

A. F. SALTALAMACHIA.
STREET SPRINKLER.
APPLICATION FILED SEPT. 5, 1911.

1,052,094.

Patented Feb. 4, 1913.

Fig. 1.

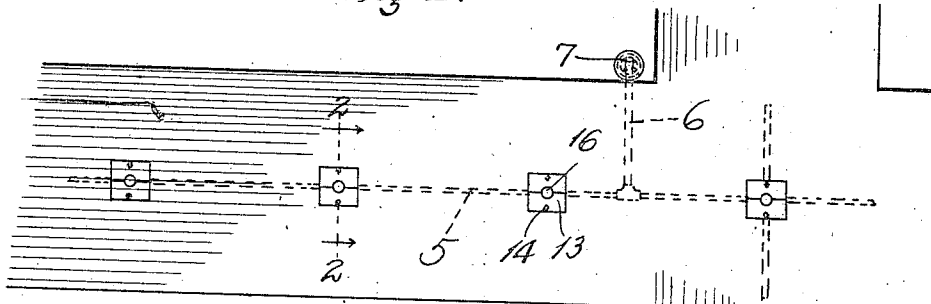


Fig. 2.

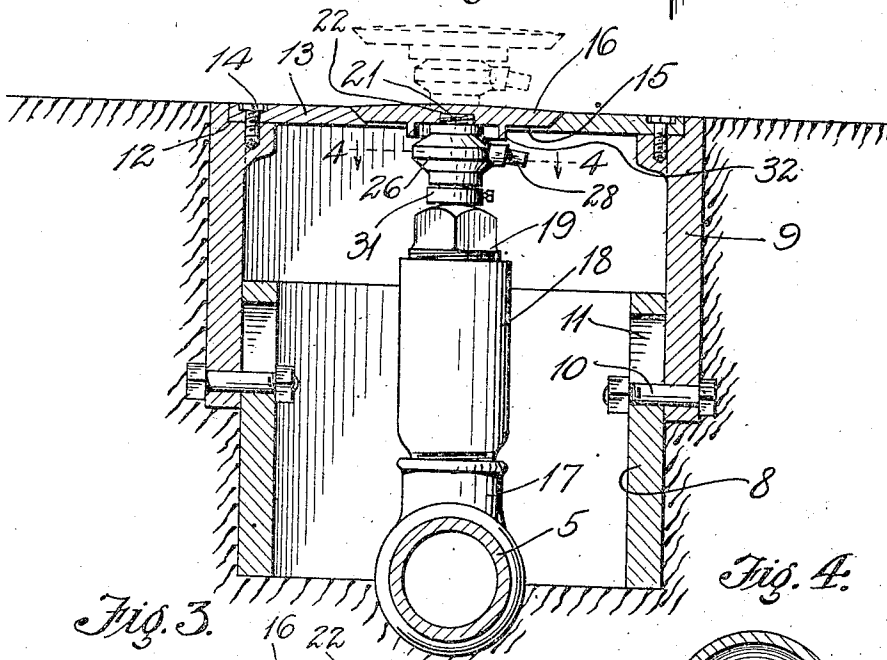


Fig. 3.

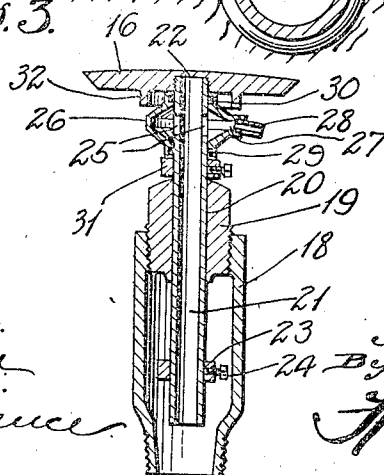
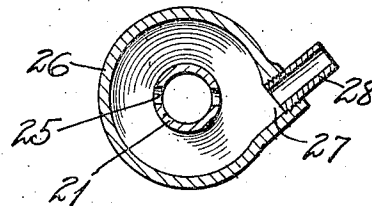


Fig. 4.



