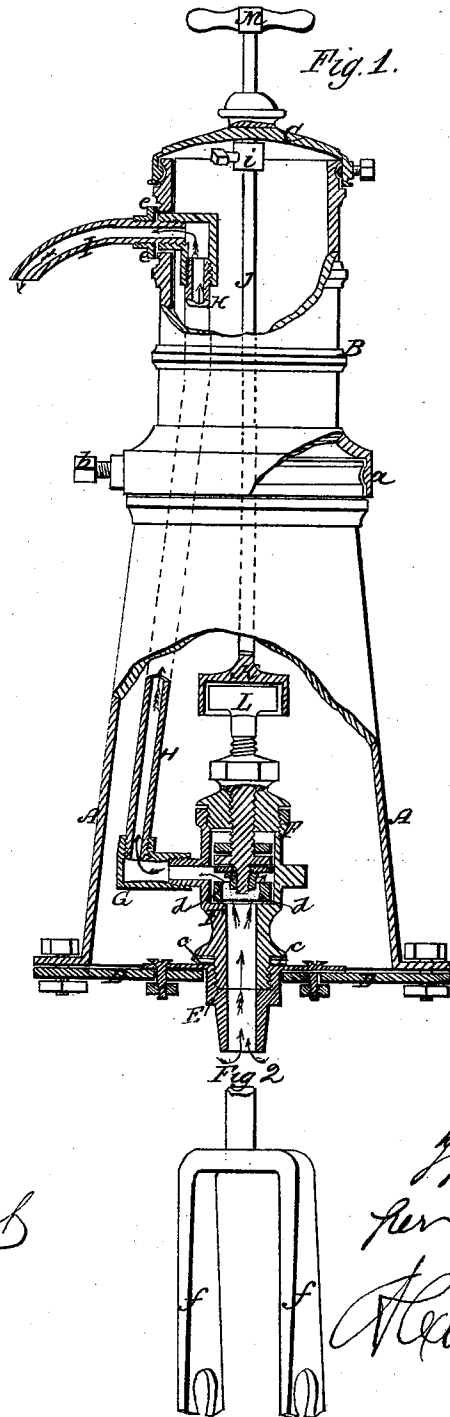


M. Zwiebel,

Hydrant.

N^o 93,658.

Patented Aug. 10. 1869.



Witnesses:
Harry King
Leopold Greif

Inventor:
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per
Alexander Mason
Attys.

United States Patent Office.

MICHAEL ZWIEBEL, OF POTTSVILLE, PENNSYLVANIA.

Letters Patent No. 93,658, dated August 10, 1869.

IMPROVEMENT IN HYDRANTS.

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

To all whom it may concern:

Be it known that I, MICHAEL ZWIEBEL, of Pottsville, in the county of Schuylkill, and in the State of Pennsylvania, have invented new and useful Improvements in Hydrants; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction and general arrangement of a "hydrant," as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a vertical section of my hydrant, and

Figure 2 is a perspective of a wrench used to take the same apart.

A represents the post or bottom of hydrant-stock, made of cast-iron, or other suitable substantial material, and is to be placed permanently in the ground.

Around the upper end of the post A is a recess to receive the case or upper part, B, of hydrant-stock, which is also made of cast-iron, or other suitable material and provided, around the lower end, with a small projection, *a*, to fit on and in the recess on the upper end of the post, to which it is securely fastened by one or more set-screws, *b*, bolt, rivet, or other suitable means.

The cap C of the hydrant is fastened to the case B in the same manner that the case is fastened to the post.

To the bottom of the hydrant-post A is secured a plate, D, to which is fastened a nipple, E, with female screw, said nipple being attached to the pipe leading to the street-main.

F represents the hydrant-stop, which, on its lower end, is provided with screw-threads to be screwed into the nipple E, and is protected from leaking at the joint by a leaden washer, *c*, being placed between the screws.

In the body of the hydrant-stop F is a glass seat, *d*, solidly embedded with lead, or other suitable manner, to prevent the wearing of the seat by use, or by the leakage of water, which is the case when metal seats are used.

In all hydrants it is invariably found that the seats in the stop are soon worn out, so as to leak more or less. This is entirely obviated by the use of a glass seat, which is not as liable to be worn off by use or by leakage.

To the hydrant-stop F is screwed an elbow, G, and to this elbow the hydrant-pipe H is screwed, which pipe leads upward; and the nozzle I, which passes

through the casing B, is screwed to the upper end of the pipe H.

The nozzle I and pipe H are then securely fastened to the case B, by means of a jam-nut, *e*.

The hydrant-rod J, which passes up through the centre of the cap C, is, at its lower end, provided with a wrench, K, which fits on the key L of the hydrant-stop; and at its upper end the said rod has a handle, M, by means of which the hydrant is opened and closed.

At a suitable point on the hydrant-rod J is placed a collar, *i*, or other suitable projection, which works against the inner side, or rather the upper inner side of the cap C, thereby protecting the key L from escaping from the wrench *i*.

With the arrangement of a hydrant as above described, I am enabled to repair any part of the pipe or stop by unscrewing the nozzle, taking off the cap and case of the hydrant, at a considerable less expense than in an ordinary hydrant, and avoiding the necessity of digging away the ground from the hydrant-post, and consequently preventing much dirt and inconvenience.

It will also be seen that when the nozzle is unscrewed and cap and casing taken off, the hydrant-stop and pipes can be removed, without disturbing the post, by means of a wrench, the lower end of which I have represented in fig. 2.

This wrench has two arms or prongs *f f*, the lower ends of which are provided with rounded slots. These forks or arms are placed, one on each side of the hydrant-stop F, one of said arms resting in its slot on the elbow G, and the other on a round projection on the opposite side of the stop. By then turning the handle of the wrench, the hydrant-stop can easily be unscrewed from the nipple E, taken out, repaired, and placed back in its position again.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the post A, casing B, cap C, bottom plate D, and nipple E, the stop F, screwed into the nipple E, and provided with glass seat *d*, the elbow G, pipe H, and nozzle I, all constructed and arranged to operate substantially as and for the purposes set forth.

2. In combination with the subject-matter of the foregoing clause, the key L, wrench K, and rod J, having handle M and collar *i*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 2d day of March, 1869.

ML. ZWIEBEL.

Witnesses:

JEROME HAMER,
CHAS. FRAILEY.