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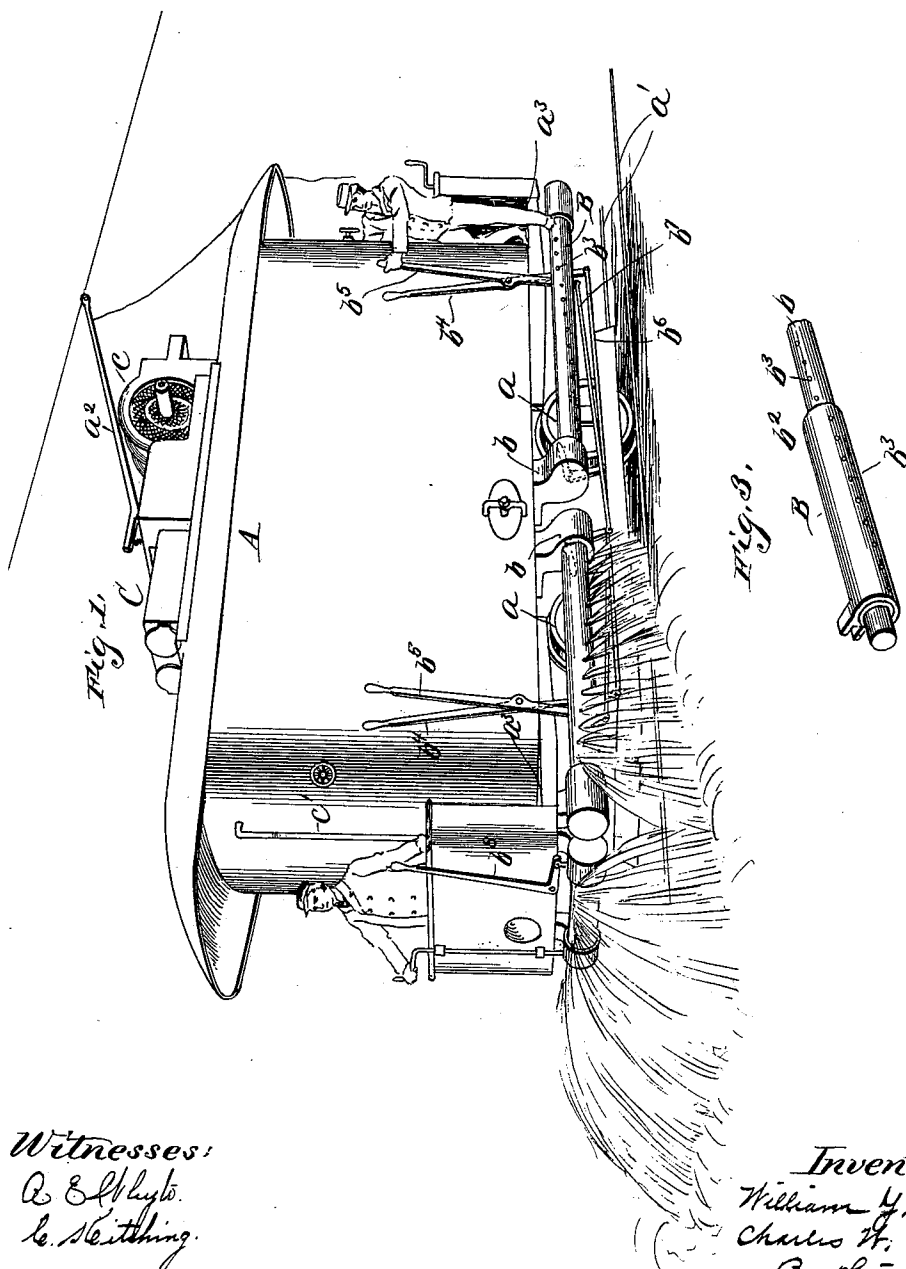
W. Y. OBER & C. W. COLLYER.

