Oct. 16, 1951 C. G. KOLBACH 2,571,583

AUTOMATIC SPRAY NOZZLE VALVE FOR TUBULAR SPRAY BARS

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Fig. 1.

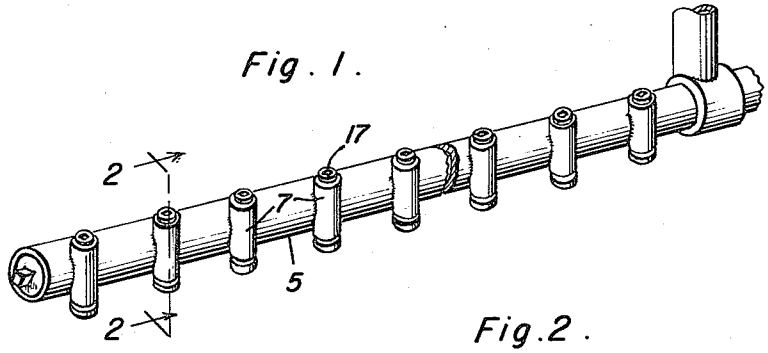


Fig. 2.

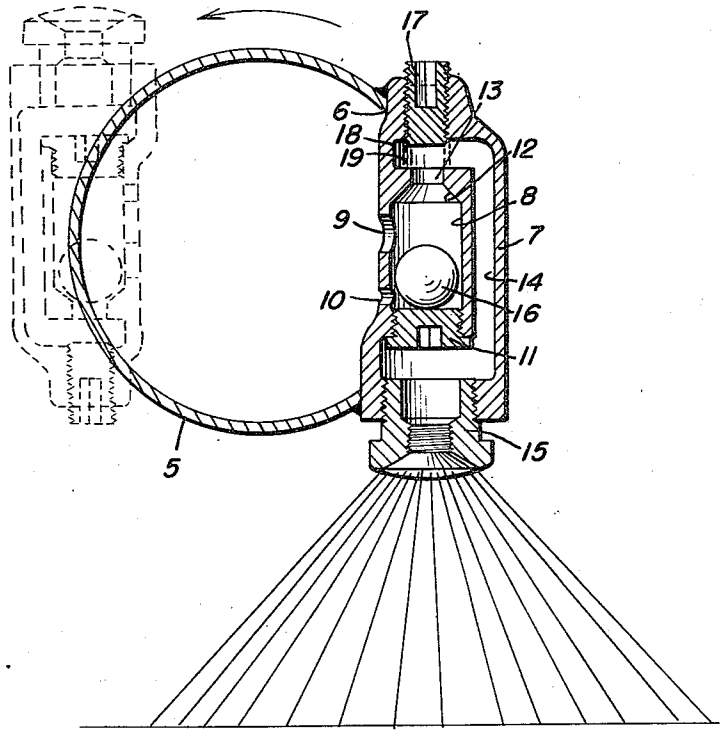
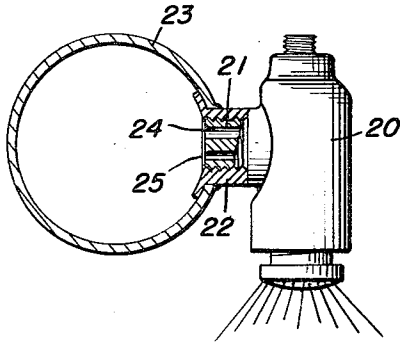


Fig. 3.



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AUTOMATIC SPRAY NOZZLE VALVE FOR TUBULAR SPRAY BARS

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3 Claims. (Cl. 299—73)

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The present invention relates to new and useful improvements in automatic spray nozzle valves particularly adapted for use with rotary full circulating spray bars of bituminous street and highway sprayers.

An important object of the invention is to provide a spray nozzle valve which is automatically opened and closed by a rotary movement of the tubular spray bar of the spraying machine whereby to eliminate the use of individual valve control levers, links and similar mechanism commonly employed for opening and closing the valves.

