

No. 652,547.

Patented June 26, 1900.

R. L. McDADE & P. L. KELLY.
STREET SPRINKLING MACHINE.

(No Model.)

(Application filed Dec. 14, 1898.)

2 Sheets—Sheet 1.

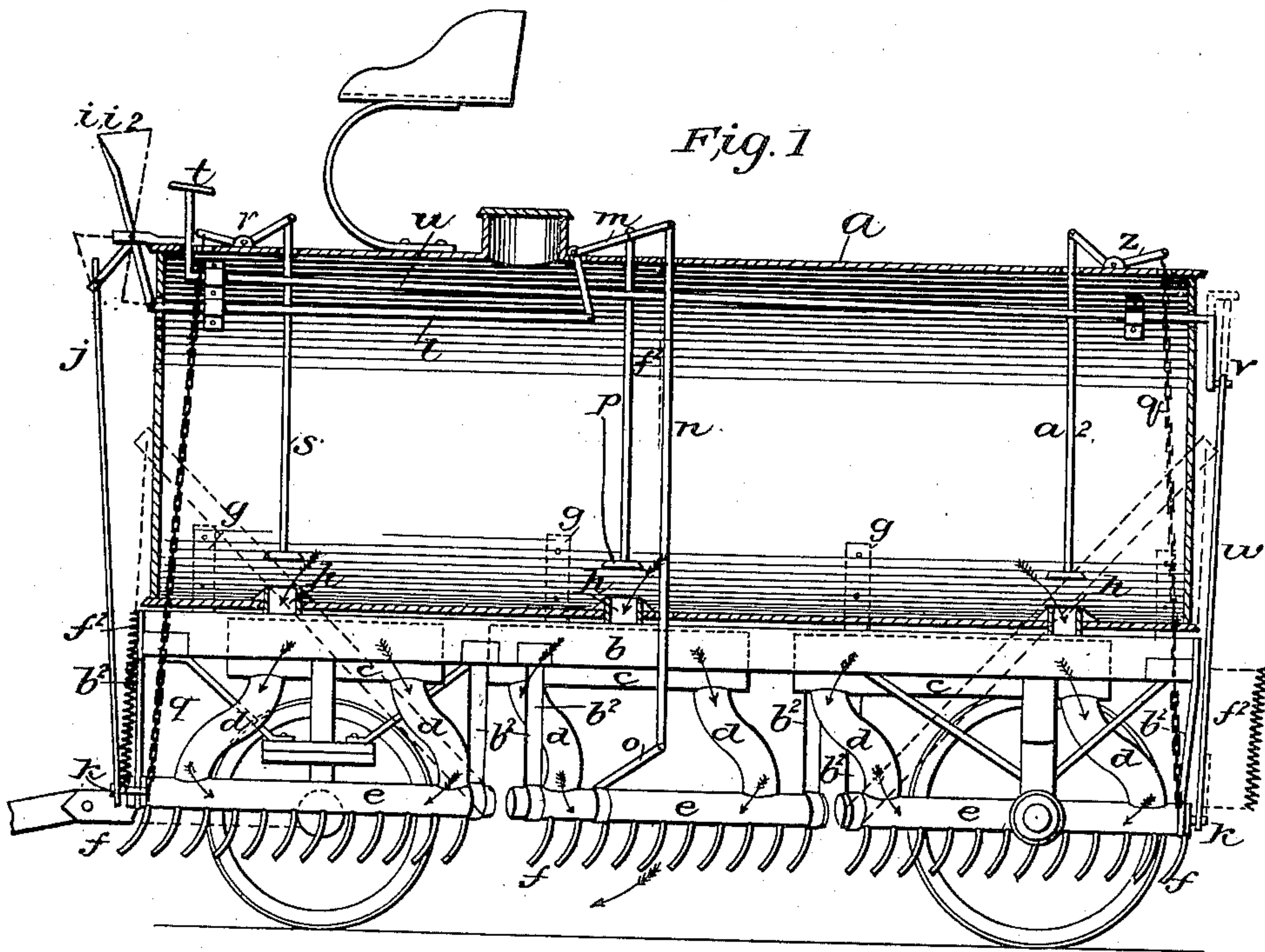


Fig. 2.

