(No Model.) 2 Sheets—Sheet 1.

P. W. BAILEY.

HYDRANT.

No. 388,010. Patented Aug. 21, 1888.

Fig 1

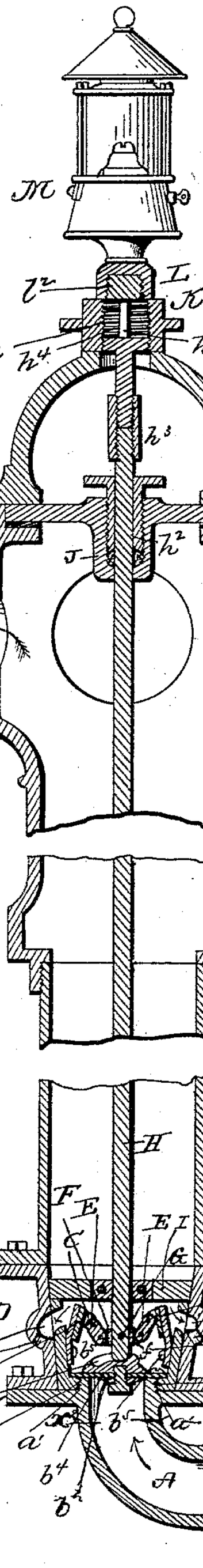
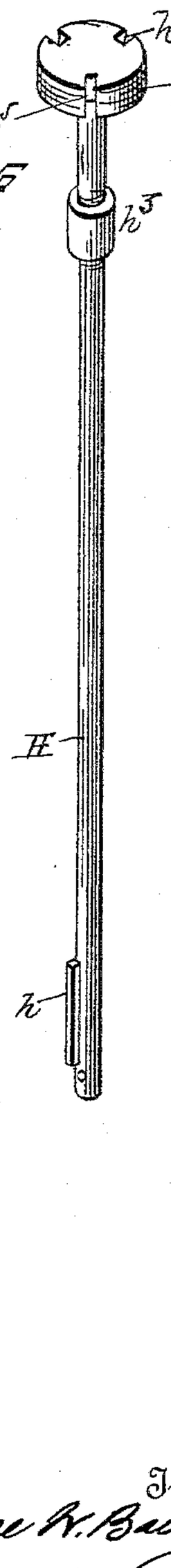


Fig 6



Witnesses.
F. L. Durand.
H. F. Chamberlain.

Inventor.
Lyell W. Bailey.

Attorney.
C. H. Watson & Co

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

P. W. BAILEY.

HYDRANT.

No. 388,010. Patented Aug. 21, 1888.

