle, substantially as described.

ELIAS CLAMPITT.

Witnesses:

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B. ABRAHAMS.