No. 733,653. PATENTED JULY 14, 1903.

F. A. JONES.

NOZZLE APPLIANCE FOR CLEANING RAILWAYS.

APPLICATION FILED JULY 17, 1902.

NO MODEL.

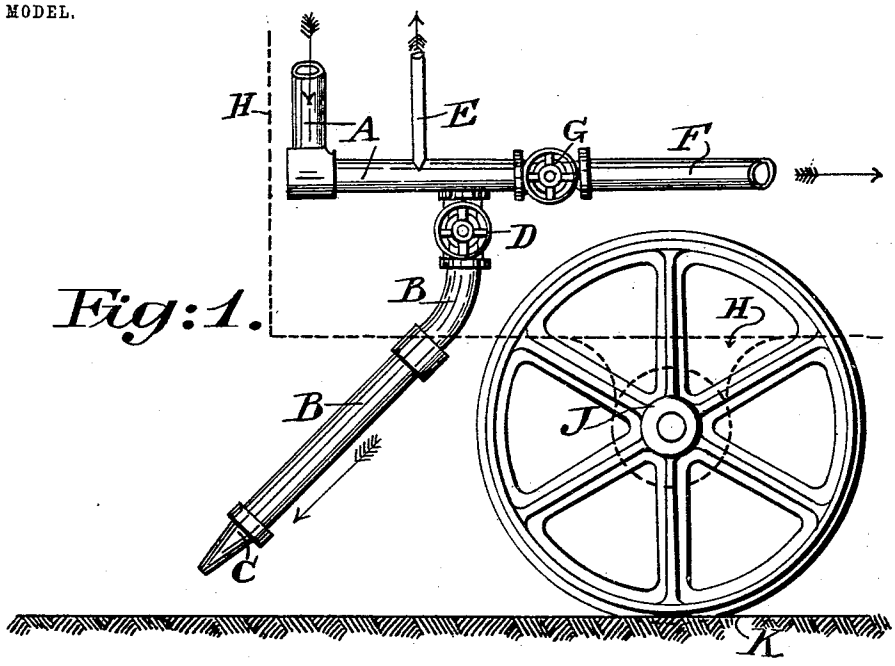


Fig: 1.

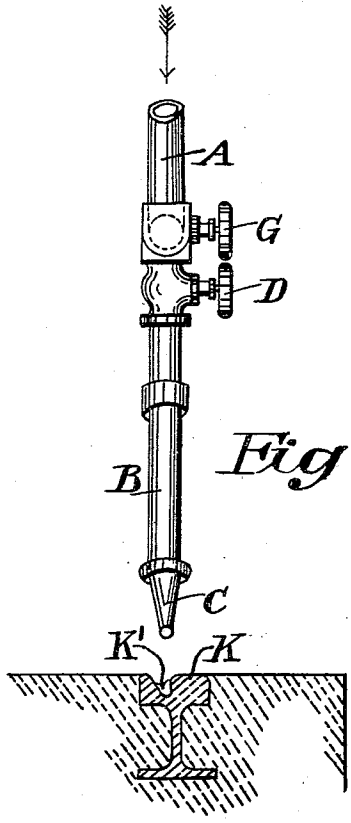


Fig: 2.

WITNESSES:

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No. 733,653. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

FREDERICK ARTHUR JONES, OF PERTH, WESTERN AUSTRALIA, AUSTRALIA, ASSIGNOR OF TWO-THIRDS TO OLIVER BOWMAN, GEORGE McMULLEN, AND ARTHUR RANKIN, OF PERTH, WESTERN AUSTRALIA, AUSTRALIA.

NOZZLE APPLIANCE FOR CLEANING RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 733,653, dated July 14, 1903.

Application filed July 17, 1902. Serial No. 116,000. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK ARTHUR JONES, a subject of the King of Great Britain, residing at 91 Adelaide Terrace, Perth, Western Australia, Australia, have invented certain new and useful Improvements in Nozzle Appliances for Cleaning Railways; and I 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to effectually clean the grooves of tram and other rail ways by means of a washing or sluicing process; and the invention has been the more particularly designed for use in connection with street-tramways. The grooves, especially those of street-tramways, have a well-known tendency to collect dust and other foreign matter from off the road or street, and owing to the passage of the cars over the rails such foreign matters become a solidified mass, and so impair the smooth and easy running of the car or other vehicle, as the case may be.

In connection with electric tram or rail ways a further advantage by the use of this invention results in having that portion of the rail which happens to lie between the wheels kept and maintained in a thoroughly clean condition, so as to obtain an efficient and uninterrupted circuit for the electric current.

This invention essentially consists of a nozzle or nozzles which is or are in communication with a body of water contained in a traveling tank, and the necessary pressure is obtained by means of a force-pump. This nozzle appliance is mounted on the traveling tank, and which tank may also be used for watering the surface of the tram-track.

In order that the invention may be clearly understood, it will now be described in conjunction with the attached drawings, illustrating same, and in which—

Figure 1 is a side view of the nozzle appliance and showing the outline of the vehicle by broken lines, Fig. 2 being a front face view of the nozzle and rail.

In the figures the arrows show the travel of the water, while A denotes the main feed-pipe of the nozzle, and which pipe acts as the discharge for the pump and leading from the water feed-tank to the nozzle or nozzles and through which the water is forced by means of a pump or other like mechanical means, also mounted on the vehicle, in order to obtain a greater pressure of water than would result from the head of water in the tank. B is a branch pipe leading downward from the main feed-pipe and is curved and arranged in such a manner as to bring the nozzle directly over and at the desired angle to the groove of the rail and as shown in Fig. 1. C represents the nozzle, which directs such high-pressure water on and into the rail and groove and in such a manner that a sluicing or scouring action is obtained, with the result that all foreign matter is broken up, ejected, and washed away clear of the rail.

D is a valve for controlling the supply of water to the nozzle, while E is a pipe and valve for returning any overplus of water back to the reservoir, and such pipe acts as a safety agent to the appliance as a whole.

F is an extension of the main feed-pipe A for the purpose of connection to the nozzle or nozzles which are attached to the other end of the watering-vehicle, and G is the valve for controlling the feed-water to same.

The wheel, as J, of the watering-vehicle H is shown in approximate position in its relation to the cleansing-nozzle, while K and K′ denote the rail and groove, respectively, of the tramway.

Each end of the vehicle is fitted up in like manner—that is, with a twin nozzle appliance—in order to allow of the cleaning operation to take place either when the vehicle is on the up or down journey, it being understood that in practice the operative nozzles are those which happen at the time to be the front ones of the water traveler. It is also obvious that a nozzle may be placed in front and behind each and every wheel of the vehicle.

When the appliance is used in connection with electric tram or rail ways, the pump would be worked by an electric motor, and which pump would be mounted on the vehicle and in a convenient place for control by the driver.

What I claim as my invention, and desire to secure by Letters Patent, is—

In an apparatus of the class described the combination of a nozzle directed to the track, a carriage upon which the said nozzle is mounted, a connection leading to the nozzle from a tank also mounted on the carriage, a return-pipe for the surplus liquid and a valve to control the supply to a second nozzle, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

FREDERICK ARTHUR JONES.

Witnesses:

RICHARD SPARROW,

FRED WALTHAM.