Fig 2

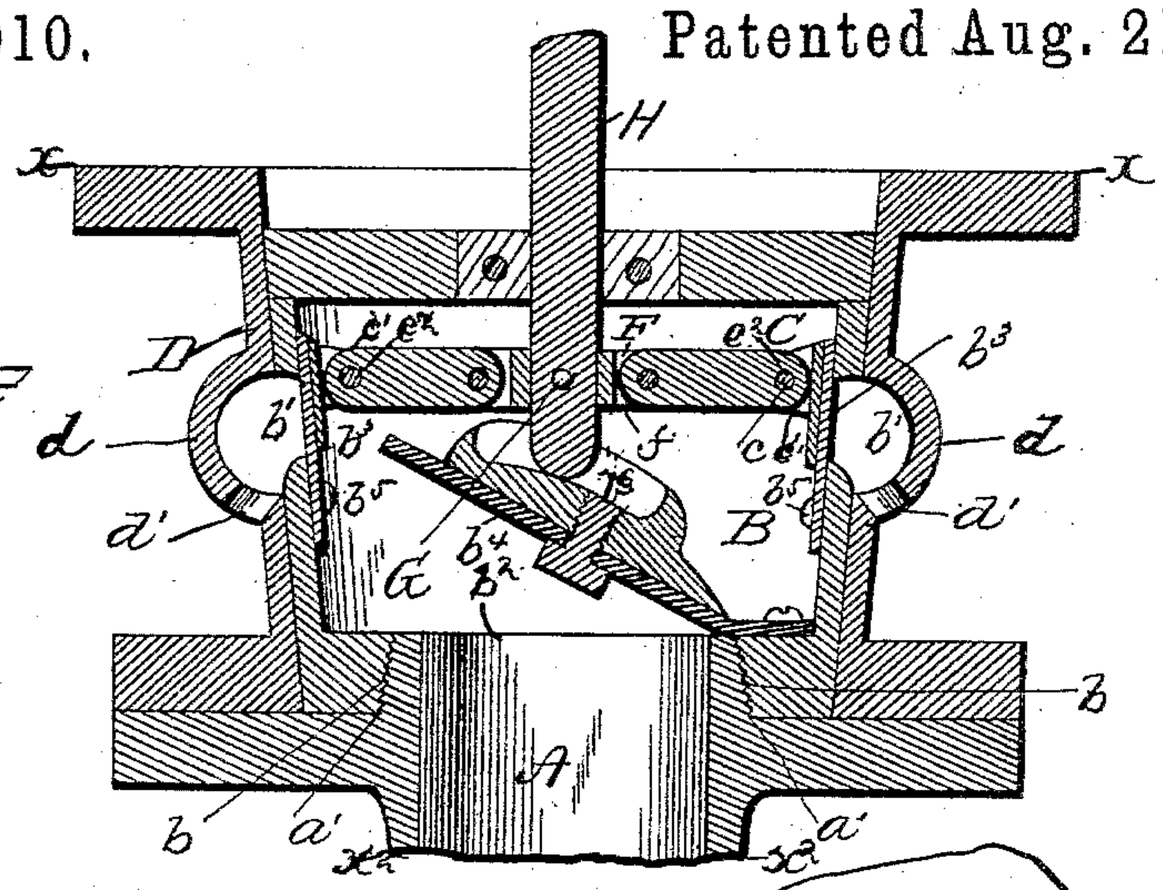


Fig 3

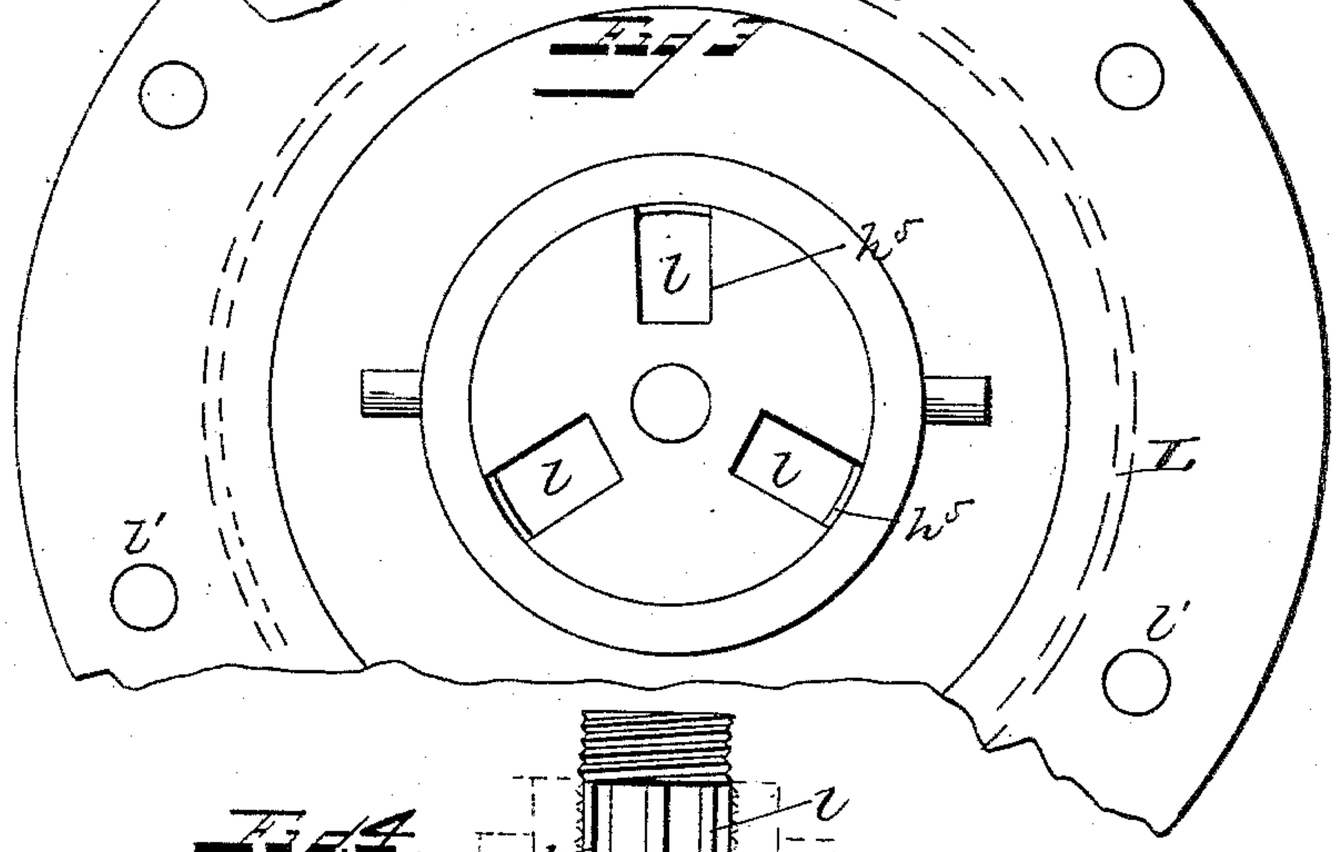


Fig 4.

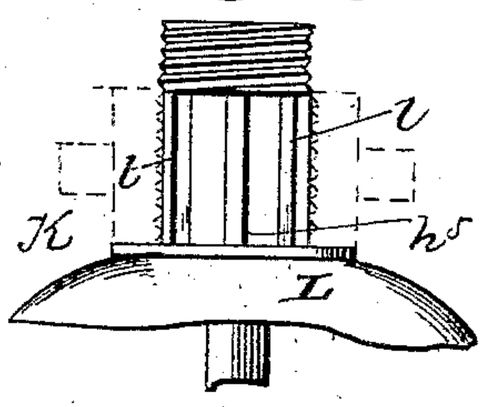


Fig 5

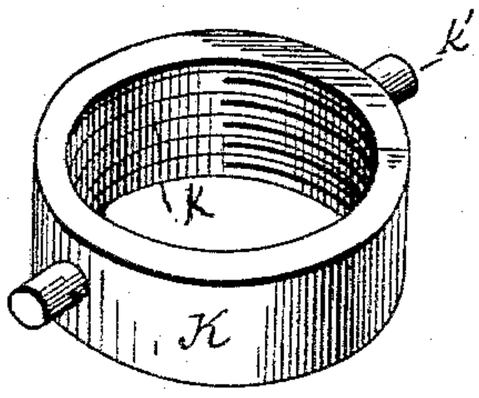


