

No. 853,720.

PATENTED MAY 14, 1907.

W. M. MURRAY.
OIL SPREADER.

APPLICATION FILED AUG. 1, 1906.

Fig. 4.

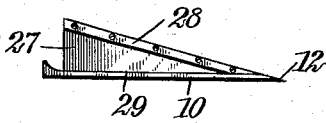


Fig. 1.

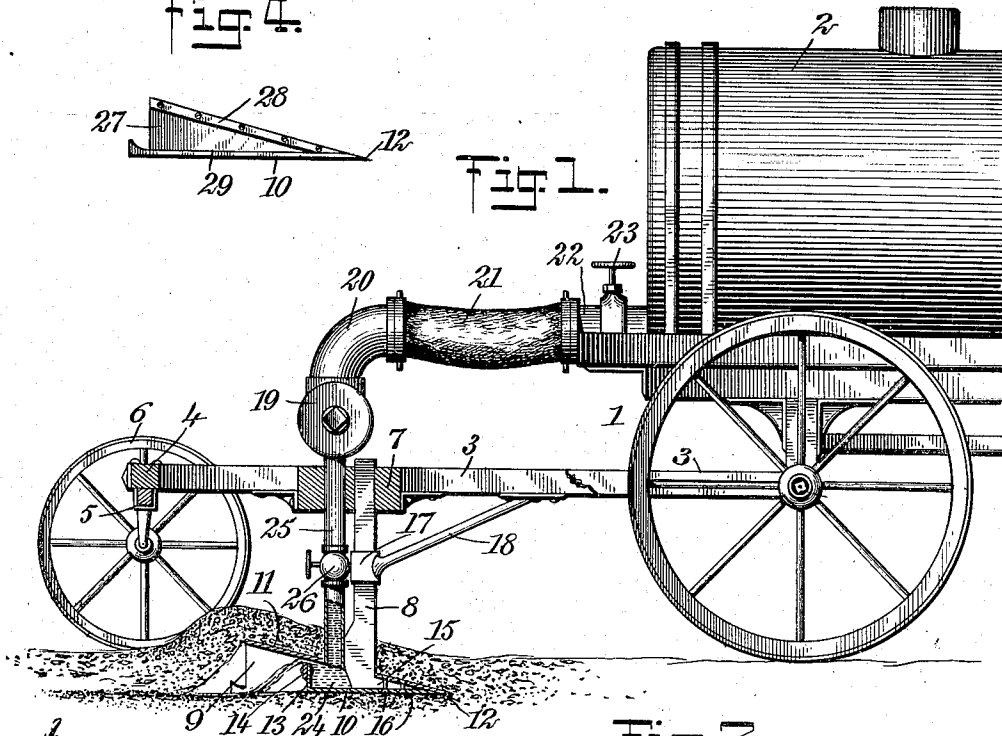


Fig. 2.

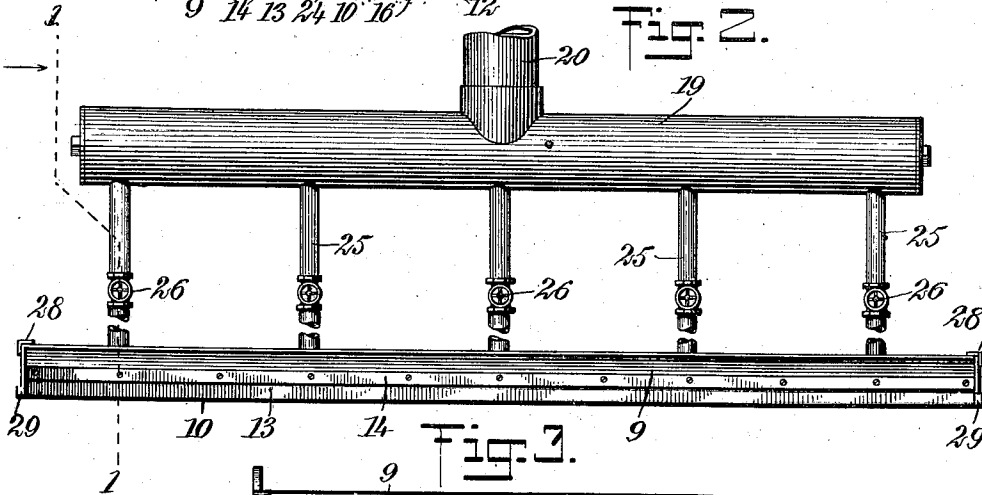
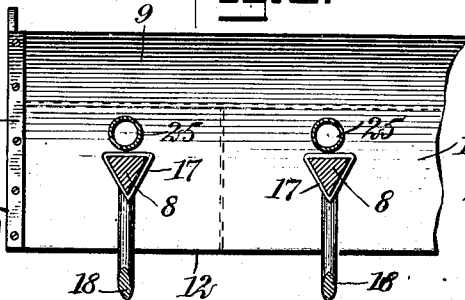


Fig. 3.



WITNESSES

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WILLIAM MARION MURRAY, OF SAWTELLE, CALIFORNIA, ASSIGNOR TO
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OIL-SPREADER.

No. 853,720.

Specification of Letters Patent.

Patented May 14, 1907.

Application filed August 1, 1906. Serial No. 328,760.

To all whom it may concern:

Be it known that I, WILLIAM MARION MURRAY, a citizen of the United States, and a resident of Sawtelle, in the county of Los Angeles and State of California, have invented a new and Improved Oil-Spreader, of which the following is a full, clear, and exact description.

This invention relates to oil spreaders, and is particularly useful in connection with devices of this character used for spreading oil, tar, asphaltum and the like upon roads.