SPRINKLING APPARATUS.

(Application filed Nov. 8, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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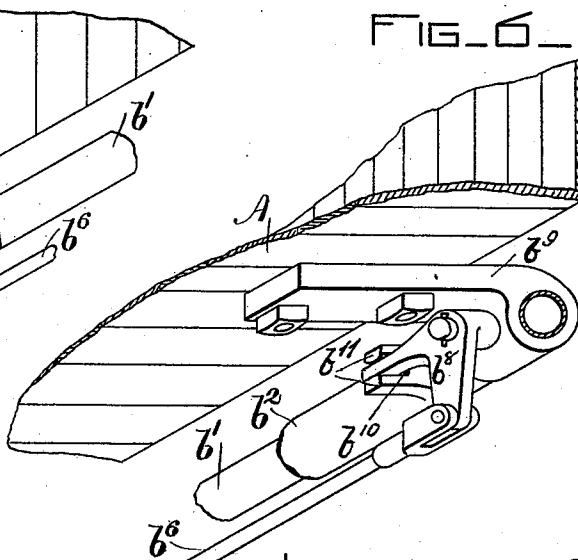
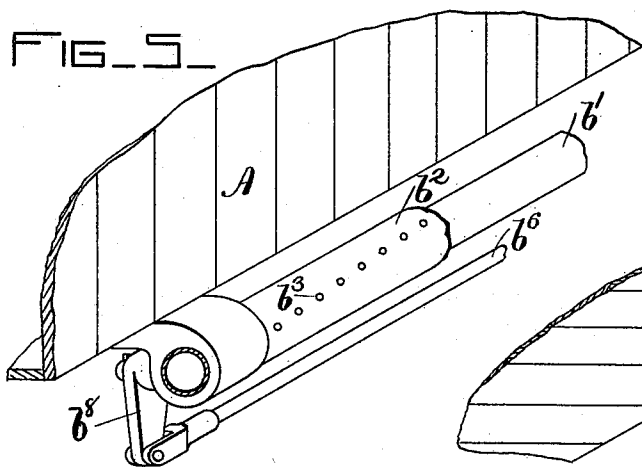
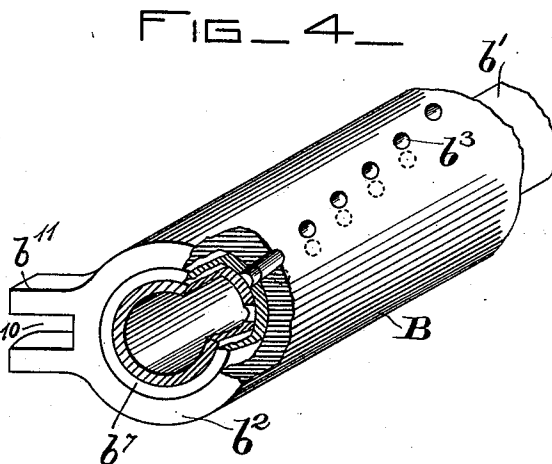
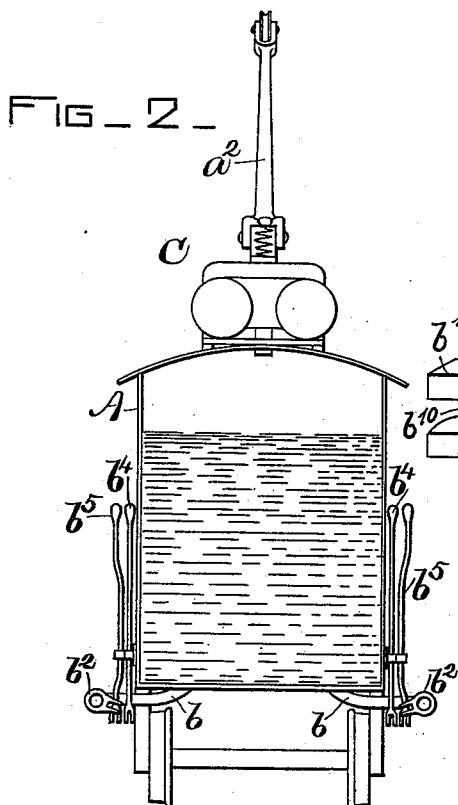
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(No Model.)

