

APPLICATION FILED MAR. 9, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

Fig. 1.

WITNESSES:
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BY

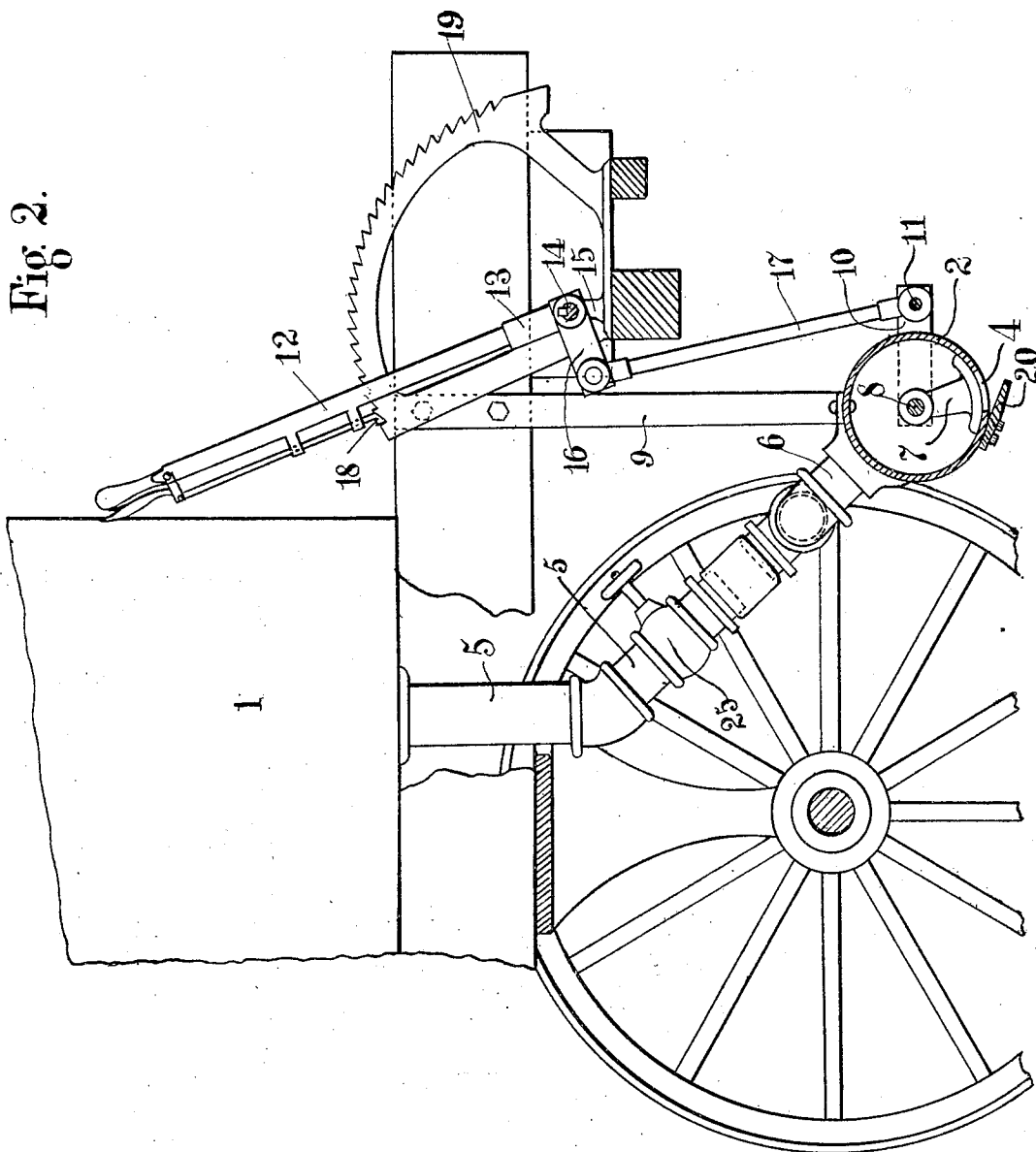
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H. TOPPING.
OIL SPRINKLING APPARATUS.
APPLICATION FILED MAR. 9, 1909.

1,052,025.

Patented Feb. 4, 1913.

2 SHEETS—SHEET 2.



WITNESSES
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OIL-SPRINKLING APPARATUS.

1,052,025.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed March 9, 1909. Serial No. 482,260.

To all whom it may concern:

Be it known that I, HOWELL TOPPING, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Oil-Sprinkling Apparatus, of which the following is a specification.

My invention relates to improvements in oil sprinkling apparatus and more particularly relates to the type used for distributing oil on roadways to prevent dust or for other purposes.

The main object of my invention is to provide an apparatus for sprinkling or distributing oil on roadways with means for controlling the amount of oil distributed so that there will be no waste or leaks.

Another object of my invention is to provide an apparatus which can be readily controlled so that only so much of a roadway as is desired may be sprinkled, thus avoiding useless consumption of fluid.

By my invention I provide the distributor with interior valves for controlling the supply of oil to the roadway, thus preventing leaks around the openings and also dispensing with the use of packing which is necessary when ordinary gates are used to control the oil openings. I also prefer to employ a deflector against which the oil strikes after leaving the distributor through the discharge openings, as the oil is spread out and gently distributes itself over the surface of the road, preventing damage thereto and the oil being more evenly distributed than if it were allowed to strike the road in the first instance.

To these ends my invention consists in the combinations, arrangements of parts and details of construction hereinafter more particularly described and then specified in the claims.

In the accompanying drawings, Figure 1 illustrates in elevation and partial section an end view of a tank wagon having my invention applied thereto. Fig. 2 is a side elevation and partial section of the end of the tank wagon shown in Fig. 1.

