

W. R. PADDOCK.
Street-Sprinkler.

No. 227,569.

Patented May 11, 1880.

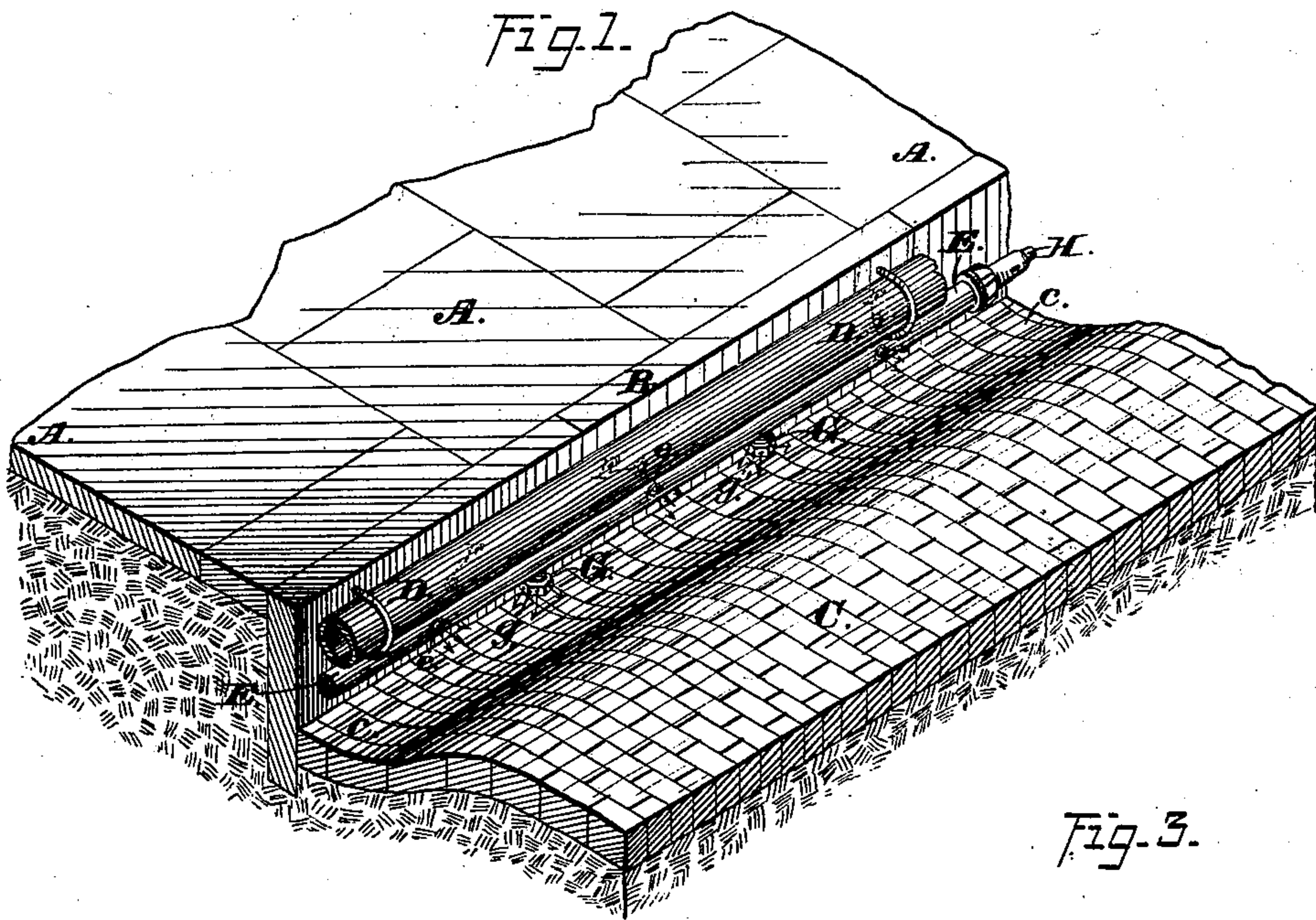


Fig-3.