Fig 7

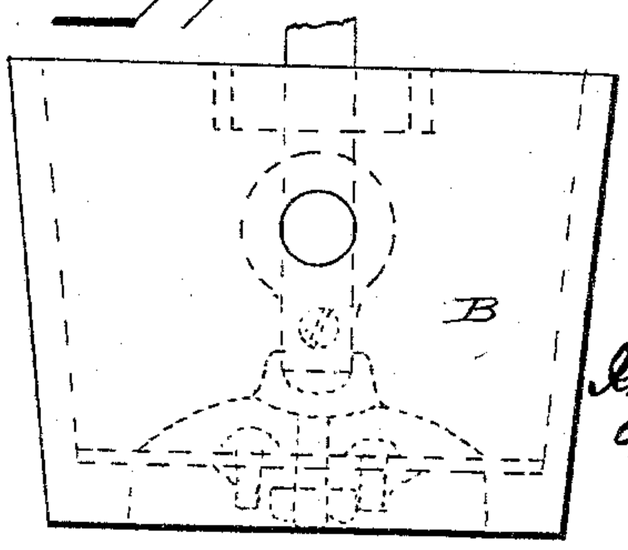
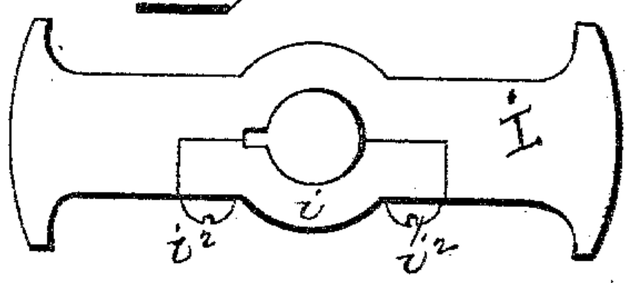


Fig 8



Witnesses.
F. L. Ourand.
H. H. Chamberlin

Inventor.
Lyce W. Bailey.