Witnesses.

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STREET-SPRINKLER.

1,052,094.

Specification of Letters Patent.

Patented Feb. 4, 1913.

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To all whom it may concern:

Be it known that I, ANTHONY F. SALTALAMACHIA, a citizen of the United States, residing at Huntington Park, in the county of Los Angeles and State of California, have invented new and useful Improvements in Street-Sprinklers, of which the following is a specification.

This invention relates to improvements in sprinkling mechanisms and particularly to devices suitable for the sprinkling of streets, pavements or other surfaces.

It is an object of the invention to provide a sprinkling system which will always be in position for reaching the streets, pavements or other surfaces to be sprinkled without moving the same into position and which will only require the turning on of the water supply thereto, to accomplish the sprinkling operation.

It is a further object of the invention to provide a series of sprinkling devices, arranged to be normally depressed below the surface to be sprinkled and adapted to be brought into sprinkling position over said surface upon the turning on of the water supply thereto.

It is a further object of the invention to provide a sprinkling system for pavements or streets employing a system of supply pipes and disappearing nozzles connected therewith and normally covered even with the surface of the pavement or street, the said nozzles being adapted to rise above the surface of the street when the sprinkling operation is to be accomplished.

In the accompanying drawing forming a part of this specification, Figure 1 is a plan view of a portion of the street having the improved sprinkling system applied thereto, the piping thereof being indicated in dotted lines. Fig. 2 is a vertical enlarged sectional view through one of the nozzle containing boxes showing the same mounted therein. Fig. 3 is a sectional longitudinal view taken through the nozzle proper. Fig. 4 is a horizontal sectional view taken upon the line 4-4 of Fig. 2.

The details and features of the invention will now be more particularly described, reference being had to the said drawing in which—

5 indicates a line of piping which is laid below the surface of the street or pavement either along the middle line thereof or where more than one line of piping is necessary,

under other portions of the street or sidewalk as desired, the said piping 5 being connected by branch piping 6 with a source of water supply as for instance any convenient water main not shown, a controlling connection therewith being made at 7. As indicated at 7 any suitable valve box may be located at this point by which a valve controlling the water supply may be reached for turning on the water to the sprinkling system, when it is desired to sprinkle the street, road-way or pavement. At suitable intervals along the piping 5 boxes or inclosures are arranged for receiving sprinkling nozzles. Each of said boxes consists of a lower section 8 and an upper section 9 telescoping thereon and having adjustable connection with the lower section, usually by means of pins or bolts 10 which engage in slots 11 formed in the lower section. By the adjustment of said bolts the boxes may be made to reach to different depths from the surface of the street in accordance with the position of the water main beneath the said streets. The upper edge of the section 9 is preferably shouldered or internally flanged at 12 to receive a cover 13 for closing the said box. The said cover 13 fits upon the shouldered portion 12 so as to be flush with the upper edge of the box and the surface of the street or pavement. For facility in placing the covers in position and removing the same, particularly after the nozzle device is in place, each cover 13 is split centrally and formed in two removable sections as indicated in the plan view of Fig. 1. The cover is usually secured in position by means of screws 14. The central portion of the cover is formed with an opening 15, the edges of which are preferably beveled so as to flare outwardly and form a seat for a nozzle cap 16. The said cap 16 is made to exactly fit the opening 15 and has under cut beveled edges adapted to seat upon the beveled edges of said opening 15 and thus be thoroughly supported by the cover 13. When the cap 16 is in its lowered position it thus forms a continuation of the surface of the pavement or street.