The object of the invention is to provide an oil spreader which is simple, strong and durable in construction and by means of which the fluid is forced into the roadway underneath the surface of the same.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which

Figure 1 is a side elevation of my invention as attached to a tank vehicle, showing parts in cross section; Fig. 2 is a rear elevation of a part of the device; Fig. 3 is a top view of a detail showing parts in cross-section; and Fig. 4 is a side elevation of the plow member of the device.

My invention may be attached to a vehicle of the usual kind, adapted to contain oil or other liquid in a tank that is supported for progressive movement on wheels; and is provided with a plow which is adapted to be forced along underneath the surface of a roadway at a suitable depth, and has means for discharging the oil underneath said plow to thoroughly impregnate the road material therewith, at a distance below the surface.

In Fig. 1 the device is shown mounted at the rear of an ordinary vehicle 1, provided with a tank 2 adapted to contain the oil. I provide a frame work end member 4 securely bolted to the longitudinal members 3 near the rear ends thereof. At the rear end of the framework is secured a transverse axle 5, the ends of which are downwardly disposed and are provided with wheels 6 adapted to roll upon the surface of the roadway and to maintain the frame at a suitable height thereabove. The framework is provided with a transverse member 7 spanning the

space between the longitudinal members 3, 55 to which are secured downwardly projecting bars 8, of triangular cross section, presenting an edge toward the vehicle. At the ends of the bars 8 is secured a plow member 9, comprising a horizontal lower plate 10 and an 60 inclined upper plate 11, which form a knife edge 12 at their junction. The rear end of the lower plate 10 has an upwardly disposed edge or flange 13 to which is riveted a transverse bar 14. The bars 8 extend down- 65 wardly, passing through suitable openings in the upper plate 11, and have forwardly disposed toes 15 which are located in the space between the plates 10 and 11. Rivets 16, passing through the plates and the toes, 70 rigidly secure the plow to the bars 8. Collars 17 are mounted upon the bars 8 and have upwardly extending braces 18 which are secured to the framework and are adapted to prevent the rearward displacement or 75 bending of the bars and the plow as the device is moved forward.

A cylinder 19 is mounted above the framework transversely of the same, and has an upwardly extending elbow 20 which communicates, by means of flexible piping 21, 80 with the outlet 22 of the tank 2. A valve 23 is located at the outlet to regulate the flow of the oil into the cylinder 19. A plurality of pipes 25 extend downwardly from 85 the cylinder 19 and are secured in openings in the upper plate 11, thereby establishing communication between the cylinder 19 and the chamber 24 formed between the upper and lower plates of the plow and the later- 90 ally disposed edge 13 of the lower plate. This edge 13 does not extend quite to the upper plate, but is so arranged that a narrow slot, extending the width of the plow, is left 95 between the edge and the upper plate. Each of the pipes 25 is provided with a valve 26, by means of which the flow of the oil there- through may be regulated.

The oil from the tank flows into the cylinder 19 and from the latter into the chamber 100 24. To prevent the oil from flowing out through the sides of the plow, side plates 27 are provided, which are secured by angles 28 and flanged edges 29 to the upper and lower plates respectively. As the plow is drawn 105 along with the movement of the vehicle, it is forced forward under the surface of the roadway and the material composing the same

slides over the inclined upper plate 11. The oil within the chamber 24 thus flows out therefrom and impregnates the material of the road as the plow moves forwardly. The bar 14 secured to the upwardly disposed edge of the lower plate, has a beveled edge which facilitates the smooth flow and even distribution of the oil from the chamber 24. It will be understood that by thus forcing the oil underneath the surface of the roadway, the latter is consolidated and rendered dust-proof far more easily than if the liquid were merely applied as a surface dressing in the usual manner. The amount of liquid which is supplied to the roadway can be nicely regulated by the valves in the feed pipes to the plow. As the lower plate of the plow is horizontal, and as the wheels 6 maintain the frame at the same height above the surface of the roadway, the plow itself will be maintained at the same level below the surface of the roadway as it is moved forward under the same.

The upper plate 11 extends rearwardly beyond the lower plate 10 thus forming an open space into which the oil may flow freely from the chamber 24, and thereby preventing the earth raised by the upper plate from falling back into position before the lower stratum has become impregnated with the liquid. Furthermore, this prevents the raised earth from clogging up the oil outlet and insures an even distribution of the liquid.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In an oil spreader, a wheeled frame, an oil tank on the frame, a plow depending from the frame, said plow comprising upper and lower plates secured together at their front edges to form a cutting edge and arranged transversely of the frame substantially the full width thereof, said upper plate being of greater width than the lower plate, and overhanging the said lower plate at the

rear thereof, said lower plate being provided at its rear edge with an upturned flange spaced apart from the lower face of the upper plate, plates secured to the ends of the upper and lower plates and forming with the upturned flange and the lower plate a receptacle, a transverse cylinder above the plow and connected with the oil tank, and a plurality of passages between the cylinder and the plow.

2. In an oil spreader, a frame, a plow depending from the frame, said plow comprising upper and lower plates secured together at their front edges to form a cutting edge and arranged transversely of the frame substantially the full width thereof, said upper plate being of greater width than the lower plate, and overhanging said lower plate at the rear thereof, said lower plate being provided at its rear edge with an upturned flange spaced apart from the lower face of the upper plate, plates secured to the ends of the upper and lower plates and forming with the upturned flange and the lower plate a receptacle, and means for supplying oil to the receptacle.

3. In an oil spreader, a frame, a plow depending from the frame, said plow comprising upper and lower plates secured together at their front edges to form a cutting edge and arranged transversely of the frame substantially the full width thereof, said upper plate being of greater width than the lower plate and overhanging said lower plate at the rear thereof, said lower plate being formed into a receptacle for oil, and means for supplying oil to the receptacle.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM MARION MURRAY.

Witnesses:

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