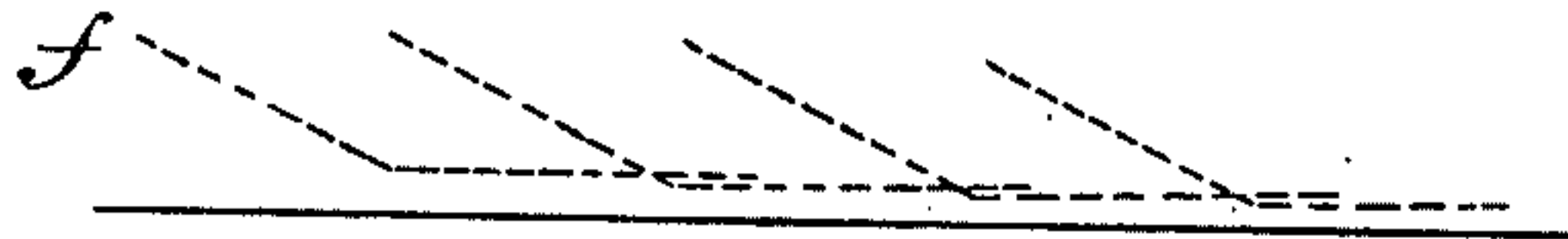


Fig. 4.

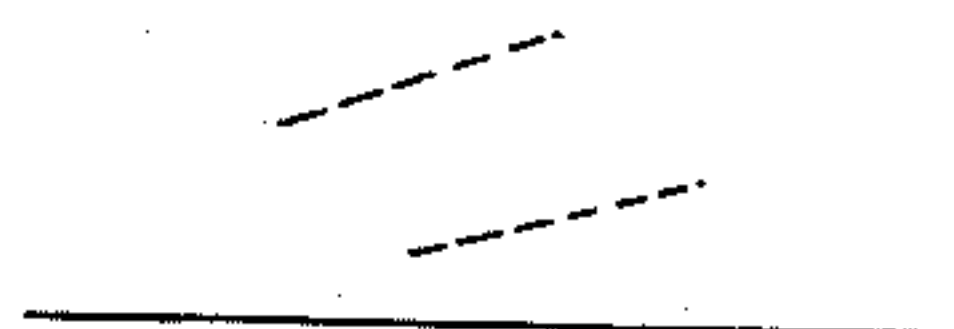


Fig. 5.



Witnesses.
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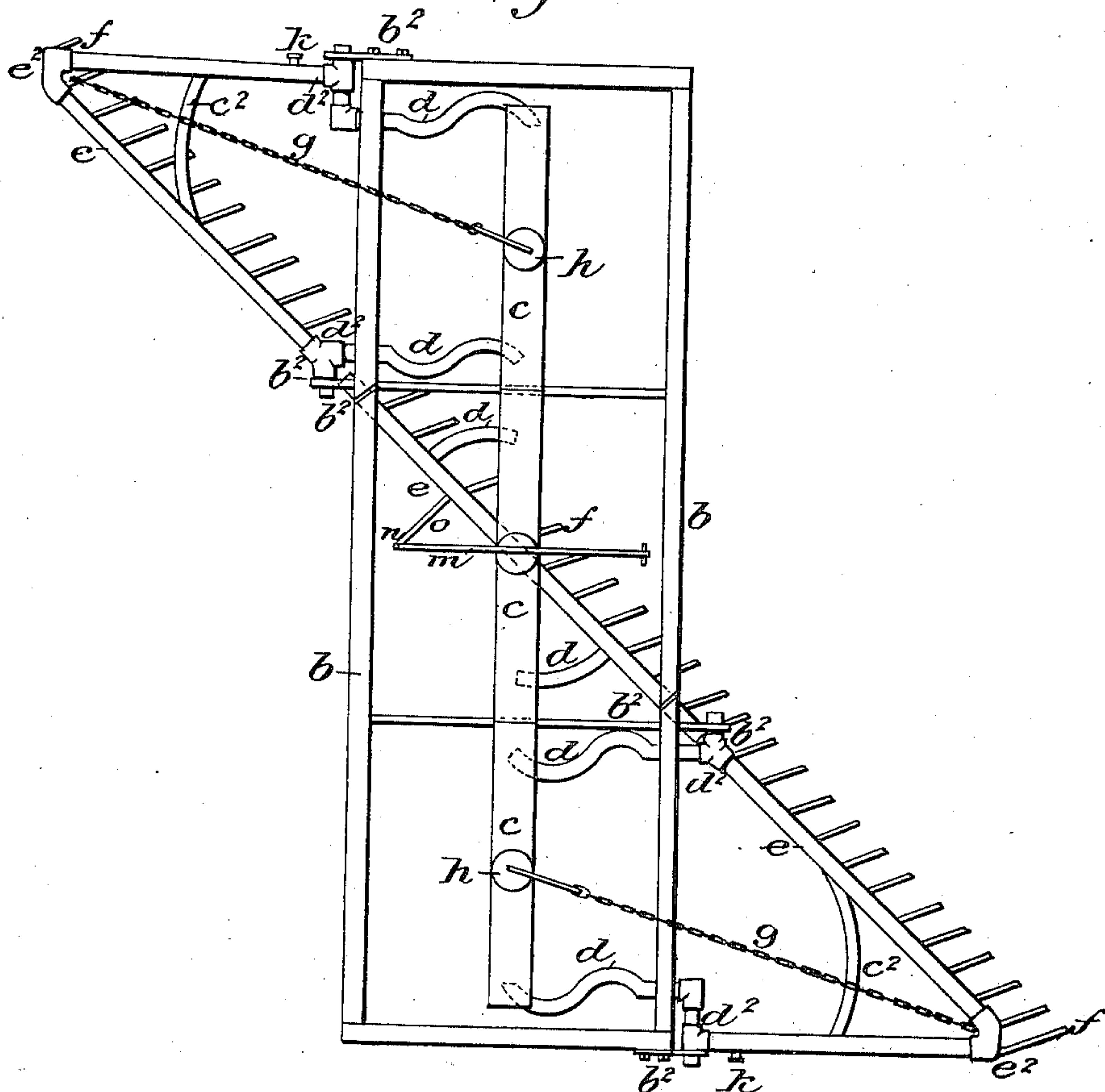
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Fig. 3.