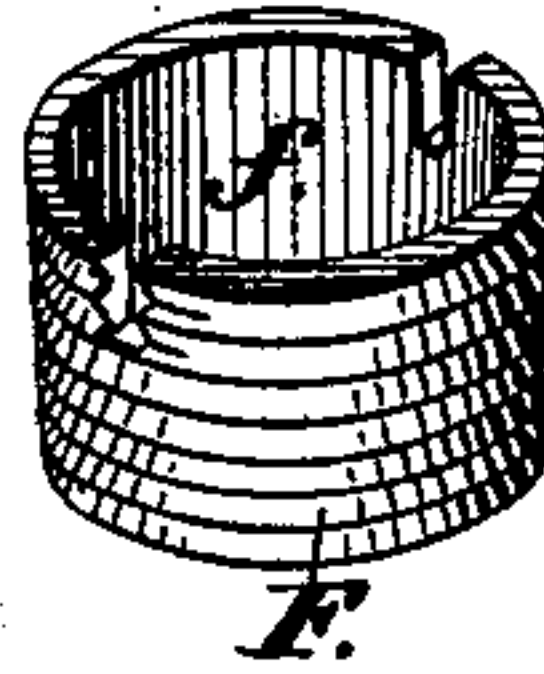


Fig. 2.

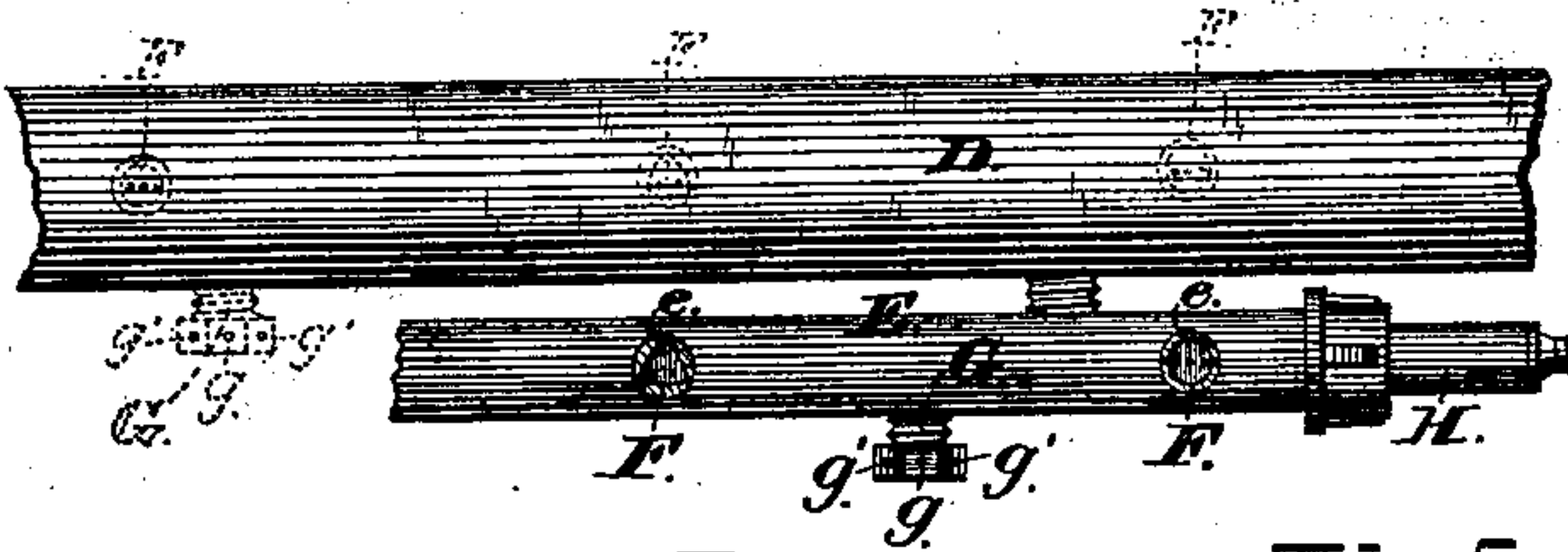


Fig. 4.

