Feb. 26, 1963

R. W. FLYNN

3,079,044

PRESSURE LACQUER DISPENSER

Filed March 21, 1960

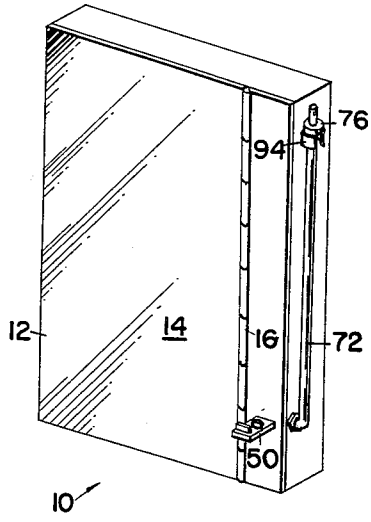


FIG. 1

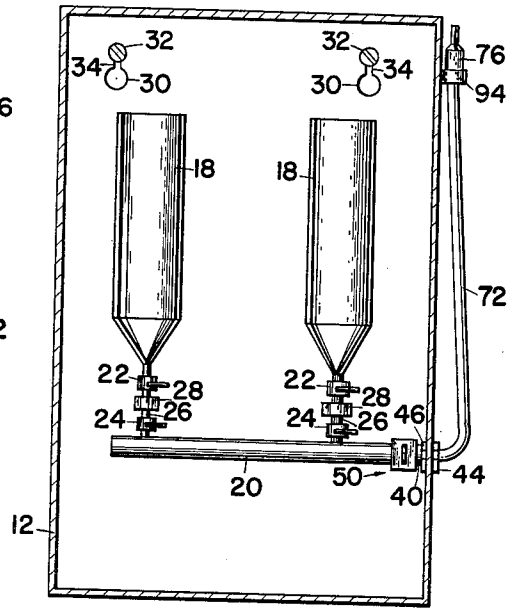


FIG. 2

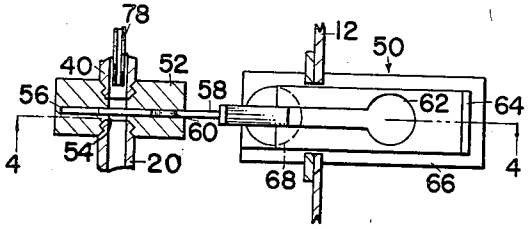


FIG. 3

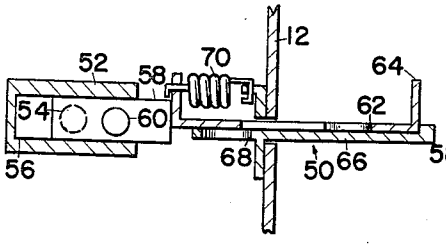


FIG. 4

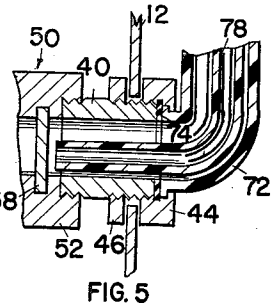


FIG. 5

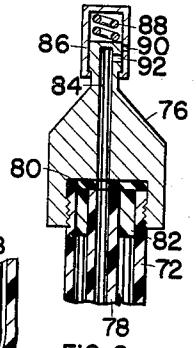


FIG. 6

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United States Patent Office 3,079,044 Patented Feb. 26, 1963

3,079,044

PRESSURE LACQUER DISPENSER

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Filed Mar. 21, 1960, Ser. No. 16,374
7 Claims. (Cl. 222—2)

This invention relates to a lacquer dispenser. More specifically, the invention relates to a dispenser for a lacquer under pressure of the type used by a lady to retain her hair in a combed position.

Spray lacquers of various types have heretofore been known and are available in various types of dispensers. Primarily these dispensers consist of a pressurized can or container 6 to 8 inches in height which are used in the home. The containers are too bulky and cumbersome to be packed in the purse for an evening or a short trip. Furthermore, these devices are relatively easily discharged which makes their transportation and use from a purse, suitcase, or the like extremely undesirable.

