

No. 883,257.

PATENTED MAR, 31, 1908.

A. THOMAS.

SPRAYING DEVICE FOR WATERING STREETS.

APPLICATION FILED NOV. 23, 1899.

2 SHEETS—SHEET 1.

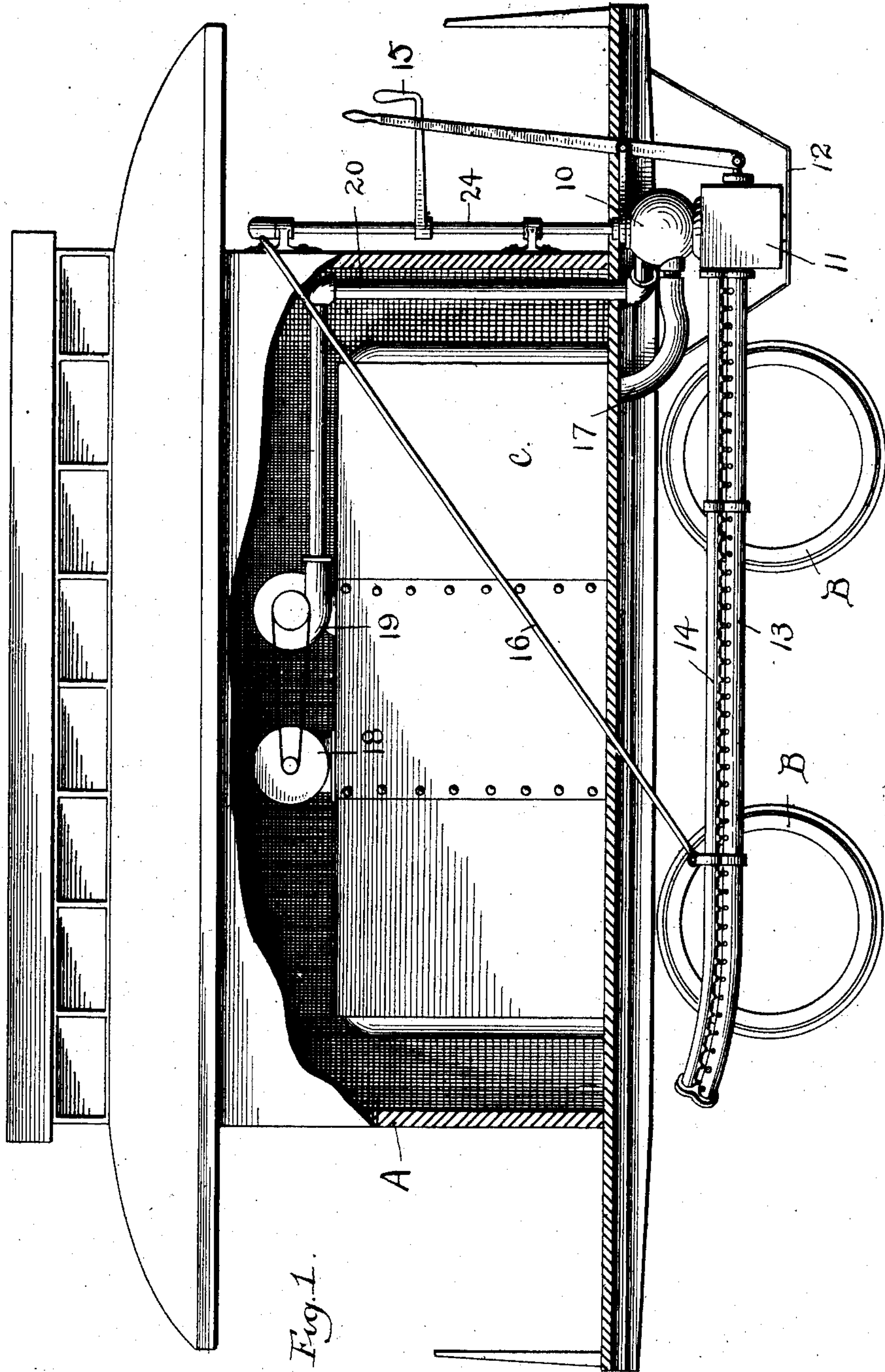


Fig. 1.