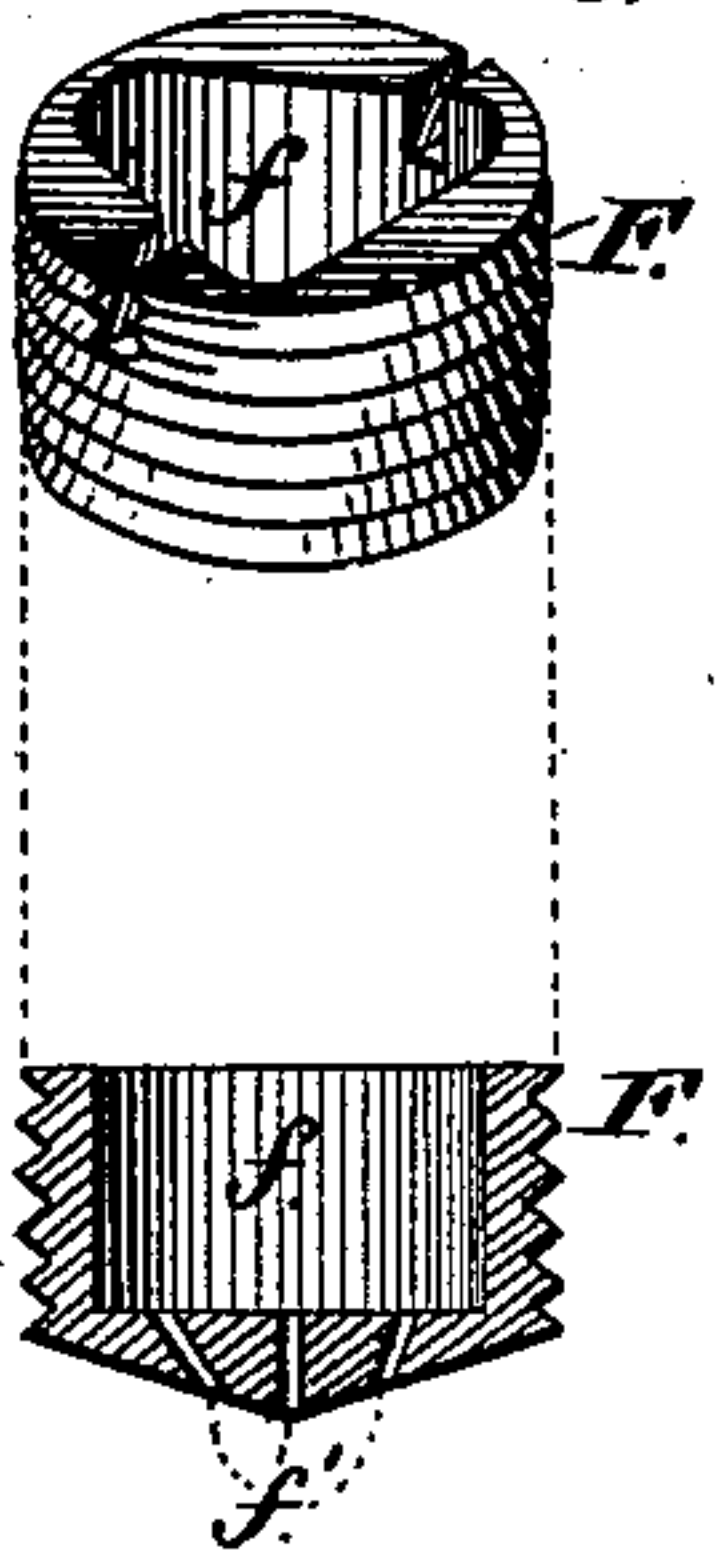


Fig. 5.

