To all whom it may concern:

Be it known that I, HENRY G. KNIEF, citizen of the United States, residing at Napa, in county of Napa and State of California, have invented certain new and useful Improvements in Apparatus for Applying Oil to Road-Surfaces, of which the following is a specification.

My invention relates to an improvement in an apparatus for applying oil to road surfaces, and the object is to provide means for delivering hot oil to a rotor which discharges the oil from the apparatus in a shower or spray of fine drops.

The invention consists of still other novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a vertical sectional view; Fig. 2 is a perspective view of the apparatus; Fig. 3 is a horizontal sectional view; Fig. 4 is a perspective view of the rotor or distributor; Fig. 5 is a perspective view of the means for controlling the discharge of the oil from the apparatus.

The bed plate 1 of the casing has a cylindrical body or wall 3 mounted thereon fastened thereto by means of screw bolts 2.

Mounted upon the wall or body 3 is a top plate 6, which is fastened in position by means of screw bolts 7. An annular rim or track 4 is mounted upon the bed plate and rotatably mounted upon the track is a rotor or distributor, which consists of a solid disk 8 mounted upon the track, and mounted upon the disk are a plurality of vanes or blades 9, 9, and a ring 10 is mounted upon the vanes for holding them in position.

Connected to the disk 8 and extending through the bed plate 1 is a shaft 11, whereby motion is imparted to the rotor. The disk 8 is provided with a recess 12, and extending through the ring 10 and into the recess 12 is an oil chamber or receptacle 13.

The chamber or receptacle 13 passes through an opening formed in the top plate 6, and is fastened thereto by screw bolts 14, 14. These bolts afford a support for the chamber or receptacle, so that it is held stationary and does not interfere with the rotation of the rotor.

The wall of the body of the casing 3 is provided with an opening 15, which extends preferably one-half of the circumference of the wall, and through which opening the oil is discharged from the blades or vanes 9.

The receptacle 13 is provided with an opening 16, which extends about one-third of the circumference of the receptacle and through each opening the oil is discharged to the vanes or blades 9. Oil is admitted to the chamber 13 by a pipe 17 through the top 18 of the chamber or receptacle.

Mounted within the receptacle 13 is a valve which is in the form of a ring 19, which is adapted to close the opening 16. The shaft 20 is connected to the ring, and the handle 21 is connected to the shaft for rotating the ring within the chamber. The ring is provided in the face thereof with two openings 22 and 23. The opening 22 is preferably the same size as the opening 16 in the chamber, so that when the valve or regulator is turned, so that the two openings are brought into registry, the oil will be discharged into the blades or vanes 9. The opening 23 is of a smaller size than, and is adapted to be brought into registry with, the opening 16, when a small quantity of oil is to be delivered. The stem or shaft 20 extends through the top of the receptacle, and formed along the top of the receptacle are a plurality of notches 24 into which a resilient pin 25 is adapted to be received for locking the valve or regulator in its adjusted positions.

This apparatus is placed upon the rear end of the vehicle, so that the opening 15 in the wall of the casing is in a position for discharging the oil onto the road surface as the wagon or vehicle proceeds along the highway. The oil is admitted to the receptacle 17 through the pipe 12 while in a hot condition, having been previously heated, and is then discharged into the receptacle 13.

The handle 21 is operated for bringing the desired opening into registry with the opening 16 in the receptacle, whereby the oil is admitted between the vanes 9 of the rotor or distributor. The rotation of the rotor or distributor in a horizontal plane causes the oil to be discharged through the opening 15 in a horizontal plane, so that the oil is thrown broadcast, and thereby covers a wide territory.

I claim:

1. The combination with a casing having an opening in one side thereof, of a rotor removably mounted in the casing having
blades, a removable fluid chamber received in the casing, means for supporting the fluid chamber in the casing, said blades located around the outer wall of the fluid chamber, said chamber provided with an opening through which the fluid may pass between the blades of the rotor as the rotor rotates about the chamber, means in the fluid chamber for controlling the discharge of fluid therefrom, and means for rotating the rotor for causing the fluid to be discharged through the opening in the casing.

2. The combination with a casing having an opening in one side, of a rotor mounted in the casing provided with blades, of a fluid chamber mounted in the casing about which the rotor rotates, said chamber provided with an opening in registry with the opening of the casing through which the fluid is discharged between the blades, whereby upon the rotation of the blades, the fluid is discharged from the casing, and means for regulating the opening of the fluid chamber for governing the direction of flow of the fluid from the casing.

In testimony whereof I affix my signature, in the presence of two witnesses.

HENRY G. KNIEF.

Witnesses:

LYMAN J. PECK,
PERCY S. KING.