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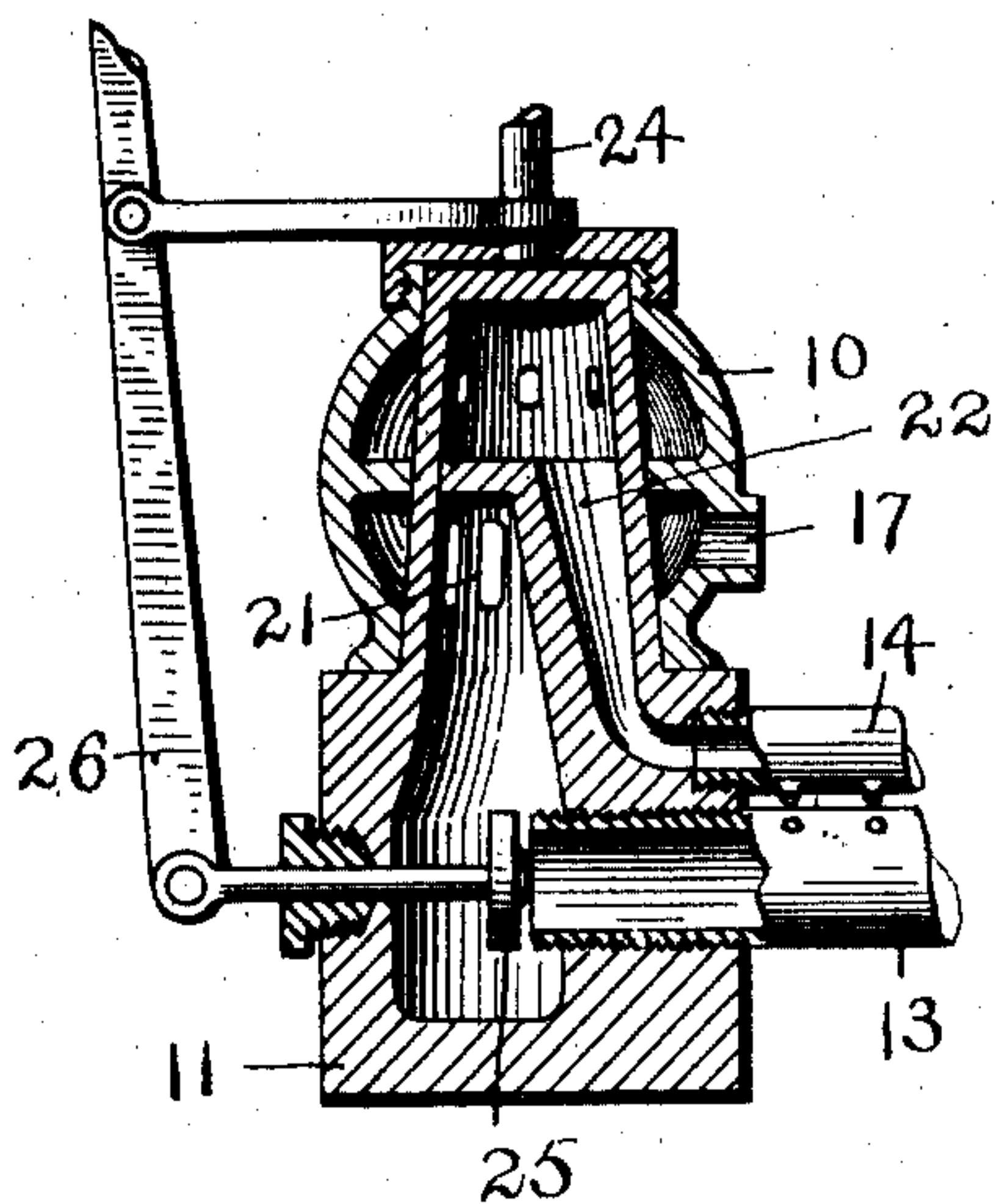


Fig. 2.