In accordance with the present invention a pressure lacquer dispenser has been provided which can be maintained in restrooms, beauty parlors, and the like for convenient use. The dispenser preferably is housed in a mirrored cabinet having one or more lacquer containers therein and connected to a hose or the like which extends exteriorally of the cabinet to be easily used by a lady. An atomizing valve is provided at the end of the hose for more efficient use. A coin operated valve is preferably included in the construction so that the device can be installed and used in some installations without having an attendant present at all times.

Accordingly, it is an object of this invention to provide a new and improved dispenser.

Another object of the invention is to provide a new dispenser designed especially for lacquer under pressure.

A further object of the invention is to provide a new pressure lacquer dispenser which includes a mirror so that the user can observe her hair at the same time.

Another object of the invention is to provide a new and improved coin operated dispenser.

A still further object of the invention is to provide a new pressure lacquer dispenser having a coin operated valve which releases the lacquer under pressure into two concentric flexible tubes whereupon it may be exhausted to the atmosphere through an atomizing valve.

Various other objects, advantages and features of the invention will become apparent from the following description taken in connection with the accompanying drawings, in which:

FIG. 1 is an isometric view of the device.

FIG. 2 is an enlarged front view of the device with the front removed.

FIG. 3 is a plan view of the coin operated valve.

FIG. 4 is a view taken on the line 4—4 of FIG. 3.

FIG. 5 is a cross section view taken through the coupling member and the hoses at the cabinet.

FIG. 6 is a cross section view taken through the hoses and the atmoizing valve at the end remote from the cabinet.

The following is a discussion and description of a preferred specific embodiment of the new lacquer dispenser of the invention, such being made with reference to the drawings whereon the same reference numerals are used to indicate the same or similar parts and/or structure. It is to be understood that such discussion and description is not to unduly limit the scope of the invention.

Referring now to the drawings in detail, the lacquer dispenser of the invention is shown generally at 10 and preferably consists of a hollow cabinet 12 having a mirror 14 on the front face. The front face having the mirror 14 thereon can be hinged at 16 for easy access to the interior thereof. Suitable common lock means (not shown) can be provided to prevent access to the interior of the cabinet except by authorized personnel.

The preferred construction of the interior of the cabinet is best seen in FIG. 2. One or more containers 18 are mounted in the interior of the cabinet in any suitable manner. The containers preferably are of the type designed to receive and retain for dispensing a liquid under pressure, preferably a lacquer, which is in admixture with a dissolved inert gas. These containers 18 are of a standard construction available on the open market which are designed for retaining the lacquer under a high pressure, and in most instances, have curved structural surfaces for best efficiency in retaining the pressurized liquid.

An elongated tubular header 20 is also mounted within the cabinet in any suitable manner and is in fluid communication with the containers 18 through a series of valves and conduits. These include a valve 22 in the outlet of each of the containers 18 and a valve 24 in each of the inlet conduits 26 of the header 20. Coupling members 28 have been provided between the header inlets 26 and the associated valve 24 and the valve 22 in the outlet of the containers 18. As will be readily apparent from the foregoing description, each of the containers 18 can be placed in fluid communication with the header 20 by opening the valves 22 and 24. When it is desired to remove one of the containers 18, or operate the device with fewer containers than the number of inlet conduits 26 on the header 20 it is merely necessary to close the valves 24 and 22 and remove the container 18 from the valve 22 or coupling means 28. This is of major importance in a commercial application since the same basic construction can be provided for use in both large and small volume locations without any alteration of the equipment. Also, by providing for a plurality of containers 18, each of the containers can be completely emptied before it is necessary to replace it, and furthermore the device need only be periodically serviced by a vending company.

The cabinet can be secured to a wall or other similar support by providing enlarged holes 30 in the back of the cabinet and screws 32 or the like on the wall or supporting structure which project through the holes 30. A slot 34 can intersect the holes 30 at the top side thereof to receive the holder screw 32 and thus prevent removal of the cabinet except by lifting the entire unit and allowing the screw 32 to pass through the hole or opening 30. Other securing means can, of course, be used to mount the device.

A coupling member 40 is threadedly secured to one side or end of the cabinet 12 and extends through the cabinet wall. Locking nut members 44 and 46 can be threadedly secured to the coupling member 40 on the outside and inside of the cabinet 12, respectively, to positively locate the coupling member 40 and prevent access to the working parts of the device by vandals.

