

July 30, 1929.

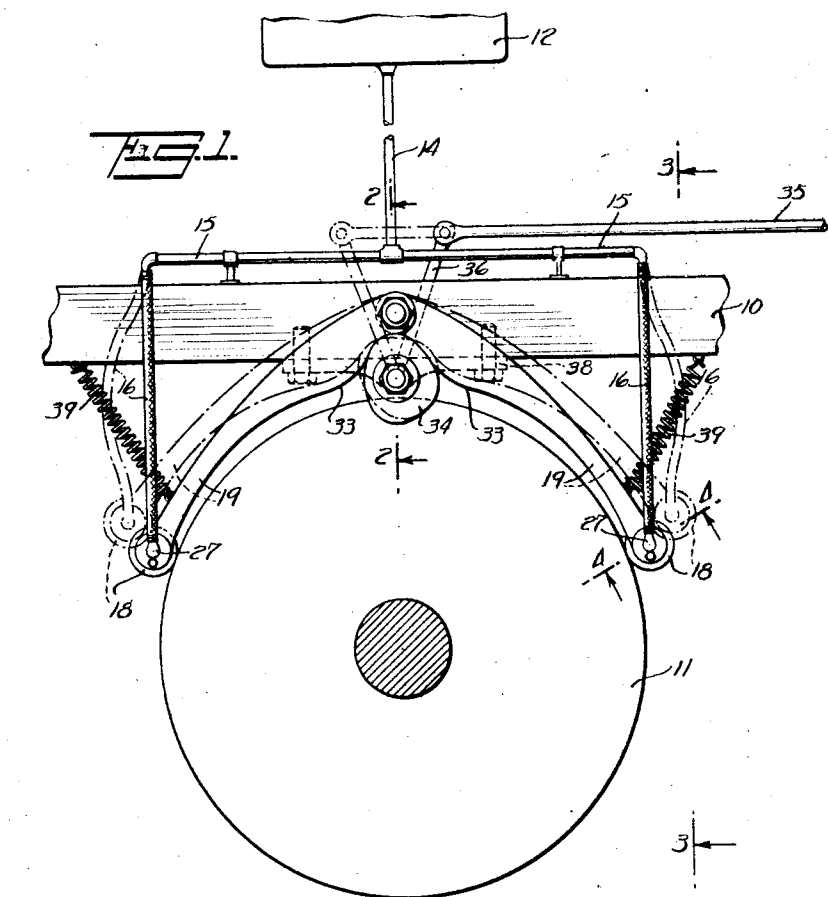
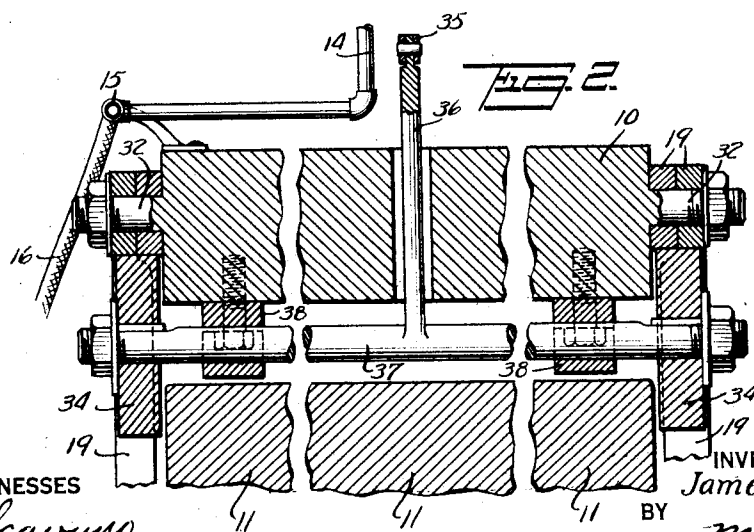
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1,722,907