2 Sheets—Sheet 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM Y. OBER AND CHARLES W. COLLYER, OF LYNN, MASSACHUSETTS,  
ASSIGNORS TO THE NIAGARA SPRINKLING COMPANY, OF PORTLAND,  
MAINE.

## SPRINKLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 613,296, dated November 1, 1898.

Application filed November 8, 1897. Serial No. 657,821. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM Y. OBER and CHARLES W. COLLYER, citizens of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Sprinkling Apparatus; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to a street-sprinkling apparatus, and more particularly to such type of apparatus which is arranged to run along the tracks of railways and to be propelled along such tracks by electric power, somewhat after the manner of an electric car, and are therefore generally known as "street-railway sprinklers."

The object of the present invention is to produce a sprinkling apparatus of the above type which shall be of simple construction and in which the flow of water shall be readily controlled and to do away with the objectionable swinging pipes which are now generally used in devices of this type and which have to be swung in and out by the operator in passing teams on the street and for other purposes.

Another object of the present invention is to produce a sprinkling apparatus in which a very large spray of water may be thrown out, covering a large area, without the necessity of employing the objectionable swinging pipes above referred to.

To the above end the present invention consists of the devices and combinations of devices which will be hereinafter set forth and claimed.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a perspective view of the improved sprinkling apparatus in use. Fig. 2 shows a transverse sectional elevation of the apparatus. Figs. 3, 4, 5, and 6 show details of construction hereinafter referred to.

Similar letters of reference refer to corresponding parts throughout the accompanying drawings.

In the drawings, A represents the tank or

reservoir, which is preferably constructed to resemble a street-car of the ordinary type and which is mounted upon any usual form of street-car trucks, having wheels *a*, arranged to be propelled along the rails *a'* in a manner common to street-cars and sprinkling apparatus of the type of the present invention.

Any suitable motor-power may be employed to propel the apparatus along the rails *a'*; but we preferably employ electric power, which is communicated from the usual overhead conductor through any ordinary form of trolley *a<sup>2</sup>*, mounted upon the top of the apparatus similar to trolleys of the ordinary electric car.

The apparatus also has a platform *a<sup>3</sup>* at each end, such as are usually employed in devices of this character, and upon which the motorman and the sprinkler operator stand to control the motions of the apparatus and the flow of water therefrom.

Located at the base of the tank or reservoir A are the sprinklers B, there being preferably six of such sprinklers, arranged as shown in the drawings, a pair of such sprinklers being located at each side of the apparatus and one at each end thereof, such sprinklers communicating with the tank or reservoir A by means of pipes *b*, as clearly shown in Figs. 1 and 2 of the drawings. Each sprinkler consists of an inner pipe *b'* and an outer pipe *b<sup>2</sup>*, and each pipe *b'* and *b<sup>2</sup>* is provided with a row of perforations *b<sup>3</sup>*, whereby the water contained in the reservoir A may be forced out of the perforations and thrown in a broad spray over a great area, as clearly shown in Fig. 1 of the drawings. The holes in the side pipes are laid out on spiral lines, as clearly shown in Figs. 1, 2, 3, 4, and 5 of the drawings, beginning at the center of the car about the middle of the outside of the pipes and rising toward the upper side as they approach nearer the ends of the car. This secures a wide and uniform distribution of the water over the surface of the road, the holes as they rise along the pipe throwing the streams of water to a greater distance from the car.