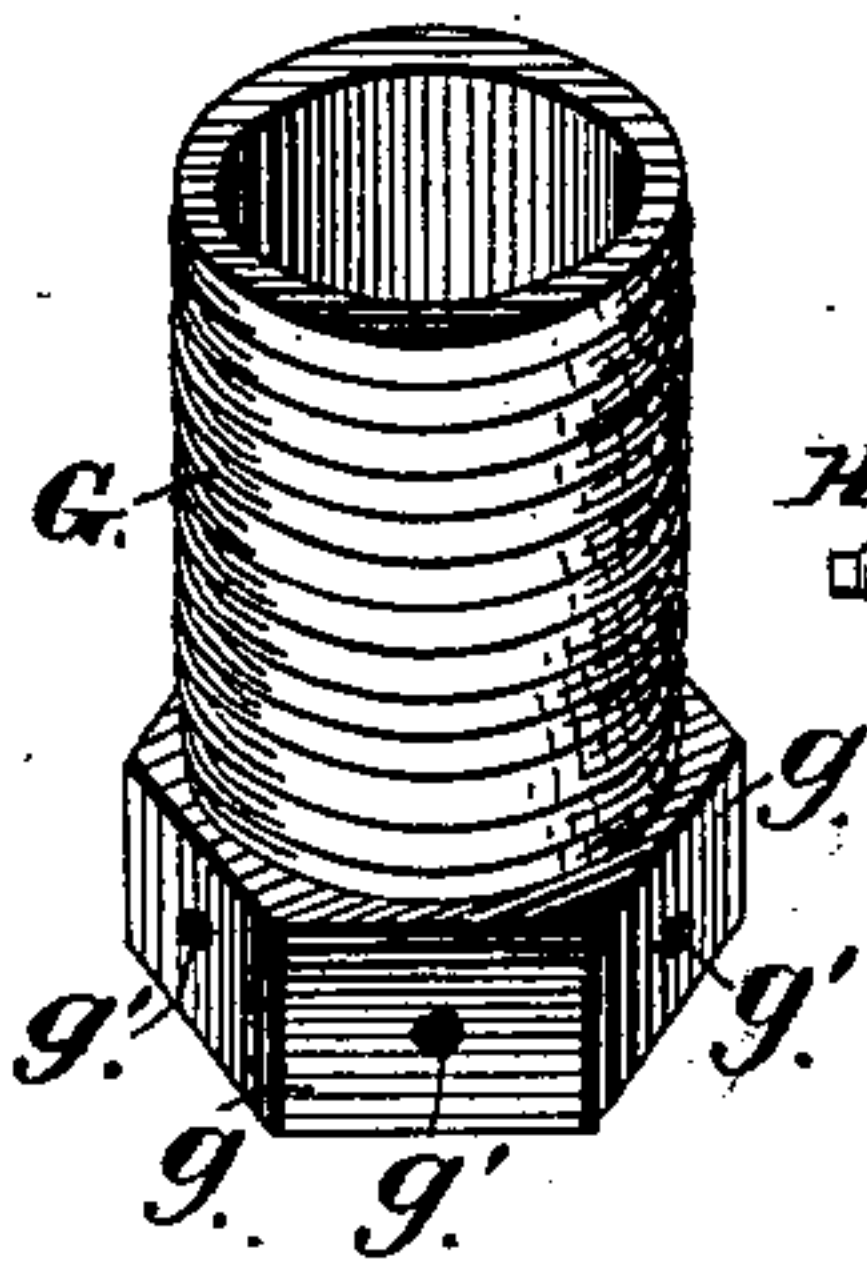
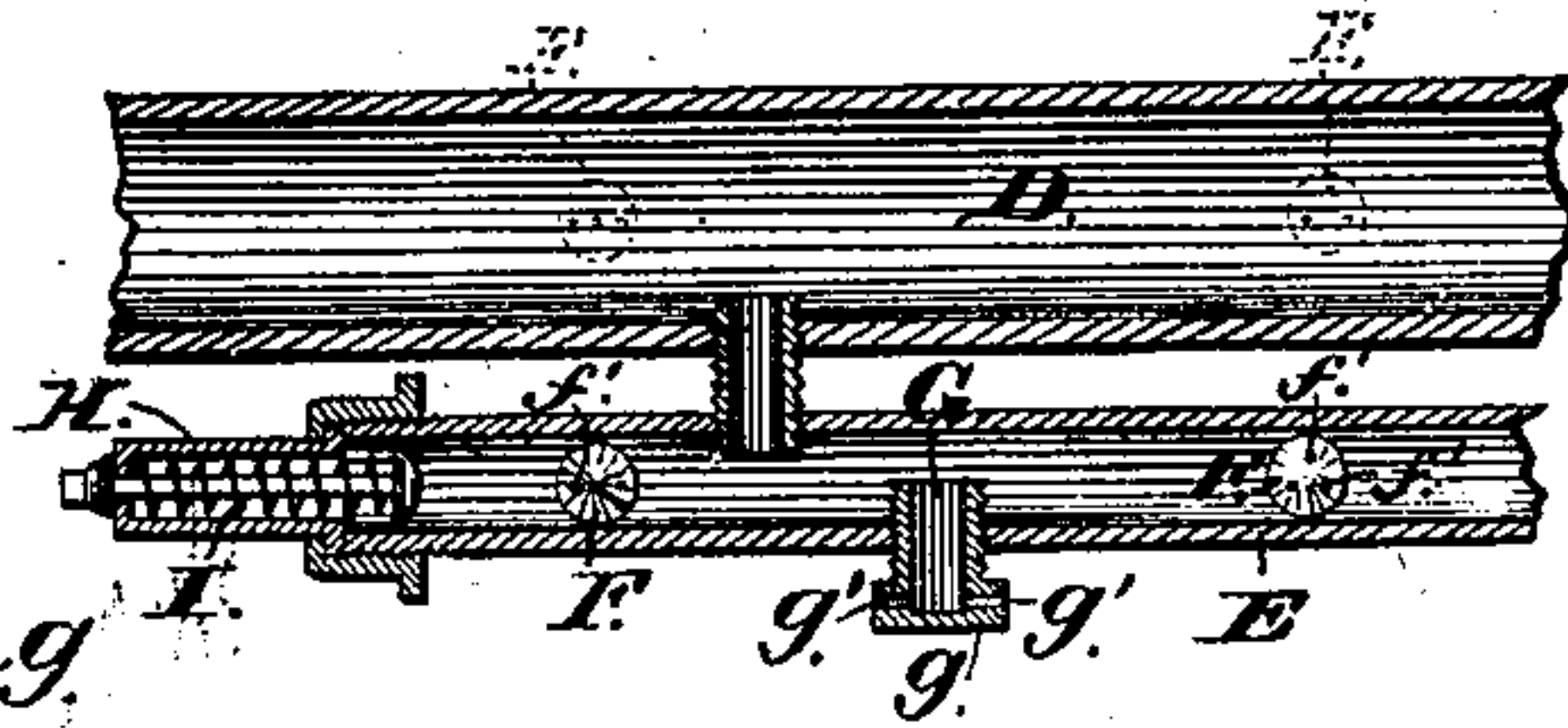