LIQUID DISPENSER

Filed Aug. 28, 1928

2 Sheets-Sheet 1



WITNESSES

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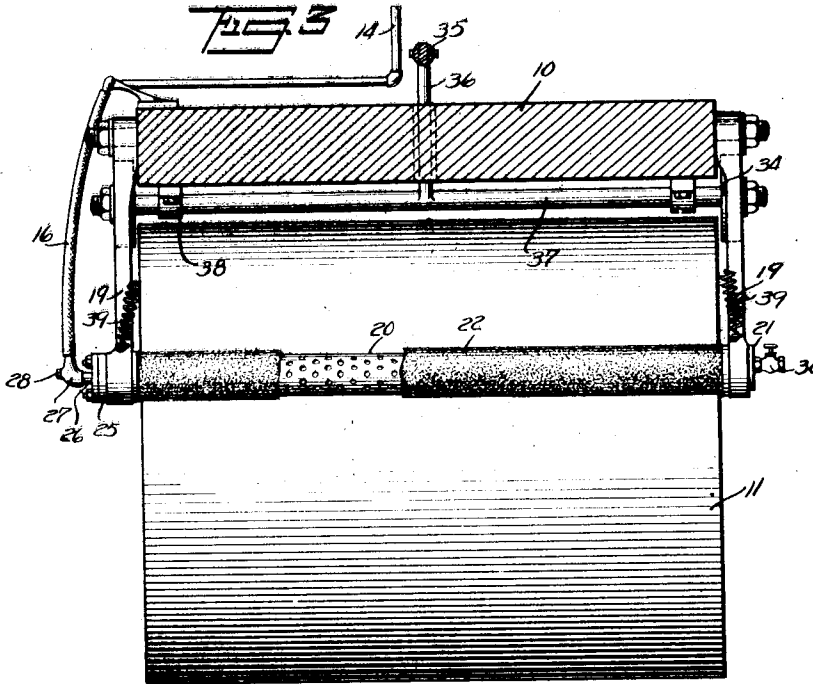
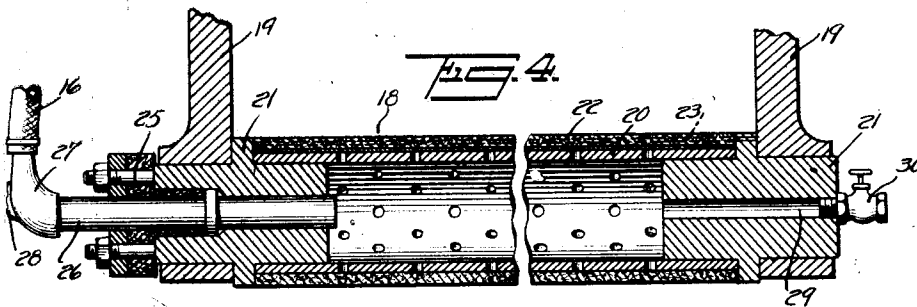
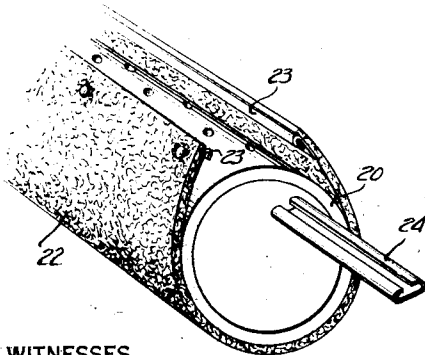
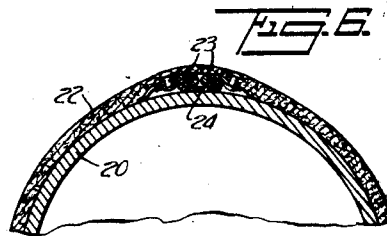
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2 Sheets-Sheet 2



WITNESSES

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Fig. 5

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UNITED STATES PATENT OFFICE.

JAMES LIDDLE, OF GARFIELD, NEW JERSEY.

LIQUID DISPENSER.

Application filed August 28, 1928. Serial No. 302,593.

This invention relates to liquid dispensers.

It is among the objects of the invention to provide an improved means for the dispensing of liquids upon a rotating surface. The

invention is particularly adapted for use in connection with road machines, such as rollers, in which it is desired to apply to the surface of the roller a liquid which will prevent sticking of the roller to road surfaces.

Another object of the invention is to provide an improved means whereby one of a plurality of dispensers may be arranged for selective contact with a roller.

Another object of the invention is to provide an improved revolving dispenser which is adapted to turn with the roller and while turning to dispense thereon suitable liquid.

Another object of the invention is to provide improved fastening means for a fabric covering for the dispensing roller whereby the covering may be readily removed or replaced but which will be retained in operative position until manual manipulation thereof.

Other objects of the invention include the combination and interrelation of parts whereby the whole forms an improved structure which will be simple in operation and cheap in construction.

With these and other objects and features of the invention in view, reference may be had to the following specification taken in connection with the drawings, in which—

Figure 1 is a side elevation of my improved dispensing means mounted in connection with the roller of a road machine;

Figure 2 is a sectional view taken on the line 2—2 of Figure 1;

Figure 3 is an end view taken as indicated by the line 3—3 of Figure 1;

Figure 4 is a detail sectional view of the dispensing roller;

Figure 5 is a detail view illustrating the mounting of the roller felt; and

Figure 6 is a sectional view showing the mode of attachment of the felt.

Referring more particularly to the drawings, a road machine is illustrated, including a body 10 and a roller 11. It is understood that the invention may be applied to many forms of road machines or the like, and the same diagrammatical illustration in Figure 1 has no bearing on the present invention. Mounted in connection with the body 10 and roller 11, a liquid tank 12 is provided which may contain any suitable type of liquid

adapted to be dispensed. In present-day practice, it is common to apply a cheap grade of fuel oil to the surface of a roller whereby upon rolling hot tar or macadam roads, such tar or macadam will be prevented from sticking to the roller. Depending from the tank 12, a delivery pipe 14 is provided which is preferably provided with a plurality of branch delivery pipes such as 15, the ends of which are provided with flexible connections 16 which lead to the dispensing member.

