Z. E. Coffin,

Hydrant,

No. 80,143. Patented July 21, 1868.

Fig. 4.

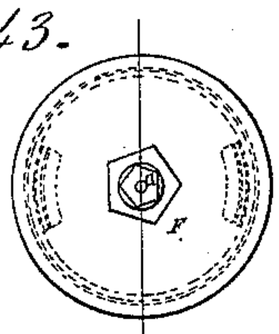


Fig. 1.

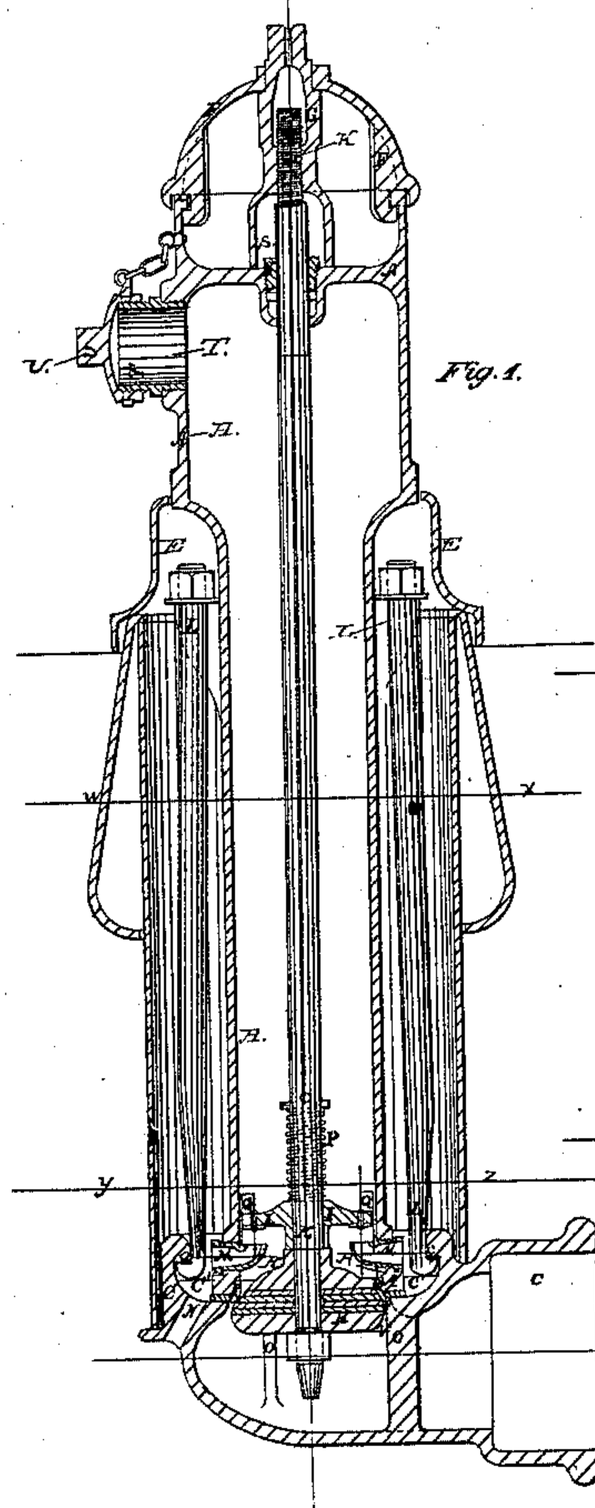


Fig. 3.

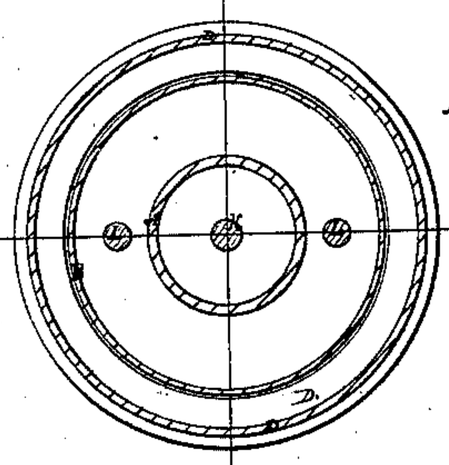


Fig. 2.

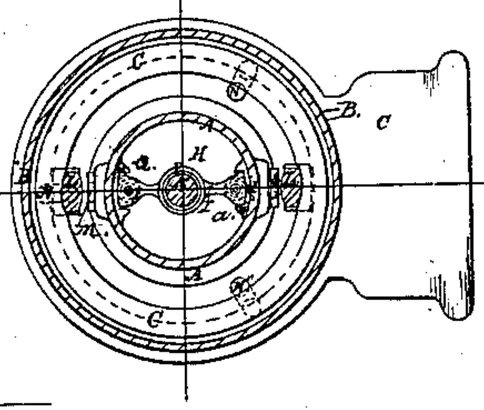


Fig. 6.

