C. F. RAPP.

FIRE-PLUG.

No. 169,476. Patented Nov. 2, 1875.

Fig: 1.

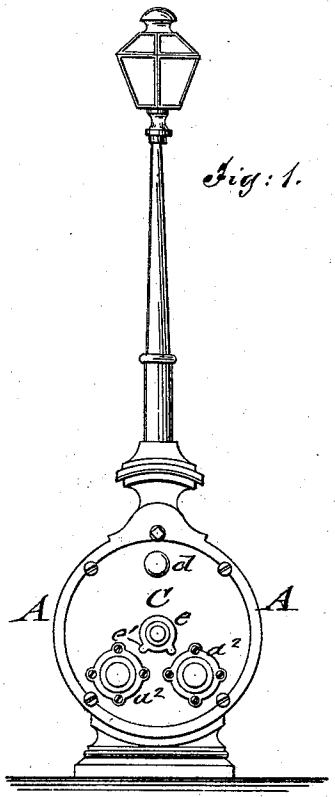


Fig: 2.

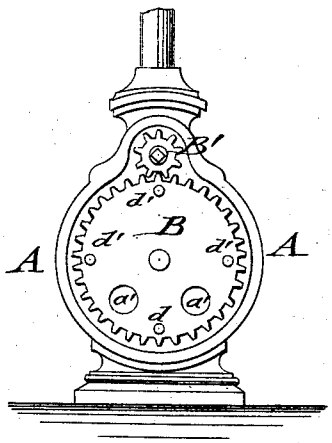


Fig: 3.

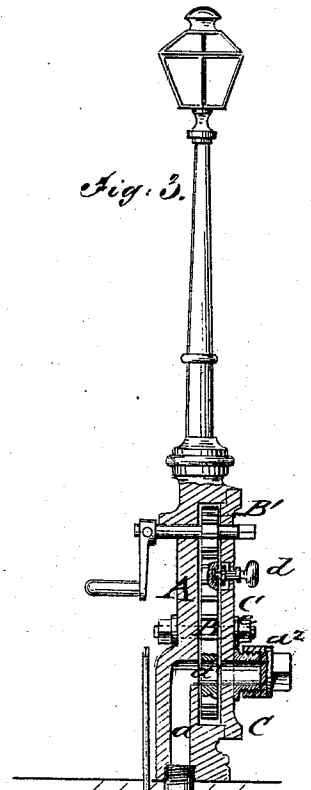
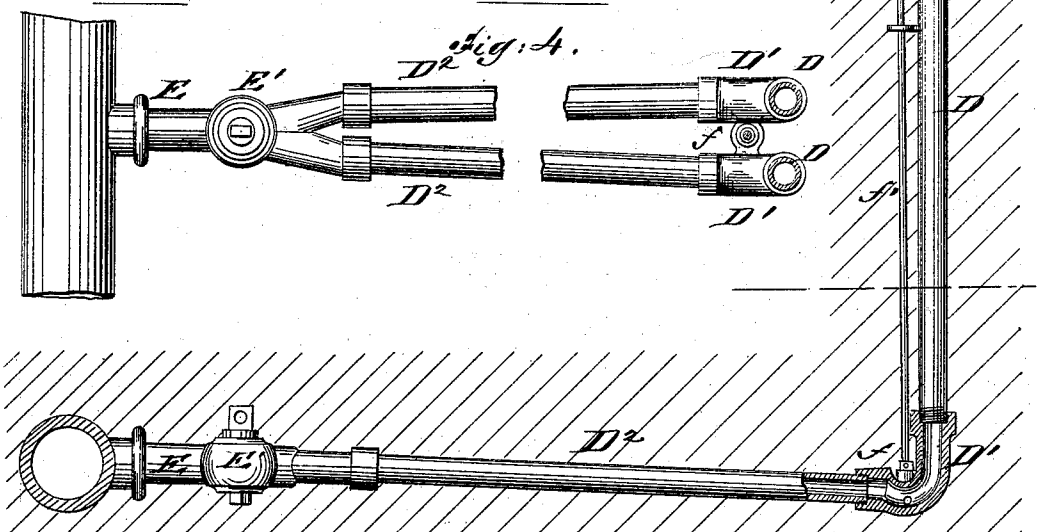


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTIAN F. RAPP, OF CINCINNATI, OHIO.

IMPROVEMENT IN FIRE-PLUGS.

Specification forming part of Letters Patent No. **169,476**, dated November 2, 1875; application filed August 28, 1875.

CASE A.