A further object of the invention is to provide an automatic spray nozzle valve for use with bituminous spraying machines which eliminates the possibility of dripping of the liquid after cutting off of the valve and which includes means for adjusting the volume of liquid supplied to the nozzle of the sprayer.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a rotary tubular spray bar showing the spray nozzles attached thereto.

Figure 2 is an enlarged transverse sectional view taken substantially on a line 2—2 of Figure 1 and

Figure 3 is a side elevational view with parts broken away and shown in section and illustrating a modified construction for attaching the valve to the spray bar.

Referring now to the drawing in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a tubular spray bar of a type used with bituminous street and highway sprayers and formed with a plurality of longitudinally spaced apart openings 6 at one side to which an elongated body 7 is welded or otherwise suitably secured in a substantially tangential position.

The body 7 is formed with a chamber 8 longitudinally thereof and provided at its side next to the spray bar 5 with an inlet opening 9 and a vent opening 10.

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The end of the chamber 8 adjacent the vent opening 10 is closed by a threaded plug 11 and the opposite end of the chamber 8 is formed with a valve seat 12 for a port 13 leading from the chamber 8 to one end of a passage 14 extending longitudinally in the body 7 to an opposite end thereof adjacent the plug 11, the passage 14 being provided at its end adjacent plug 11 with a spray nozzle 15 threaded into the end of the body. A free or captive valve 16 is positioned in chamber 8 and gravitates into a position on the plug 11 when the spray bar 5 is rotated into a position with the spray nozzle 15 facing downwardly as shown by the full lines in Figure 2 of the drawing, the valve 16 gravitating into a position to engage valve seat 12 for closing port 13 when the spray bar 5 is rotated 180° to face the spray nozzle 15 upwardly as shown by the dotted lines in Figure 2.

The end of the body 7 opposite from spray nozzle 15 and adjacent the outlet port 13 is provided with a threaded plug 17 formed with a beveled inner end 18 for seating on a valve seat 19 at the outer end of outlet port 13.

The plug 17 may be adjusted to regulate the volume of liquid passing from chamber 8 into passage 14 for discharge from the nozzle 15 and when it is desired to completely cut off one of the spray nozzles 15, the plug 17 is threaded inwardly its maximum distance to engage the beveled inner end 18 with the valve seat 19.

In Figure 3 of the drawing, the combined spray head and valve body 20 is formed with an externally threaded stem 21 at one side of the body for threading into a nipple 22 suitably secured to the side of the spray bar 23. The stem 21 is formed with the inlet opening 24 and vent opening 25.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A spray head comprising a reversible elongated body, a spray nozzle in one end of the body, a chamber in the body connected to a liquid supply through an inlet in one side

of the body, a valve seat in the chamber at the end of the body opposite from the nozzle, a captive valve in said chamber, and a passage in the body leading from the valve seat of the chamber to the nozzle, said valve opening and closing the passage when the body is reversed from one vertical position to the other.

2. A spray head comprising a reversible elongated body, a spray nozzle in one end of the body, a chamber in the body connected to a liquid supply through an inlet in one side of the body, a valve seat in the chamber at the end of the body opposite from the nozzle, a passage in the body leading from the valve seat of the chamber to the nozzle, an automatic valve for the passage, said valve opening and closing the passage when the body is reversed from one vertical position to the other, and an independent manual valve for the passage.

3. A spray head comprising a reversible elongated body, a spray nozzle in one end of the body, a chamber in the body connected to a liquid supply through an inlet in one side of the body, a valve seat in the chamber at the end of

the body opposite from the nozzle, a passage in the body leading from the valve seat of the chamber to the nozzle, an automatic valve for the passage, said valve opening and closing the passage upon a reversing movement of the body, and a valve threaded in the body for the passage for regulating flow of liquid therethrough.

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