For the purpose of controlling the flow of water from the reservoir A the pipe *b<sup>2</sup>* is ar-

ranged to turn on the pipe  $b'$ , so that the perforations in the pipe  $b^2$  may be brought into and out of register with the perforations of the pipe  $b'$ , whereby the water in the reservoir A may be permitted to flow therefrom or the flow cut off, and in order that the pipe  $b^2$  may effectually close the apertures in the pipe  $b'$  when it shall have been turned on the pipe  $b'$  to bring the apertures in the pipe  $b^2$  out of register with the apertures in the  $b'$ , the pipe  $b^2$  is preferably provided with a lining or packing  $b^7$  of rubber or other suitable material.

The turning of the pipes  $b^2$  in the sprinkler-sections B is preferably controlled by the operator on the platform opposite to the platform upon which the motorman is stationed, and for this purpose there are arranged suitable controlling-levers  $b^4$  and  $b^5$  at either end of and upon each side of the apparatus and located adjacent to the platforms  $a^3$ , within easy reach of the operator thereon. These levers  $b^4$  and  $b^5$  are connected by means of suitable rods  $b^6$  and  $b^7$  with the pairs of pipes  $b^2$  upon the sides of the car by means of the bell-crank levers  $b^8$ , pivoted upon the supports  $b^9$  for the pipes  $b^2$  and engaging notches  $b^{10}$  in the projections  $b^{11}$ , integral with the said pipes  $b^2$ , all as clearly shown, so that the operator from the rear platform or from either platform may readily control the flow of water from the apparatus.

If desired, the pipes  $b^2$  of the end sections of the sprinkler-sections B may be likewise connected to the levers  $b^4$  and  $b^5$ ; but it is preferable to connect these pipes  $b^2$  of the end sprinkler-sections with an independent lever  $b^8$ , located upon the dashboard of the platforms  $a^3$ , whereby they may be either operated by the motorman or by the operator.

In order that the water may be forced from the reservoir A with great power, and therefore thrown in a spray over a greatly-increased area than it would be if it was simply allowed to flow from the reservoir A, there is located upon the top thereof any suitable form of air-pump C, arranged to force air into the tank or reservoir A above the water contained therein, and said pump is preferably actuated by a motor  $c$ , placed upon the top of the reservoir A, said motor being preferably an electric motor operated by power taken from the trolley  $a^2$ . By this means the

water in the reservoir A is put under great pressure and caused to be thrown from the sprinkler-section B in a large spray, as clearly shown in Fig. 1 of the drawings.

$c'$  represents any suitable form of gage placed upon the reservoir A in order to determine when said reservoir has been filled to the proper height.

It is to be noted that by arranging the sprinkler-section B in the manner shown and forcing the water under pressure therefrom the objectionable swinging sprinkler-sections now so commonly employed are done away with and that the flow of water and the extent of the spray are more readily controlled by the operator than in the forms of sprinklers heretofore constructed.

Having described our invention, we claim as new and desire to protect by Letters Patent of the United States—

1. In a sprinkling apparatus, the combination with a tank or reservoir, of a sprinkler-section communicating therewith, said sprinkler-section comprising a straight fixed pipe and a straight pipe arranged to revolve on said fixed pipe, a line of perforations in each pipe arranged to be brought into and out of register with each other, a lever and suitable connections for turning the revoluble pipe on the fixed pipe, substantially as described.

2. In a sprinkling apparatus, the combination with a tank or reservoir and electrically-actuated power mechanism for propelling said tank or reservoir along the highway, of an air-pump for forcing the water from said tank or reservoir, an electric motor for actuating said pump and connections between said motor and the electric conductor which supplies power to the propelling-motor, substantially as described.

3. In a sprinkling apparatus, the sprinkler consisting of an inner pipe and an outer pipe provided respectively with corresponding spiral rows of perforations, and means for turning one of the pipes upon its axis, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM Y. OBER.

CHARLES W. COLLYER.

Witnesses:

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A. O. ORNE.