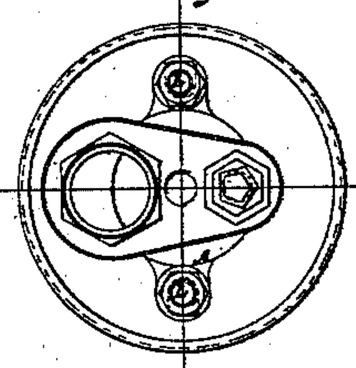
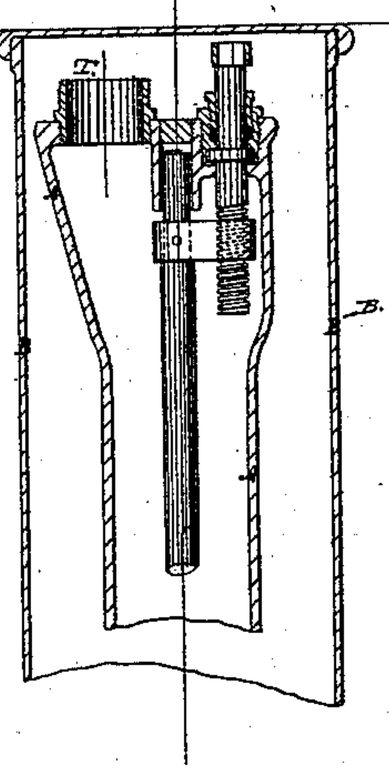


Fig. 5.



Witnesses.
Thomas Gaunt
Geo. W. Howard.

Inventor
Z. E. Coffin

United States Patent Office.

ZEBULON E. COFFIN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO BOSTON MACHINE COMPANY.

Letters Patent No. 80,143, *dated July* 21, 1868.

IMPROVEMENT IN HYDRANTS.

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

Be it known that I, ZEBULON E. COFFIN, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Fire-Plugs or Hydrants; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a sectional elevation.

Figure 2 is a sectional view on line Y Z.

Figure 3 is a sectional view on line W X.

Figure 4 is a plan of the cover.

Figure 5 is a sectional elevation of the upper part of a flush-top hydrant, which may be used instead of the post-hydrant.

The part C is the base or bottom; *o* being a tie or strengthening-piece in the water-way, and one of several guides for the valve H.

Upon the top of the part C, and above the joint, between the base and the stand-pipe or body of the hydrant, is an enlargement or bowl, C′, which has upon its upper edge an annular projection for the hook-bolts L L to take hold of to secure the body of the hydrant to its base. This bowl receives the waste water discharged through the pipes M M, and discharges it through the holes *n n n*. This bowl should be made just large enough to receive the lower end of the stand-pipe, and leave sufficient room for the necks of the hook-bolts, which are flattened opposite the projection, that they may not occupy more room than is necessary to proper strength, so that when all the parts are in their proper place, the hook-bolts are prevented from getting out of place, the lower end of the stand-pipe occupying the space between the hook-bolts.

n n n are holes, for the waste water to pass through. *a* is an annular projection on the top of the base, for the hook-bolts L L to take hold of to secure the body to the base. This projection is made all the way round the base, that the hydrant-pipe may be conveniently placed at any required angle to the main, as it cannot be when the common lugs or bolts in use are used.

H is the valve for closing the water-way. M M are waste-pipes, to free the hydrant from water when not in use. I I, the valves, to close the waste-pipes, when the hydrant is in use. K is the valve-stem. A is the body or stand-pipe of the hydrant. B is the hydrant-case. D is the frost-jacket. I is the hose-nozzle. U, the cap to hose-nozzle. S, gland to stuffing-box. G, the nut by which the valve is worked through the rod or stem K. The lower end of this nut, which has its bearing upon the body of the hydrant, is so enlarged as to make a cap or cover for the stuffing-box and gland S, and by removing the small screw at the top, the screw upon the rod K may be oiled without removing the cover F; also, by removing the cover F the nut G may be conveniently removed, and the stuffing-box around the rod K be repacked. It also has a pocket or enlargement above the female thread, and between it and the top, which serves as an oil-cup to the screw on the top of the rod K. F, the cover, which is held in its place by inclined lugs or bolts, and answers two purposes, viz, to hold the nut G in its place, and cover the top of the hydrant. E, a ring, that forms a part of the case.

Advantages Gained by this Invention.

First. The valve closes the water-way at a point on a level with the top of the pipe, so that the water may be drawn, when the hydrant is not in use, much lower than when the common hydrant-bend is used, thereby rendering the hydrant less liable to injury by frost.

Second. The hydrant being firmly set in the ground, and the earth filled in to the ground-level, the ring E may be raised, and the nuts on the hook-bolts L L loosened, and the hydrant removed, the case remaining in the ground, and another put in its place, or repairs made, and replaced without digging up the ground, thereby saving the expense of wood or brick boxes, such as are usually used.

Third. The frost-jacket D, having a space between it and the case, prevents the earth from freezing to the case, and the case being lifted by the frost, and is also a protection to the hydrant from freezing.

Fourth. The waste-pipes, by this arrangement, can be made with direct, clean openings, and the valves being opened by a positive movement, and not by springs or gravitation, are sure to free the hydrant of water at the right time, and are not likely to choke up as in other devices in use for this purpose.

Claims.

1. I claim the combination of the base or bottom of the hydrant with the body of the hydrant, hook-bolts, waste-pipe or pipes, and waste-valves, hydrant-valves, and outside case, all constructed in the manner and for the purpose set forth.

2. I claim the hook-bolts L L, in combination with the body A and bowl C′, having an annular projection, *a*, when the parts are constructed substantially in the manner and for the purpose set forth.

3. I claim the nut G, in connection with the rod or valve-stem K and body A, when the parts are constructed and arranged to operate substantially as described.

Z. E. COFFIN.

Witnesses:
THOMAS GAUNT,
GEO. W. HOWARD.