C. H. Waterman, Attorney.

UNITED STATES PATENT OFFICE.

PRYCE W. BAILEY, OF SENECA FALLS, NEW YORK.

HYDRANT.

SPECIFICATION forming part of Letters Patent No. 388,010, dated August 21, 1888.

Application filed March 10, 1888. Serial No. 266,824. (No model.)

To all whom it may concern:

Be it known that I, PRYCE W. BAILEY, a citizen of the United States, residing at Seneca Falls, in the county of Seneca and State of New York, 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 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, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in hydrants; and the objects of my improvents are, first, to provide a hydrant that will be simple in construction, effectual in operation, and positively non-freezing; second, to so attach a signal-lamp to said hydrant as to enable any one to mark its position in the night and operate the valves without detaching the signal-lamp, and, third, to so arrange the hydrant that any or all of its internal mechanism can be withdrawn at any time for any desired purpose—such as inspection or repair—without digging up the hydrant. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an axial section of the hydrant embodying my invention, the parts being in position in which the water-supply is closed and the wasteway open. Fig. 2 is a similar section between the lines x and x^2, the parts being in a position in which the water-supply is open and the wasteway closed. Fig. 3 is a plan view of the cap. Fig. 4 is an elevated sectional view of the cap, showing its relative position to the nut and threaded screw-head on the top of the rod. Fig. 5 is a perspective view of the nut. Fig. 6 is a perspective view of the rod. Fig. 7 is a side view of the bucket, and Fig. 8 is a view of the bar across the top of bucket. A portion is broken away from each section for compactness of representation.

Similar letters refer to similar parts throughout the different views. The arrows indicate the course of the water.

A is the inlet elbow or tube connected in any suitable manner to the service-pipe from the main. Said elbow or tube A is provided with an annular flange or shoulder, a, and the raised valve-seat a', which is threaded to receive and hold in position the bucket B, which is provided in the bottom with similar threads b, adapted to screw upon those of the valve-seat a'. The bucket B fits into the outside iron case, D, of the hydrant, and is provided with the orifices b' and b^2 and the valves b^3 and b^4. These valves are secured to the bucket B by means of the screws b^5, or in any other suitable way, and are so arranged and constructed as to open and close effectually the orifices b^2 b' in the bottom and side, respectively, of the bucket B. The waste-valves b^3 are provided with the ears C. Said ears are provided with the slots c', into which the ends of the bars E are placed and securely fastened by means of the bolts c^2 passing through the ears C and the holes in the ends of the bars E, respectively. The other ends of the bars E are secured in a similar way to the ears f of the collar F, which is secured to the lower end of the rod H by means of a bolt, G, passing through the collar F and the vertical rod H.

It can be readily seen that the bars E and the collar F, being thus attached, form a toggle-joint by which the valves b^3 are opened and closed by means of the vertical movement of the rod H. The inlet-valve b^4 is closed by the downward pressure of the rod H, the lower end of which fits in a groove, b^6, which is made in a raised portion upon the top of the valve. The lower end of the rod H, working in said groove, holds the valve b^4 at all times firmly in position. When the vertical rod H is raised, the pressure of the water is sufficient to open the valve b^4.

The case D has an annular projection or rim, d, in the lower portion of which are the openings d', for the purpose of letting the waste water escape. The openings d' are downward with a view of preventing the water from washing away the dirt around the hydrant.

There is a bar, I, across the top of the bucket B. This bar is provided with an adjustable piece, i, which can be removed by taking out the screws i^2. The purpose of the adjustable piece i is to take out the vertical rod H, if necessary, without removing the bucket B. It is evident (if the piece i is not removed and the rod H slipped out of its normal position) that the rod H cannot be removed without withdrawing the bucket B unless the bolt G is taken out and the collar F slipped off of the

rod H, because the collar F in being raised will come in contact with the bar I. It is, however, frequently convenient to unscrew the bucket B from its raised valve-seat a' and withdraw the bucket B in connection with the rod H. This is accomplished by removing the cap L from the top of the hydrant. The bucket B is then removed by unscrewing the same from the casing D by means of the rod H. The rod H contains a spline, h, which fits in the slot or groove in the bar I. The purpose of said spline is to prevent the rod H from revolving in the bar I.