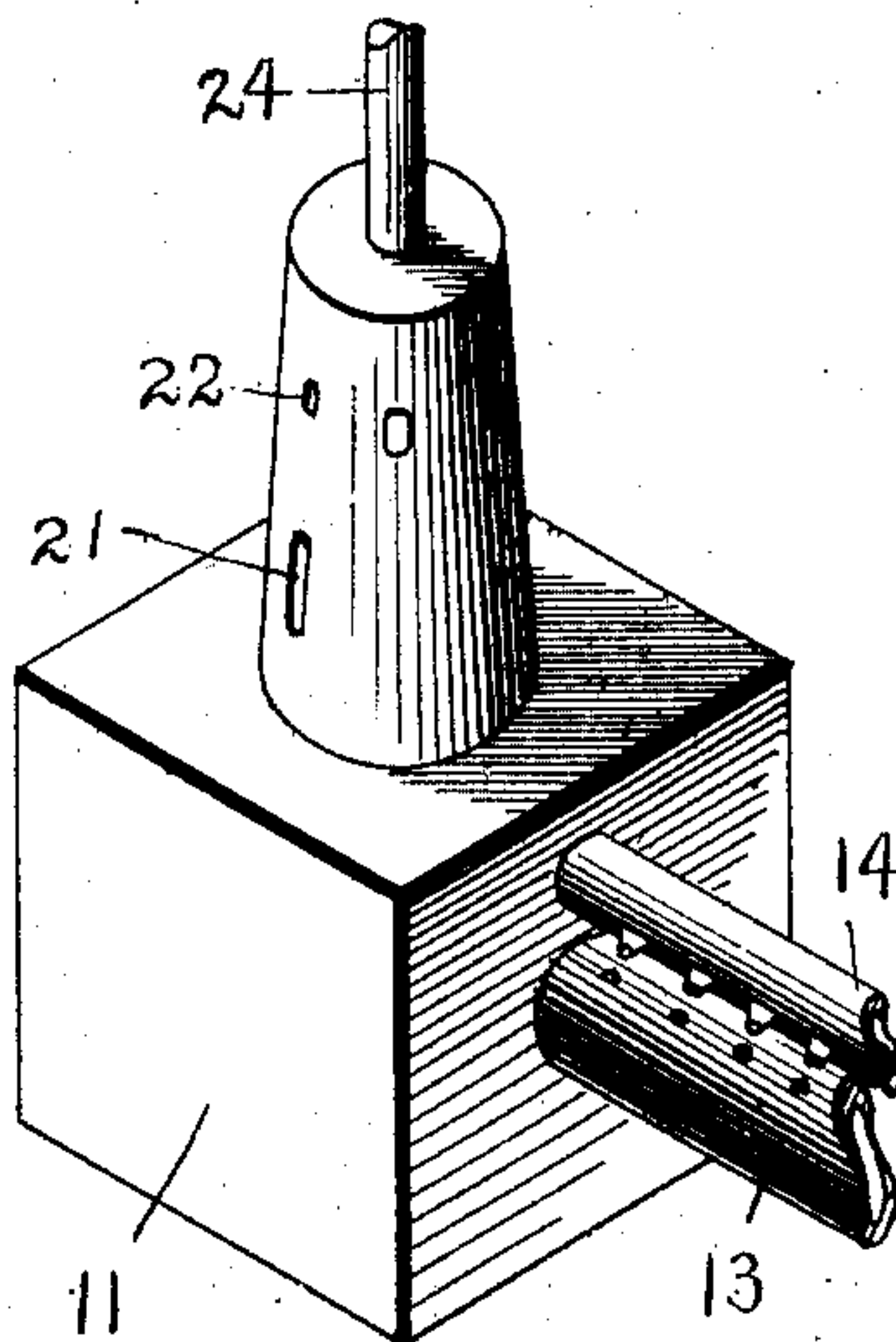


Fig. 3.

