C. F. RAPP.

Hydrant.

No. 168,413. Patented Oct. 5, 1875.

Fig: 1.

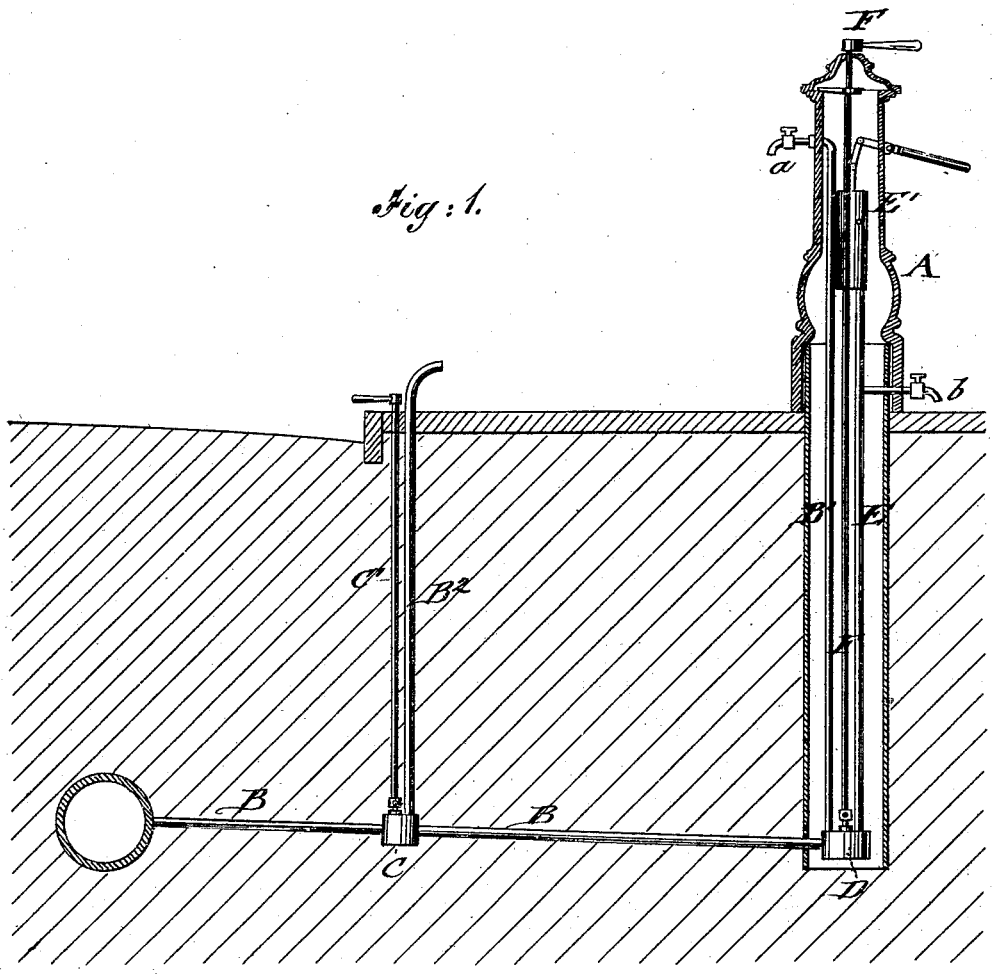


Fig: 2.

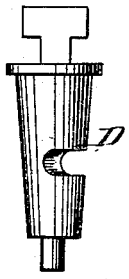


Fig: 3

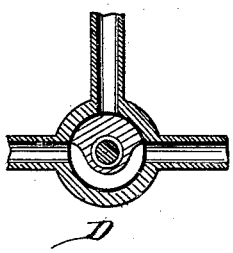
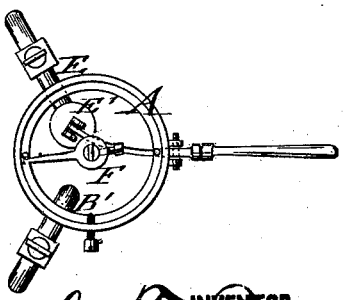


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTIAN F. RAPP, OF CINCINNATI, OHIO.

IMPROVEMENT IN HYDRANTS.

Specification forming part of Letters Patent No. **168,413**, dated October 5, 1875; application filed August 28, 1875.

CASE B.

To all whom it may concern:

Be it known that I, CHRISTIAN F. RAPP, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Hydrant, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section of my improved hydrant, showing connection with the main supply-pipe. Figs. 2 and 3 represent a detail view and section of the three-way cocks employed, and Fig. 4 a top view of the hydrant.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an improved hydrant that is operated in simple manner, so as to prevent waste of water and, in the cold season, the freezing of the hydrant and supply-pipes

The invention consists of a hydrant connected, by three-way cocks, with the supply-pipe and two separate exit-pipes, of which one is provided with a pump to force out the water remaining in the supply and other pipes.

In the drawing, A represents the hydrant-post; B B^1, the supply-pipe, which taps the main and runs at suitable slope to a three-way cock, D, below the post A, from where the vertical section B^1 runs up within the post, and to the outside by a stop-cock, *a*. A second three-way cock, C, is applied to the supply-pipe B, between main and hydrant, and governed by rod and key C′ from the pavement, in the usual manner. An exit-pipe, B^2, extends from the three-way cock C, near rod C′, to the pavement, and may be used with a hose for sprinkling. The hydrant-regulating three-way cock D is governed by a rod, F, that is operated by a key or handle at the top of post A. A second pipe, E, extends from three-way cock D up into the post, and to a stop-cock, *b*, at the base of the post. Above the stop-cock *b* is arranged a pressure-pump, E′, either within or outside of the post, so that in the latter case the pump may be detached in the summer season, if desired. The pump is worked by a lever-handle or crank-disk, or in any other suitable manner. The three-way cocks C and D are set by their handles or keys and suitable guides and stops, so as to either close the supply-pipe and establish the connection of the branch pipes or establish the communication of the supply-pipe with either one of the pipes branching out from the cocks.

To prevent the freezing and bursting of the hydrant connecting-pipes, the three-way cock D is first turned to close the supply-pipe B and produce the communication of pipes B^1 and E. The application of the pump forces, then, all the water in the pipes through the stop-cock *a*. The three-way cock C is then turned to close the section of the supply pipe connecting with the main, and establish the communication of the remaining section with the exit-pipe B^2, which allows, on the closing of the stand-pipe B^1, the pumping out of the water in the supply and exit pipe through the latter. All the pipes are in this manner, with a few strokes of the pump, freed of water, and any possibility of damage to the same by freezing obviated.

In the warm season the pump connecting-pipe may be closed by the governing-rod F, so that it is thrown out of function, or the water may be allowed to run out to the level of the ground through the base-cock *b*.

The hydrant is, by this anti-freezing arrangement, protected against any interruption of its function, and the frequent digging and repairing of damage and the throwing out of use fully prevented.

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

As an improvement in hydrants for preventing the freezing up in winter, the combination of supply-pipe B with a three-way cock, C, and exit-pipe B^2, and with a second three-way cock, D, and issuing-pipe B^1, pump connecting-pipe E, and pump E′, the whole arranged to admit of the forcing out of the water from the pipes exposed to freezing, substantially as and for the purpose set forth.

CHRISTIAN F. RAPP.

Witnesses:

HENRY J. WIPPER,

HUGO C. HAENGER.