Fig. 6.



WITNESSES=

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UNITED STATES PATENT OFFICE.

WILLIAM R. PADDOCK, OF CINCINNATI, OHIO.

STREET-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 227,569, dated May 11, 1880.

Application filed February 11, 1880.

To all whom it may concern:

Be it known that I, WILLIAM R. PADDOCK, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Street-Sprinklers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a portion of one side of a street provided with my improved sprinkling mechanism. Fig. 2 is an enlarged side elevation of a portion of said mechanism. Figs. 3, 4, and 5 are enlarged perspective views of the different forms of nipples employed, and Fig. 6 is a vertical longitudinal section of my mechanism upon a central line.

Letters of like name and kind refer to like parts in each of the figures.

Many attempts have heretofore been made to sprinkle streets from stationary pipes; but thus far failures only have resulted, in consequence of inherent defects in the mechanism.

To remedy these defects and to render practicable the employment of stationary pipes for sprinkling streets and washing gutters is the design of my invention, which consists, principally, in a sprinkling mechanism having nipples whose inner ends are plane and without depressions at or around the jet-openings, substantially as and for the purpose hereinafter specified.

It consists, further, in a sprinkling mechanism composed of a main or supply pipe attached to or upon the curb of a street and a distributing-pipe, having less diameter, placed below and connected with said main pipe and provided with jets or nipples for the escape of water, substantially as and for the purpose hereinafter shown.

It consists, finally, in a street-sprinkling mechanism composed of a pipe secured to or upon the curb and provided with jets or nipples for the escape of water upon the roadway and other jets or nipples for the escape of water into the gutter, whereby said roadway may be sprinkled and said gutter washed at one and the same time, substantially as is herein-
after set forth.