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 Fire-Plug, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front elevation of my improved fire-plug; Fig. 2, a front view of the interior of fire-plug, with face-plate detached; Fig. 3, a vertical transverse section of the same, showing connection with the main; and Fig. 4 shows the connection of the main with the branch supply-pipes of the plug.

Similar letters of reference indicate corresponding parts.

My invention has reference to an improved fire-plug of simple and effective construction, that may be readily opened and closed for supplying water to the fire-engines, and prevented from freezing in the winter by a reliable and conveniently-working device.

The invention will first be described in connection with drawing, and then pointed out in the claims.

The fire-plug is constructed of a casing, an interior disk, and a front plate, with adjustable openings to establish connection with the supply-pipes of the casing and the nozzles of the closing front plate, and open or close the plug, a spring-stop locking the disk into position. A waste-cock at the elbow of the supply-pipes serves to drain any water from the same.

In the drawing, A represents the main casing of the fire-plug; B, the interior revolving wheel or disk, and C the outer face-plate, that is secured to the casing by suitable fastening-screws. The casing A is cast at the back with two supply-openings, *a*, that turn at right angles toward two corresponding openings, a^1, of the disk B, and the nozzles a^2 of the front plate C. The disk B turns on a central shaft, that passes through perforations of casing and front plate, and is provided with screw-nuts at the ends to tighten the parts closely to prevent leaking. The contact parts of casing, disk, and face-plate are lined with soft metal to allow the tight packing of the same.

The wheel B is turned by means of a pinion, B′, at the upper part of the casing, the pinion being revolved by a crank applied to its projecting shaft. A spring-stop device, *d*, of the front plate locks into recesses *d′* of the disk, to secure the same either in closed position or with one or both holes open. The spring-stop has to be released before the disk can be turned by the crank. A washer, *e*, with indicators *e′*, is keyed to the shaft of the disk in such a manner that the indicaters follow the motion of the disk, and show the positon of the exit-holes of the same. The nozzles of the front plate are closed by screw-caps, which are taken off when the hose is to be screwed on.

The fire-plug may be constructed in connection with a lamp-post, in which case suitable arrangements for the gas-pipes have to be made.

The openings *a* of the casing connect by downward-extending pipes D and elbows D^1, at suitable depth, with the inclined or sloping pipes D^2, that form the connection with the main supply-pipe. The elbows D^1 are placed closely together, and connected, by exit-holes, with a joint waste-cock, *f*, between the same, for draining off any water gathering at the elbows, either by the leaking of the stop-cock or valve, or for other causes. The stop-cock is controlled by a connecting-rod, *f′*, extending upward in suitable guides to the casing of the fire-plug.

The supply-pipes D^2 branch out from one pipe E, of suitable diameter, that is connected to the main. Pipe E is provided with a stop-cock or valve, E′, that is operated in the customary manner from the street, and constructed in such a manner that one or both supply-pipes may be opened or closed, as required. When the valve closes pipe E the communication of the branch supply-pipes D^2 is established.

The fire-plug may be used with one or two engines, the communicating disk being set accordingly. For the purpose of protecting the fire-plug against freezing in winter the stop-cock is closed, and one of the engines detached, so that by a few strokes of the remaining engine the water in the supply-pipes may be entirely pumped out. During the warm season the plug may be closed directly by the

disk, as there is no danger of freezing. The arrangement of branch supply-pipes may also be applied to the plugs in common use—one pipe being connected to the plug, the other either to a second plug, or in factories, to the engine; or the second pipe may terminate at the level of the street, to act as air-supply pipe when the water is pumped out by the engine, in similar manner as before described. The fire-plugs are thus protected by a simple device against freezing, and may, by the construction described, be more rapidly thrown into action for supplying water than the plugs at present in use.

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

1. The combination of the adjustable disk, having suitable recesses, with a spring-stop device of the front plate, to secure rigid position of disk in open or closed position, as specified.

2. The elbows of the water-supplying branch pipes, provided with a joint waste-cock, set from above to drain off leakage, as set forth.

3. The combination of a fire-plug with a water-supply pipe and a second branch vent-pipe, being opened and closed by a common stop-cock or valve, to shut off the water from the main and allow the pumping out of the water from the supply pipe by the fire or other engine, to prevent freezing up of fire-plug in the winter season, substantially as and for the purpose set forth.

4. The combination of the double exit-openings of the casing, disk, and front plate with branch supply-pipes and a regulating stop-cock or valve between the same and the main pipe, that allows the opening of one or both branch pipes, or the communication of the branch pipes by closing the main pipe, substantially as set forth.

CHRISTIAN F. RAPP.

Witnesses:

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