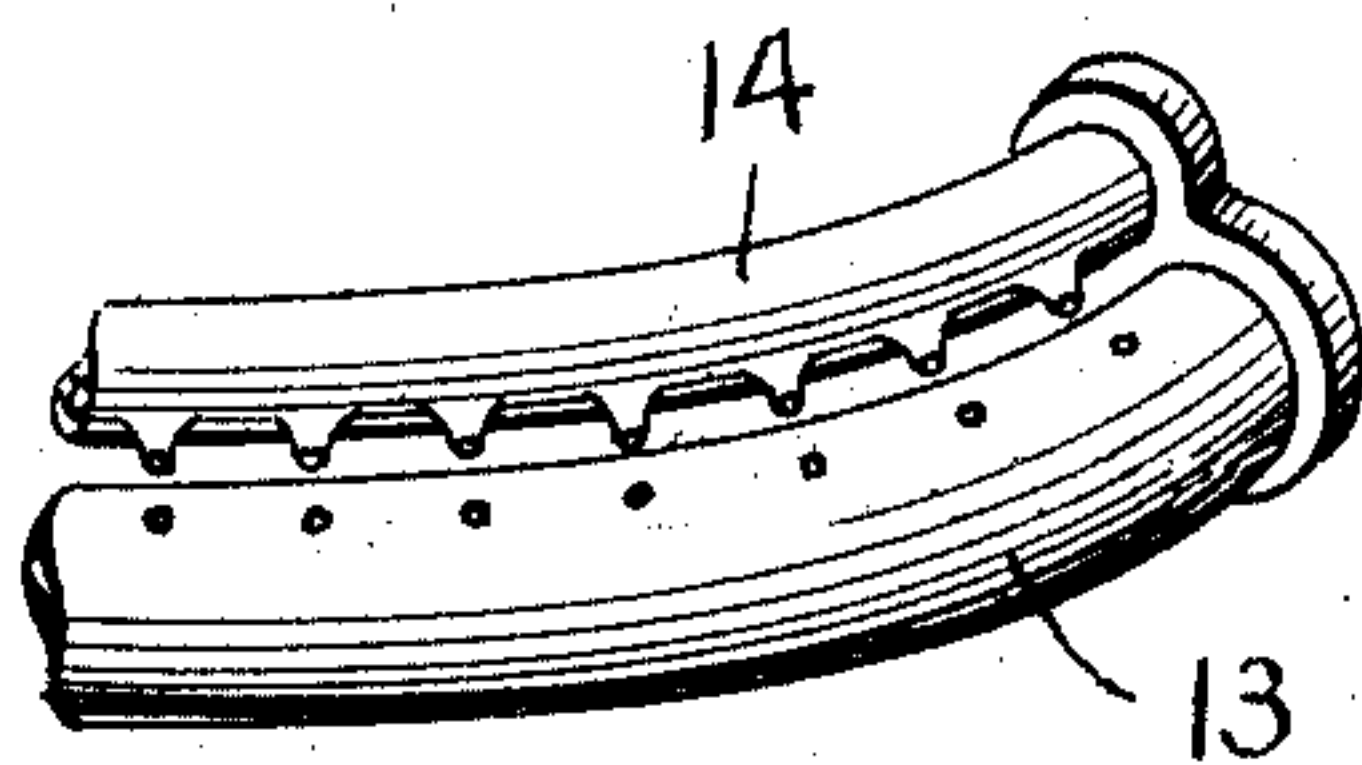


Fig. 4.

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UNITED STATES PATENT OFFICE.

ALFRED THOMAS, OF WORCESTER, MASSACHUSETTS.

SPRAYING DEVICE FOR WATERING STREETS.

No. 883,257.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed November 23, 1899. Serial No. 738,029.

To all whom it may concern:

Be it known that I, ALFRED THOMAS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Spraying Device for Watering Streets, of which the following is a specification.

This invention relates to a spraying apparatus for watering streets which has been especially designed for laying the dust on concreted or paved streets, and the object of this invention is to provide a watering device to vaporize or distribute the water in the form of a vapor or fog, instead of distributing or spraying water in the form of separate streams.

To this end this invention consists of the parts and combinations of parts as herein-after described and more particularly pointed out in the claims at the end of this specification.

In the accompanying two sheets of drawings, Figure 1 is a side view partially broken away of a sprinkler car provided with spraying devices constructed according to this invention. Fig. 2 is an enlarged sectional view of the turn plug, Fig. 3 is a perspective view thereof, and Fig. 4 is an enlarged fragmentary view of a portion of the spraying device or sprinkler arm, showing the relative position of the sprinkling perforations and the air nozzles.

The practice of sprinkling the paved or concreted city streets with considerable volumes of water to lay the dust has been found to be objectionable on account of the washing action of the streams of water, and especially when used on concrete, because water if allowed to stand thereon causes the concrete to rot and deteriorate very rapidly. Furthermore, where city streets are sprinkled in the ordinary manner now practiced, the pavements are frequently rendered so slippery as to cause numerous accidents from horses or vehicles slipping thereon. To obviate these difficulties, I propose to provide a spraying device for watering streets which will distribute water in a finely divided vapor or fog, so that the paving will not be washed or injured, and will not be rendered unnecessarily slippery. To this end, a spraying device for watering streets constructed according to my present invention, comprises a vehicle, such as a cart or car of ordinary construction, a water-tank mounted in the ve-

hicle, a sprinkler, and air supplying connections arranged to vaporize the water distributed through the sprinkler.