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UNITED STATES PATENT OFFICE.

RUFUS LONGFELLOW McDADE AND PATRICK LAWRENCE KELLY, OF
BUREAU JUNCTION, ILLINOIS.

STREET-SPRINKLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,547, dated June 26, 1900.

Application filed December 14, 1898. Serial No. 699,286. (No model.)

To all whom it may concern:

Be it known that we, RUFUS LONGFELLOW McDADE and PATRICK LAWRENCE KELLY, citizens of the United States, residing at Bureau Junction, in the county of Bureau and State of Illinois, have invented certain new and useful Improvements in Street-Sprinkling Machines, of which the following is a specification.

Our invention relates to improvements in street-sprinklers in which a water-tank is mounted on a truck which is driven over the locality to be sprinkled; and the objects of our improvements are, first, to provide the sprinkling-machine with a washing capacity; second, to afford facilities for the proper adjustment of certain parts with respect to non-interference with street traffic, and, third, to reduce the care of operating said machine. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal sectional view, partly in elevation, of the entire machine. Fig. 2 is a diagrammatic view showing the course of the jets of water or spray as they leave the nozzles. Fig. 3 is a plan view of the machine with the tank and wheels removed. Fig. 4 is a diagrammatic view of the course of the spray as viewed from the top of the machine, and Fig. 5 is a similar view from the rear of the machine.

Similar letters refer to like parts throughout the different views of the drawings.

The tank *a*, resting in the saddles *g*, supported by the truck construction *b*, on which is fast a number of hangers *b*², constitutes the framework of the machine. The pipe-sections *e e e*, Fig. 1, describe a diagonal underneath the frame, as shown in Fig. 3 of the drawings. Each outside section is substantially a triangle of about forty-five degrees, the longest side having the spray-nozzles. These sections are constructed by making a bend at the outer portion or by screwing the pipes into oblique connections *e*² *e*², (see Fig. 3,) with the inner ends screwed into T-sections, which form the bearings that work in hangers *b*², and also form the hose connections, as at *d*² *d*² *d*² *d*². (See Fig. 3.) The triangle may be braced near the angle by a

curved pipe-section, as at *c*², as shown, which is held in place by any desired means and the outer portions supported by valve-chains *q q*. The center section *e* is a straight piece of pipe plugged at each end and on which is placed the tipping-lever *o*, and rests on hangers *b*² *b*².