In the annexed drawings, A represents the foot-walk, B the curb, and C the roadway, of

a street provided with a gutter, *c*, at the point where said roadway abuts upon said curb, all in the usual manner. Secured to or upon the outer face of the curb B is a metal pipe, D, which has any desired diameter, and extends along the entire square, and at its ends is connected with a water-supply, that may be admitted to or shut off from said pipe at will. Immediately below the pipe D is a second pipe, E, which has considerably less diameter than the same, and, being also placed against the curb B, is protected by said pipe D from injury by the wheels of wagons, feet of horses, &c. At equidistant points within the outer side of the pipe E are provided threaded openings *e*, within each of which is fitted a nipple, F, that has the form shown in Figs. 3 or 4, its periphery being cylindrical, slightly tapering, and threaded to fit said opening, its inner end being plane and having a right angle to the axis of said nipple, while its outer end is provided with a recess, *f*, that extends nearly to said rear end and has any desired shape in front elevation to enable it to receive the end of the wrench or screw-driver employed for screwing said nipple to place.

From the recess *f* of the nipple F several small round openings, *f'*, extend inward into the pipe E, and have such relative lateral lines and such inclination from a horizontal plane as to cause jets of water escaping therefrom to impinge upon the roadway C at points equidistant from each other and from the jets of the adjacent nipples upon each side between the curb B and the center of the street.

As arranged, the mechanism described is used, when desired, by admitting water under pressure into the main pipe D, from whence it passes into the distributing-pipe E, and from thence escapes through the nipples F upon the roadway.

In consequence of the plane inner end of the nipple F the openings *f'* are no larger at the point where the water enters than at any portion of their length, so that dirt or other solid substance entering the inner end of either of said openings will pass freely through without finding lodgment, while in case of nipples which are recessed, however slightly, at their inner ends the reverse is true, and their openings soon become clogged by solid or semi-solid substances, which become wedged

into their inner ends and cannot be forced through the same without a large increase in the pressure of the water.

The object sought by recessing the outer end of each nipple F is to shorten the jet-openings f' , so as to lessen the friction of the water and to render more easy the outward passage of dirt and sediment.

In order that the gutter c may be thoroughly and easily cleansed while the street is being sprinkled I provide at equidistant points along the lower side of the pipe E nipples G, which have the form shown in Fig. 5, and consist of an exteriorly-threaded cylinder having at its lower end a head, g , from which to its upper open end said nipple is hollow. Within said head g are several jet-openings, g' , that extend from the interior of said nipple rearward and downward, so as to cause water issuing therefrom to impinge upon the curb B and upon the inner corner of said gutter.

The length of each nipple G is such as to cause its upper end to project considerably above the bottom of the pipe E, so that sediment within the latter does not have access to the interior of said nipple, and its openings g' are not liable to obstruction.

It being desirable that water remaining in the pipes D and E should be permitted to escape after the supply is cut off, I provide at one or both ends of said pipe E a valve, H, which closes by an outward movement, and is held open by a spring, I, that exerts considerably less pressure than the pressure of the water, so that when the latter is admitted to said pipes said valve will be automatically closed and the outward passage of water at that point prevented; but when the supply of

water is cut off said valve will be opened by said spring and all water remaining in said pipes will be permitted to pass freely outward.

If desired, the lower distributing-pipe may be omitted and the nipples placed directly within the main upper pipe, as shown by dotted lines in Fig. 2; but in such event said nipples would be more liable to injury than when arranged as before described.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. A sprinkling mechanism having nipples whose inner ends are plane and without depressions at or around the jet-openings, substantially as and for the purpose specified.

2. A sprinkling mechanism composed of a main or supply pipe attached to or upon the curb of a street and a distributing pipe, having less diameter, placed below and connected with said main pipe and provided with jets or nipples for the escape of water, substantially as and for the purpose shown.

3. A street-sprinkling mechanism composed of a pipe secured to or upon the curb and provided with jets or nipples for the escape of water upon the roadway and other jets or nipples for the escape of water into the gutter, whereby said roadway may be sprinkled and said gutter washed at one and the same time, substantially as set forth.

In testimony that I claim the foregoing hereunto set my hand this 28th day of January, 1880.

WILLIAM R. PADDOCK.

Witnesses:

J. S. ZERBE,
S. STROBHART.