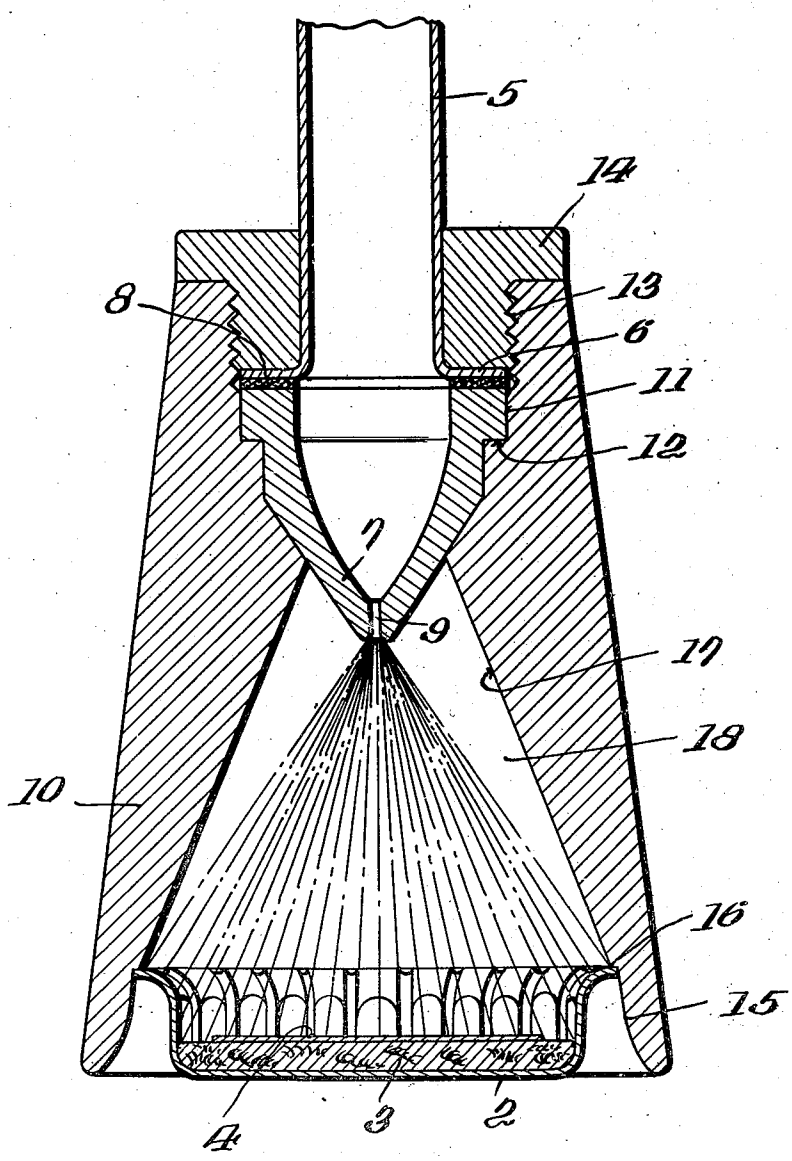
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APPARATUS FOR SPRAYING CROWN CAPS AND THE LIKE

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APPARATUS FOR SPRAYING CROWN CAPS AND THE LIKE

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2 Claims. (Cl. 91—44)

The invention relates to an apparatus for spraying crown caps and the like.

An object of the invention is to provide an apparatus for spraying crown caps wherein means is associated with a spraying nozzle for confining the spray to a certain desired area of the cap.

A further object of the invention is to provide an apparatus of the above type comprising as a unit, a nozzle and a hood associated therewith, said hood being concentric with the nozzle and having means for centering the cap and controlling the area thereof which is to be sprayed.

A still further object of the invention is to provide an apparatus for spraying crown caps and the like comprising in combination a spraying nozzle and a hood associated therewith, said hood having a portion thereof adapted to surround the nozzle, and a seat on the inner face thereof adapted to engage and overlie the flange of a cap for centering the cap and controlling the area of the cap which is to be sprayed.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

The sole figure of the drawing is an enlarged vertical sectional view through a spraying apparatus embodying the improvements, showing the same in contact with a cap and the spray issuing from the nozzle for coating the cap.

Crown caps are usually manufactured from sheet metal which is coated with lacquer. In the die-shaping of the cap, the edge portion thereof is crimped or corrugated so as to form holding lugs when the cap is attached to the container. During this die-shaping operation, the enamel is sometimes fractured or scratched at the portions thereof which are sharply bent. It is often desirable to apply a coating of wax, lacquer or the like to the interior surface of the crown cap in order to fill and cover any scratched or broken places in the lacquer coating initially applied thereto. Cork inserts are often used in conjunction with a crown cap for sealing the container, and it is sometimes desirable to apply a coating of wax or lacquer to the cork insert, even though it be provided with a spot, so as to insure that the contents of the container do not come in contact with the cork and have an off-flavor imparted thereto.