The pipes *e e e* connect with the tank *a* through the valve-openings *h h h* and the main feed-pipes *c c c* and the hose *d*, and said pipes *e e e* have communicating therewith the spray-nozzles *f*, which are uniformly curved to a departure or inclination of about thirty degrees and are preferably screwed into the pipes *e*, so that they can be readily adjusted. The points of the nozzles *f* are directed toward the pavement at an inclination of about twenty degrees, as shown in Fig. 2 of the drawings, and is to give the flow of water a sweeping or washing capacity. We adjust the nozzles by using a pipe-wrench and turning the pipes *e* in their bearings until the nozzles *f* assume the proper "dip" or inclination, or, in case of the center section, by adjusting the length of the lifting-bar *n*. The nozzles also may be set at a departure of about seventy degrees off the top or front, as shown in Fig. 4 of the drawings, in which event the action of the water will be rendered more efficient by reason of the momentum of the machine. This can be done by turning them in their fittings to give the spray the proper departure; but in this special care must be exercised to give each section the same dip or inclination and give all of the nozzles the same "set," so as to give all of the sprays or jets a uniform distance apart on the line where they meet with or engage the pavement. On this set and dip and the diagonal arrangement of the nozzles rests the vital merit of this invention. The operator must study the nature of the pavement to be cleaned, for what would clean a granite-block pavement would not reach the maximum point of economy of an asphalt pavement.

The foot-lever *i* and the bar *j*, working on the pin *k*, manipulate the first section *e* on the left to the proper working position, as shown in Fig. 1. The chain-support *q* relieves the rocker *r* and allows the valve *S* to drop, shutting off the water-flow. The foot-

lever i^2 and the bar l , acting on the lever m , and the bar n , and the lever o force the points of the nozzles downward to the proper working position. The lever m also closes the valve p at the same time. The foot-press t turns the shaft u , and the crank v , which is connected with the bar w , working on the pin k , manipulates the third or rear section to the proper working position. The supporting-chain q relieves the rocker z and allows the valve a^2 to drop, thus closing the rear-section flow.

Each pipe-section is provided with a spiral spring-balance f^2 , drawn to a tension that maintains the outside sections in an upright position and the center-section nozzles to a horizontal position at all times, except when forced downward to the working position by means of the foot-levers.

The size of the nozzles or the space between them may be changed to economically meet the requirements of the thoroughfare to be sprinkled. To attain this object, several sections may be made and kept in reserve, with different spaces and different-sized nozzle-points which may be adjusted. The position of the operator may be changed at the discretion of the builder, though the position indicated gives a more complete survey of traffic. That the diagonal pipes adhere to the diagonal line is not specific, as only the nozzle-points are intended to be construed in that sense.

The machine is made with respect for the law "keep to the right." In operation the sprinkler should pass to the right of the street center and back on left of center, each time taking a new swath where the previous one left off until the gutter is reached.

From the foregoing and by reference to the drawings it will be clearly seen and understood that our machine not only acts as a sprinkler, but performs the further function of washing or cleaning the surface of the street, thus removing the dirt and litter to the gutter.

Having thus fully described our invention,

what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of a series of nozzles arranged and constructed so as to discharge in a diagonal line to the movement of the machine and obliquely to the surface of the street, with means to force water through the nozzles, substantially as described.

2. The combination of a series of nozzles arranged and constructed so as to discharge at equidistant points in a diagonal line to the movement of the machine, and obliquely to the surface of the street, with means to force water through the nozzles, substantially as described.

3. The combination of a series of nozzles arranged and constructed so as to discharge at equidistant points in a diagonal line to the movement of the machine, with means to force water through the nozzles, substantially as described.

4. The combination with a tank, mounted on wheels, of sections of pipe adjustably secured below the tank and diagonally thereto, flexible connections communicating with said pipes and tank, a series of nozzles adjustably secured in said pipes, and means to turn and raise the pipes, substantially as described.

5. The combination of a tank mounted on wheels, with sections of pipe having flexible communications therewith, a series of curved nozzles adjustably secured in said pipes, springs to normally hold the outer sections of pipe in a raised position and the controlling-levers and valve-chain supports, substantially as described.

6. The combination of the tank, with drop-valves therein, main feed-pipes under the tank and intersected at either end by hose, pipe-sections provided with nozzles and connected at each of their ends to the hose, substantially as described.

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