A valve 50, preferably of the coin operated slide valve type, is included with the device. The valve 50 is threadedly mounted on the coupling 40 and the header 20 and is operable to close the header 20. The coin operated valve can be any of a number of types presently available. The valve illustrated, as best shown in FIGS. 3 and 4, includes a mounting block 52 which threadedly receives the header 20 and the coupling member 40. A central opening 54 passes through the block 52 and joins the header 20 to the coupling member 40 when the valve is open. A slot 56 passes through the major length of the block 52 as shown in FIGS. 3 and 4 and is adapted to tightly receive in sliding relation the forward end of a slide 58 to close the opening 54. The forward end of the slide 58 has an aperture 60 therein which is approximately the same size as the opening 54 in the block

52, and which is aligned with the opening 54 when the valve is placed in the open position. The other end of the slide member 58 is in a plane approximately 90 degrees to the plane of the forward end, and a coin receiving hole or slot 62 is provided therein. The slide member 58 terminates in an upwardly extending flange 64 which is used to move the slide in the usual manner. The slide member 58 moves along and is guided by a rigid plate 66 which is secured to the front of the cabinet 12. The inner end of the plate 66 has an opening 68 therein through which coins can drop into a suitable receptacle, not shown, inside the cabinet. A spiral spring 70, or other suitable means, is mounted between flanges on the slide member 58 and the rigid plate 66 to continually urge the slide member 58 into the extended position, closing the opening 54.

In operation, a coin is placed in a coin receiving hole 62 and the flange or lever 64 is pushed towards the cabinet. When the holes 62 and 68 overlie each other the coin will drop therethrough into the receptacle, and at the same time the hole 60 and opening 54 will be aligned to place the header 20 and coupling member 40 in fluid communication with each other. Of course, suitable means are provided with the coin operated slide valve mechanism to prevent its operation by slugs, defective coins, and the like. The means are not shown since they constitute no part of the invention and are well known in the art. The slide valve 58 is most preferably in close proximity to coupling 40 and the preferably flexible tube therein as is described hereinafter.

A hose 72 is secured to the end of the coupling member 40 outside of the cabinet. The hose 72 can be retained thereon by the locking member 44 previously described which can be reduced in diameter on the outside portion thereof to engage the end portion of the hose 72 and press it firmly against the end of the coupling member 40. Suitable sealing means as shown at 74 can be provided to seal the connection of the hose 72 to the member 40. The hose 72 is preferably a flexible plastic material such as nylon, Teflon, or the like, or a suitable rubber or synthetic rubber material. The hose 72 can be reinforced with any material known to the art so that it will withstand the pressures to which it is subjected. The other end of the hose 72 is secured to an atomizing dispensing valve 76. The hose is mounted in and closed by the atomizing dispensing valve 76.

A second hose 78 is positioned within the hose 72 and preferably extends the full length of the hose 72 and into the coupling 40 to a point preferably closely adjacent the slide valve 50. The inner end of hose 78 preferably lies in the bottom of coupling 40 for greatest efficiency. The other end of the hose 78 is also secured in the body of the dispensing valve 76. An annular sealing member 80 can be provided, where necessary, to seal the connection of the hoses 72 and 78 to the atomizing valve 76. A spacing plug 82 can be used to separate the hoses 72 and 78 in their mounting in the dispensing valve 76. The second hose 78 is similar in construction to the hose 72 and can be made of like materials.

The dispensing valve 76 has a conduit 84 extending therethrough which preferably communicates with hose 78 only. The dispensing valve 76 has a valve operator or cap 86 mounted on the end thereof. The valve operator 86 is preferably spring loaded by a spiral spring 88 within the cap-like structure of the operator 86. When the top of the valve operator or cap 86 is depressed against the force of the spring 88, an opening 90 in the valve operator 86 will be aligned with an opening 92 which leads to the conduit 84. The smaller hose or tube 78 is thus placed in communication with the atmosphere through the conduit 84 and the openings 90 and 92. Obviously, when the pressure is relieved from the top of the valve operator 86 the spring 88 will place the openings 90 and 92 out of alignment, which effectively closes the valve.

A suitable clamp 94 can be secured to the side of the cabinet 12 to receive and retain the dispensing valve 76 and/or the hoses during periods of non-use.