To the vertical rod H above the stuffing-box J there is secured a coupling, h^3, which, by coming in contact with the stuffing-box J, prevents the rod H from being lowered to an extent which would be injurious to the valve b^4. At the top of the rod H there is a threaded head, h^4, upon which the nut K works. The threaded head h^4 is provided with slots h^5, into which the splines l of the cap L are adapted. The splines prevent revolution or hold in a stationary position the threaded head h^4.

The cap L is secured to the hydrant by means of the screws l', and is constructed with three or more splines, l, projecting upward. Upon the top of said splines, or upon the top of the cap L, there is a neck, l^2, to which the lamp is attached. The splines l are adapted to the slots h^5 of the threaded head h^4, and when adjusted in said slots they prevent the revolution of the rod H. Said splines are made longer than the threaded head h^4 of the rod H with a view of giving the threaded head h^4 ample room for its necessary vertical movement. The top or neck l^2 may be made with threads for the purpose of screwing on the lamp M, or it may be made without threads and the lamp secured thereto in any suitable manner.

The nut K is provided with the projections k' and the threads k, adapted to the threads of the threaded head h^4 of the rod H. It is easily seen that by screwing down the nut K upon the head h^4 the vertical rod H is drawn upward, closing the valves b^3. By reversing the nut K—that is, turning it backward—the rod H is forced downward and closes the valve b^4 and opens the valves b^3. In other words, the circular motion of nut K is converted into the vertical motion of rod H, by means of which the valves of the hydrant are operated.

The lamp M is of any suitable construction, provided with a reflector, if necessary, and is secured to the top l^2 of the cap L.

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

1. In a hydrant, the combination of the casing, having suitable waste-apertures and inlet-elbow, with the cap L, having the splines l, the vertical rod H, having the threaded and slotted head h^4, the nut K, working upon said head, the collar G, secured to the lower end of the rod H, the toggle-joint connecting said collar with the valves b^3 of the bucket B, and the bucket B, having the valves b^3 and b^4, whereby said valves are operated, substantially as described.

2. In a hydrant, the combination of the casing, having a suitable inlet-elbow, with the raised valve-seat a', the cap L, having the splines l, the vertical rod H, having the threaded and slotted head h^4, the nut K, working upon said head, the bucket B, screwed upon the raised valve-seat a' of casing D, the bar I across the top of the bucket B, the collar G, secured to the lower end of the rod H, the toggle-joint secured to said collar, and the valve b^3 of the bucket B, whereby the internal mechanism may be withdrawn without digging up the hydrant, substantially as described.

3. In a hydrant, the casing D, having waste-apertures and inlet-elbow, with raised valve-seat a', upon which is screwed the bucket B, in combination with the bucket B, having suitable waste and inlet valves, the inlet-valve b^4, having the groove b^6, whereby the same is held in position, substantially as described.

4. In a hydrant, the combination of the casing D, with cap L, having splines l, with a neck extending above said splines, to which is secured the lamp M, the vertical rod H, having the threaded and slotted head h^4, the nut K, working upon the head h^4 of the rod H, the collar G, secured to the lower end of the rod H, the toggle-joint connecting said collar with the valves b^3, the bucket B, having the valves b^3 and b^4, whereby said valves are operated without detaching the lamp or lighting device.

5. A hydrant provided with a suitable casing, having the raised valve-seat a', in combination with the bucket B, screwed upon said valve-seat, the cap L, having the splines l, with a neck extending above said splines, to which is secured a signal device, the vertical rod H, having the threaded and slotted head h^4 and the spline h, the nut K, working upon said head, the bar I across the top of the bucket B, the collar G, secured to the lower end of the rod H, the toggle-joint secured to said collar, and the valve b^3 of the bucket B, substantially as described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PRYCE W. BAILEY.

Witnesses:
J. W. NEWKIRK,
B. F. QUIMBY.