The present invention relates broadly to an apparatus for spraying a coating medium on the interior of a crown cap for the purpose of covering a sealing pad when used, and for insuring that any scratches or ruptures in the inner lacquer-coated face of the cap are well covered. The apparatus includes a spray nozzle which is connected to a spray pipe through which the medium to be sprayed on the cap is supplied under sufficient pressure for causing a jet of the coating medium to issue from the discharge opening therein. Also associated with the nozzle is a hood which is rigidly attached to the nozzle and the supply pipe therefor. This hood is preferably shaped so as to provide a seat for the nozzle and the means which secures the nozzle to the pipe may be utilized for securing the hood to the nozzle. The hood projects in front of the nozzle and is provided with a seat for the cap which is to be sprayed. This seat is so disposed that when the hood is placed down over the inverted crown cap, the extreme edge portions of the crown cap will be contacted with by said seat, and this confines the area which will be coated with the spray issuing from the nozzle to the interior of the cap.

Referring more in detail to the drawing, an ordinary crown cap with a crimped flange is indicated at 2 and the cork liner therefor at 3. As shown, the cork liner is shown with the usual foil spot 4. The purpose of the present invention is to apply a coating of wax, lacquer or the like to the interior of the crown cap so as to cover the liner for the cap and the skirt and flange portion of the cap, particularly in the region where there is any chance of the contents of the container contacting therewith. The apparatus includes a supply pipe 5 which may be of any desired construction. As shown, this pipe is provided with a flange 6. The nozzle 7 is secured to the flange end of the pipe. Between the pipe and the nozzle is a gasket 8. The nozzle 7 is provided with a discharge opening 9. Surrounding the nozzle 7 is a hood 10. The hood is bored as indicated at 11 and shaped so as to provide a seat 12 for the nozzle. The bored portion of the hood is threaded as indicated at 13 and a sleeve 14 threaded into the hood bears against the flange 6 of the pipe 5, and thus the nozzle is forced against the seat on the hood and the hood and nozzle secured together as a rigid unit. The hood projects forward of the nozzle and is provided with a recess 15 adapted to receive the cap which is to be coated. There is a seat 16 at the inner end of the recess which contacts with the extreme outer edge portion of the skirt of the cap. Thus it is that the cap is centered relative to the spray nozzle. The inner wall 17 of the hood is cone-shaped and dimensioned so as to intersect the nozzle back from the discharge opening 9. This wall extends to the flange of the

cap, and thus together with the nozzle and the cap forms a substantially closed chamber 18. As shown in the drawing, the coating material issues in the form of a jet which is cone-shaped, and the position of the cap relative to the discharge opening of the nozzle is such that the spray jet will spread so as to cover the entire inner surface of the cap, extending out on to the flange of the cap and the portion thereof which is crimped. The coating material will, therefore, completely cover the cork insert, the spot if it is used, and the flanges of the cap.

It will be obvious that by changing the shape of the hood and the position of the nozzle relative to the cap that the area of the cap which is supplied with the coating may be varied. It may be restricted so as to cover only the cork insert or the region of the spot and may be applied to the cork insert so as to form the equivalent of a spot which will prevent the contents of the container from contacting with the cap.

It is obvious that minor changes in the details of construction and the arrangement of the parts may be made without departing from the spirit of the invention as set forth in the appended claims.

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

1. An apparatus for spraying crown caps and the like comprising in combination a supply pipe, a spray nozzle and a hood, means for rigidly attaching said nozzle and hood to said pipe, said hood having a portion thereof surrounding the nozzle and extending outwardly therefrom, said hood being shaped to provide a concentric member having formed on its inner face adjacent the end thereof a seat adapted to engage and overlie the flange of a crown cap for centering the cap relative to the nozzle and controlling the area of the cap which is to be sprayed.

2. An apparatus for spraying crown caps and the like comprising in combination a supply pipe flanged outwardly at the end thereof, a spray nozzle seated against the outer face of said flange, a hood surrounding the nozzle and shaped to seat against the nozzle, a collar on said pipe adapted to engage the inner face of the flange of the pipe and having a threaded connection with said hood, whereby the hood, nozzle and pipe are rigidly clamped together, said hood having a portion thereof adapted to surround the nozzle and extending outwardly therefrom, said hood being shaped to provide a concentric member having formed on its inner face adjacent the end thereof a seat adapted to engage and overlie the flange of a crown cap for centering the cap relative to the nozzle and controlling the area of the cap which is to be sprayed.

HENRY A. FINK.