For delivering the liquid upon the surface of the roller 11, a dispensing roller 18 is provided which is mounted upon a pair of brackets 19 pivotally carried by the body 10 and controlled for selectively causing the contact of the roller 18 with the roller 11, as will be hereinafter described.

The dispensing roller 18 includes a perforated body member 20 which is mounted upon rotatable ends 21 mounted within the brackets 19. About the perforated member 20 there is preferably provided a covering of felt, asbestos or other suitable fabric liquid dispensing surface 22. The surface 22 is preferably secured about the perforated body 20 by the provision of a pair of abutting inwardly turned flanges 23 carried by the edges of the member 22 and which are adapted to be joined by reception in a removable locking head 24, as clearly shown in Figure 6. Liquid is delivered to the interior of the perforated member 20 through one of the ends 21 which is centrally bored and which is provided with a packing gland assembly, as at 25, through which passes a delivery tube 26 connected by an elbow 27 to the flexible tube 16. If desirable, a suitable closure 28 may be provided in a T 27 whereby an air hose may be attached for delivering a supply of air under pressure through the dispenser for cleaning purposes. The opposite end 21 is also centrally apertured to provide a bore 29 which is controlled by a valve 30. Thus, it may be readily seen that in normal operation of the device, the vent 28 and valve 30 are closed and liquid is dispensed to the interior of the perforated member 20 and through the felt 22 to the surface of the roller. It will be readily understood that by the rotatable mounting of the ends 21 within the brackets 19, that contact of the felt 22 with the roller 11 will cause rotation of the dispensing member 18 and thus evenly distribute a small

quantity of the liquid over the surface of the roller. When it is desired to clean the dispenser, the valves 30 and 20 may be opened and to either one there may be supplied a supply of fresh air which will blow out through the opposite valve carrying with it any residue from the liquid passed therethrough. By referring to Figures 1 and 2, it will be seen that the arms 19 are pivoted at a point 32 on the body 10. The arms 19 are preferably provided adjacent their pivoted extremities with extending portions 33 which co-act as camming surfaces with a rotating cam 34. Rotation of the cam 34 is controlled by a horizontal extending control arm 35, one extremity of which is associated with a lever 36 mounted upon and rotatable with the axis 37 of the rotating cam 34, as will be clearly seen in Figure 2. Suitable depending brackets 38 may be provided positioned between the body 10 and the roller 11 for supporting the axis 37. The arms 19 are freely pivoted at the points 32 whereby their normal position is moved downwardly to cause the dispensing member 18 to contact with the roller 11. Spring members 39 are provided for resisting this normal movement.

Upon rotation of the rotating cam 34 in response to the lever 37, however, it will be seen that the cam is turned to contact with one of the surfaces 33 to raise the arm 19, thus lifting the dispenser 18 from the surface of the roller 11. By referring to the dotted line positions shown in Figure 1, it will be seen that by control of the arm 35, either one or both of the dispensers 18 may be caused to contact with the surface of the roller 11, or if desired, both may be held from the surface. It will be understood that by the provision of a felt through which the liquid must pass in the dispenser 18, that without contact with the surface 11 or a similar surface, no liquid will flow from the dispensers.

Thus, it may be understood that my invention provides simple and convenient means for applying liquids to rotating surfaces, and it may also be readily seen that leakage and waste of the fluid to be dispensed is prevented and ready control of the dispensers for selective contact with the rolling member is provided for. It will be understood that numerous changes and modifications in my invention may be resorted to and the full use of equivalents entered into without departing from the spirit or scope

of my present invention as outlined in the appended claims.

I claim:

1. A device of the character described comprising two pairs of pivoted arms, a rotatably mounted perforated member carried by each pair of said arms, means for supplying liquid to said rotatable members and means for selectively causing contact of said members with a rotating element.

2. A device of the character described comprising two pairs of pivoted arms, a rotatably mounted perforated member carried by each pair of said arms, means for supplying liquid to said rotatable members, means for selectively causing contact of said members with a rotating element and means for preventing the discharge of liquid from said dispensing elements when not in contact with said rotating element.

3. A device of the character described comprising two pairs of pivoted arms, a rotatably mounted perforated member carried by each pair of said arms, means for supplying liquid to said rotatable members and means for selectively causing contact of said members with a rotating element, said means comprising camming surfaces adapted to cooperate to move said arms by the other pivots.

4. A device of the character described, comprising pivoted arms, a rotatably mounted perforated member carried by said arms, means for supplying liquid to said rotatable member, and means for selectively causing said member to contact with a rotating element.

5. A device of the character described, comprising pivoted arms, a rotatably mounted perforated member carried by said arms, means for supplying liquid to said rotatable member, means for selectively causing said member to contact with a rotating element, and means for preventing the discharge of liquid from said member when not in contact with said rotating element.

6. A device of the character described, comprising pivoted arms, a rotatably mounted perforated member carried by said arms, means for supplying liquid to said rotatable member, and means for selectively causing said member to contact with a rotating element, said means comprising camming surfaces adapted to co-operate to move said arms about their pivots.

JAMES LIDDLE.