In the accompanying two sheets of drawings, I have illustrated my invention as applied to a sprinkler car of a similar construction to that shown in the patent to Gathright, No. 570,991, of Nov. 10, 1896, but it is to be understood that my invention can be practiced in connection with any of the ordinary forms of carts or cars, whether the same are arranged to run on tracks or not.

Referring to the drawings and in detail, a spraying apparatus embodying my invention as herein illustrated, comprises a vehicle or car-body A having wheels B for running on tracks in the same manner as an ordinary street car.

A water-tank C is arranged in the car-body, and can be filled or supplied with water in any of the ordinary manners, not necessary to herein show or describe. Mounted at the front of the car is a casing forming part of a turn plug through which air and water are supplied to the spraying and vaporizing passage of a side arm sprinkler. The tank C is connected with the lower part of the casing through a pipe or passage.

Mounted in the car A in any convenient manner is a blower or air forcing device. The blower or air forcing device may be of any of the ordinary or preferred constructions, and may be driven or operated in any desired manner. As herein illustrated, the blower 19 may be driven by belt from an electric motor, such as 18, but in applying my invention to other classes of sprinkler cars, it is to be understood that the blower or air forcing device 19 may be operated by different connections, as for example, by being driven from the axles or wheels of the cart or car. From the blower or air forcing device 19, a current of air is passed through a pipe.

As illustrated most clearly in Fig. 2, the casing 10 is divided into two separate chambers, and journaled in the casing 10 is a turn plug or movable section 11 having separate passages 21 and 22, the passage 21 being arranged to admit water to a perforated sprinkler or water pipe 13, and the passage 22 being connected to supply air to the vaporizing or atomizing pipe 14.

As illustrated most clearly in Fig. 1 the movable turn plug or section 11 is supported by a strap or brace 12, and may be operated

by a vertical shaft 24 having an operating handle 15. The vertical shaft 24 is connected from its upper end to the sprinkler arm by a rod or link 16 substantially in the same manner as in the Gathright patent before referred to.

To shut off the water supply, I may employ a shut-off valve 25 which may be controlled by a lever 26.

The water pipe 13 is provided along its upper surface with a series of perforations, and the air pipe 14 is provided with a series of nozzles or passages corresponding with the perforations of the water pipe, said air and water passages being arranged with respect to each other, so that the air as it blows through the nozzles extending from the air pipe will act to atomize or vaporize the water.

In the use of the sprinkling device as thus constructed, I am enabled to lay the dust of city streets with the least possible washing or damage to the pavement, and I have also found that it is possible to keep the dust laid with much less water than when the water is thrown in the form of streams or sprinkled on the road. This is due to the fact that by distributing water in the form of vapor, the surface of the street is not disturbed, but an even dampness is allowed to settle thereon with such uniformity that it is necessary to use only a comparatively small quantity of water to keep the dust laid; whereas in sprinkling streets by ordinary methods, it is not only impossible to secure as even a distribution of the water, but inasmuch as the ordinary devices deliver solid drops or streams of water, the surface of the road will be disturbed or mixed with the water in the form of mud, rather than simply forming a coating

over the same as I am enabled to do by distributing water in the form of vapor.

I am aware that many changes may be made in practicing my invention by those skilled in the art without departing from the scope thereof as expressed in the claims, and I do not wish therefore to be limited to the form which I have herein shown and described, but

What I do claim and desire to secure by Letters Patent of the United States, is:—

1. In an apparatus for watering streets, the combination of a car-body, a tank mounted therein, a sprinkler arm pivotally mounted at the side of the car, and comprising a water pipe or passage, an air pipe or passage arranged above said water pipe or passage, said pipes or passages being provided with registering perforations arranged to vaporize the water distributed by said sprinkler arm, an air forcing device, and connections for supplying air to said pipe or passage.

2. In an apparatus for watering streets, the combination of a sprinkler arm, an air pipe arranged parallel with the arm, said arm and pipe having registering perforations, an air supply for the pipe and water supply for the arm, a cock having passages for conducting air to the pipe and water to the arm, and a shut-off valve for the water supply located in said cock.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALFRED THOMAS.

Witnesses:

LOUIS W. SOUTHGATE,
PHILIP W. SOUTHGATE.