My invention may be applied to a wagon constructed practically along the lines of the ordinary water-wagon, the construction of which is well known and therefore any detailed description thereof is dispensed with herein except to state that 1 indicates the supply tank suitably mounted on and

carried by the road wheels of the wagon, the said tank in the present case being adapted to carry a supply of the kind of oil it is desired to distribute over the roadway; crude oil being the character of oil usually employed for this purpose.

2 indicates the distributing cylinders or tanks of which there are preferably two arranged end to end and each independent of the other in its operation. The cylinders are closed by the heads 3, suitably secured to the cylinders, in any desired manner. A plurality of openings 4, preferably rectangular, are formed in the walls of the cylinders and at or near the bottom thereof. The distributing cylinders are connected with the main supply tank 1 by a feeder pipe 5 and branches 6 from said feeder to each of the distributors employed. Mounted within the distributing cylinders 2 is the valve mechanism for controlling the openings 4, said valve mechanism preferably consisting of a number of separate valve arms 7 carrying imperforate valve sectors as shown, one for each opening 4 and all mounted on a common valve, spindle or shaft 8 longitudinally disposed in said cylinders and journaled in bearings in the heads 3. The distributing cylinders are preferably supported from the main frame of the wagon or carriage by the braces 9 and the ends of the valve spindle or shaft 8 project from the heads 3 and have levers or crank arms 10 secured to said projecting ends, the levers being pivotally connected together at their outer ends by a rod 11.

12 indicates an operating lever located at any desired part of the wagon and by means of which the valves 7 are rotated to permit the oil to pass through the openings 4. The operating lever 12 is secured to an arm 13 keyed to a rock shaft 14, said rock shaft being mounted in supports 15 secured to a fixed part of the apparatus. An arm 16 fixed to the rock shaft 14 is pivotally connected to the rod 11 by a link 17. Preferably I provide two links 17 for securing the rod 11 of each distributor to the rock shaft 14 to insure rigidity and smooth action and it will also be understood that one operating lever 12 is provided for each distributor employed. A pawl 18 secured to the lever 12 cooperates with a toothed segment 19 mounted on a fixed part of the apparatus in proximity to the operating lever by means of which the operating lever and

therefore the valves 7 can be locked in any desired position.

20 indicates a deflecting plate secured to the outer periphery of the cylinder 2 and in such position that it will be below the openings 4 in the cylinder and at a short distance therefrom, the purpose of which is to deflect the oil discharging from the openings and to cause it to distribute itself over a greater area than if the oil passed direct from the openings to the road. In this operation it will be seen that the plate 20 acts purely as a spreader upon which the stream of oil from the openings in the distributor is received and spreads out over the surface of the deflector by an action which may be properly characterized as a capillary action, assisted in a measure by gravity, and that there is no break up of the stream by pure impact owing to the fact that the openings are in immediate proximity to the plate, and the stream is delivered in a substantially unchanged form and solidity at the surface of the spreader plate. It will be further seen that the lower edge of this spreader plate is free and that the spread out sheet of oil may therefore flow freely in its spread out form over said edge and that it is not confined in any way or caused to back up into a pool and then delivered from said pool over the edge.

The operation of the apparatus will be obvious. When the operating lever 12 is in the position shown in Fig. 2 the openings 4 will be closed by the valves 7. On moving the lever 12 the valves are rotated through the rock shaft 14 and the links and levers as heretofore described and the valves are locked in any position to give the desired amount of opening through which the oil can pass by the pawl 13 engaging the teeth in the segment 19.

It will be understood that my invention might be carried out by employing more or less than the two distributing cylinders shown and described and that a single valve might be employed to operate on all the openings without departing from the spirit thereof.

If it is desired to shut off the supply of oil from the distributing cylinders 2 when the apparatus is not in use or for any other reason it is desired to keep the oil from the distributors, I supply, by preference, a gate valve or valves located in the pipe connections between the distributor and the supply

tank 1. In the drawings this gate valve is shown as located in the pipe 5 and indicated at 25.

It will be seen that in my construction, 60 the oil from a supply tank instead of being delivered into one single distributor is branched out into a series of them so that in traveling over uneven ground the elevation of one side or end of the wagon considerably above the other will not substantially affect the even distribution of the oil over the whole surface to be covered, as would be the case if the one distributor is employed, in which latter case the oil would principally escape from the depressed portion of said single distributor and the whole portion of the road-bed under the elevated end would receive no oil.

What I claim as my invention is:

1. In an oil sprinkling apparatus, the combination with a supply tank of a distributor cylinder connected with said tank and provided with openings through which the oil is adapted to pass, a valve spindle passing longitudinally through said distributor, crank arms secured to the respective ends of said spindle outside the cylinder heads, a connecting rod connecting said arms, a rock shaft and operating lever, arms projecting therefrom and links extending from said arms to the said connecting rod.

2. In an oil sprinkling apparatus, the combination with a supply tank, of a plurality of separate distributors connected to said supply tank through a common supply pipe, each of said distributors being provided with a series of perforations through which the oil is adapted to pass, independent valve mechanism for each distributor comprising a valve shaft passing longitudinally through the distributor and terminating outside the distributor heads, crank arms secured to the respective terminals of said shaft, a rod connecting said crank arms, an operating lever, a rock shaft to which said lever is connected, and links extending from said rock shaft and connected to the rod joining the crank arms.

Signed at New York in the county of New York and State of New York this 8th day of March, A. D., 1909.

HOWELL TOPPING.

Witnesses:

IRENE LEFKOWITZ,
EDWARD M. JELLINEK.