The piping 5 is provided with a T connection 17 in each of the boxes and a fitting 18 is screwed into the same and allowed to project upwardly into the box a suitable distance to receive the nozzle device. The upper end of said fitting 18 is made larger than the lower end thereof and receives a

plug 19 which is centrally bored to form a bearing 20 for the nozzle pipe 21 which is passed through the same. The exterior of the plug 19 is provided with a squared portion at its upper end by which it may be turned into and out of place, the said plug having a screw threaded engagement with the upper end of the fitting 18. The nozzle pipe 21 is made to form a closed joint with the bearing 20 but is sufficiently loose therein to be able to move longitudinally. The said pipe 21 will thus rise and fall under the action of the water when it is turned on or off. The upper end of the said nozzle pipe 21 is threaded into a recess 22 formed upon the under side of the cap 16 so that when the pipe 21 rises the cap will move with it and be lifted from its seat in the opening 15. The cap 16 thus closes the upper end of the said nozzle pipe 21, but the lower end thereof is left open and projects well into the fitting 18. Its upper movement is limited by an adjustable collar 23 which is clamped by means of a set screw 24 at any desired position upon the said pipe 21. Between the plug 19 and the cap 16, the said pipe 21 is provided with one or more apertures 25 by which water may escape from the piping into a rotating nozzle 26. The said nozzle 26 is formed with a hollow body portion as clearly illustrated in Figs. 3 and 4 and has a tangentially arranged outlet at 27 which is usually fitted with a short mouth piece 28 extending in a tangential direction from the body portion of the nozzle. The said nozzle is formed with close fitting bearings at its upper and lower edges engaging the pipe 21 and packing means as 29 and 30 is preferably arranged in said bearings to form a close joint with the pipe 21 and yet not interfere with the rotation of the nozzle thereon. A collar 31 clamped upon the pipe 21 just below the said nozzle holds the same movable in position beneath the cap 16. The cap 16 is preferably provided with a depending annular flange 32 projecting toward the nozzle 26 so as to prevent an upward spurting of the water to too great an extent.

It will be apparent from this description that when water is turned into the piping it will force its way into the nozzle pipes 21 and carry them upwardly in the bores 20, the caps 16 going with them. Nozzles will be carried to a position approximately indicated in dotted lines in Fig. 2 and will distribute water over the surrounding sur-

face of the street or pavement. The tangential arrangement of the outlet 27 and the mouth pipe 28 will cause the said nozzle to be rapidly turned by the action of the water in escaping therefrom and the water will thus be thoroughly distributed in all directions. As soon as the water is turned off again the nozzles will all drop into their lowered positions, the caps closing the openings 15 and completing the surface of the paving or roadway. It will be understood that each of the said nozzle devices are held in elevated position under the yielding pressure of the water and in the event of a vehicle striking the same, the cap 16 will merely be forced downwardly as a wheel passes over it and as soon as it has passed the same, the pressure of the water will raise the nozzle into operative position again. In this way the device is adaptable to all kinds of streets or pavements without interfering at all with the traffic thereon and without danger of being injured by such traffic. The system of piping fitted with the nozzles may be extended in all directions and the frequent flushing or wetting of the streets or roadways be accomplished by merely turning on water when desired.

While the mouth pipe 28 of each nozzle is usually set so as to extend downwardly at a slight angle to the surface of the road as shown in Fig. 2, it will be understood that it may be set at other angles in accordance with the manner in which it is desired to spread the water upon the street, all within the spirit of the invention.

What I claim is:

A street sprinkling mechanism comprising a water main, nozzle holding fittings projecting upwardly therefrom having street sprinkling devices attached thereto, caps for said devices having beveled edges, street boxes fitted over said sprinkling devices, comprising upper and lower adjustable sections and transversely divided covers fitting upon the tops of said boxes and level with the street surface, the divided formation of the covers facilitating their adjustment into or out of place under the beveled edges of the said caps.

In witness that I claim the foregoing I have hereunto subscribed my name this 28th day of August, 1911.

ANTHONY F. SALTALAMACHIA.

Witnesses:

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