To prepare the device for use, one or more of the containers 18 are secured within the cabinet 12 to the coupling members 28 and the valves 22 and 24 are opened to place the interior of one of the containers 18 in fluid communication with the header 20. The containers 18 hold an admixture of a lacquer and an inert gas at relatively high pressure which forces the lacquer and gas therein through the valves 22 and 24 and coupling member 28 into the header 20. With the containers 18 thus in position the device is ready for use and the hinged front mirror 14 can be closed and locked in position. When one desires to use the device, it is then only necessary to insert a coin into the coin receiving slot 62 in the coin operated slide valve 50 which is then operated in a manner hereinbefore described. When the coin operated valve is open the header 20 will be in fluid communication with the hoses or tubes 72 and 78 through the valve 50 and the coupling means 40. The length and size of the hoses 72 and 78 are chosen so that a predetermined quantity of the lacquer admixed with the gas will be discharged into the hoses when the coin operated slide valve is open. The valve 50 is then closed and the predetermined amount of the lacquer and gas mixture remain in the hoses 72 and 78. The user then removes the atomizing valve 76 from the clamp 94, and, while observing her hair in the mirror 14 she can direct the lacquer onto her hair by depressing the valve operator or cap 86. Upon depressing the valve operator 86 the lacquer will be exhausted from both of the tubes or hoses 72 and 78 through the smaller hose 78. The use of the two hoses 72 and 78 mounted as described prevents all the lacquer from being instantly flashed from the atomizing valve 76 when the cap 86 is depressed. Upon emptying of the first can 18, its valves 22 and 24 are closed for replacement of the can, while another can 18 is placed in communication with header 20.

While the device has been described as having a coin operated slide valve between the header and the hoses, it should be understood that other types of valves can be used therein. For example, in installations such as a beauty parlor and the like it would, of course, be undesirable to use a coin each time one desired to apply spray to the hair. The coin operated and slide valve is most useful in installations where the spray lacquer will be applied by the individual desiring it, and no attendant will then be necessary to operate the device or receive payment therefor. Also the atomizing dispensing valve described is intended to be merely illustrative, and other types of atomizing valves can also be used.

It will be evident to those skilled in the art, that various other modifications of the invention can be made, or followed, in the light of this description and discussion, without departing from the spirit of the disclosure or the scope of the claims.

While the invention has been described in connection with a preferred specific embodiment thereof, it will be understood that this description is intended to illustrate and not to limit the scope of the invention, which is defined in the claims.

I claim:

1. A dispenser for lacquer under pressure comprising, in combination, a hollow cabinet, a mirror on the front face of said cabinet, a plurality of containers mounted inside said cabinet each having an outlet conduit, said containers adapted to receive and retain therein for dispensing a lacquer under pressure and in admixture with a dissolved inert gas, an elongated tubular header mounted within said cabinet, a valve in the outlet of each of said containers, a plurality of spaced inlet conduits in said header, each of said inlet conduits having a valve therein, coupling means with said inlet and outlet conduits constructed and adapted to connect said containers

and header in fluid communication, a coupling member secured in one side of said cabinet and extending through said cabinet, said coupling member threadedly receiving said header on the inside of said cabinet, a coin operated slide valve closely adjacent said coupling member and operable to close said header, a plastic hose secured in one end portion to said coupling member outside said cabinet, an atomizing dispensing valve secured to the other end portion of said hose remote from said coupling member with said hose mounted in and closed by said dispensing valve, a second plastic hose within said first hose extending the full length of said first hose and into said coupling member to a point closely adjacent said slide valve, said second hose being smaller in diameter than said first named hose and secured in one end portion to said dispensing valve, and a spring loaded valve operator with said dispensing valve controlling fluid flow therethrough, said device being constructed and adapted so that spray lacquer under pressure within said containers is constantly supplied to said header with said container outlet valves and said header inlet valves open so that when said coin operated slide valve is opened a measured amount of said lacquer will be supplied to the space formed by said hoses and dispensing valve, so that when said dispensing valve is opened by said valve operator said lacquer under pressure can be exhausted to the atmosphere through said second plastic hose and said dispensing valve.

2. A dispenser for lacquer under pressure comprising, in combination, a hollow cabinet, a plurality of containers mounted within said cabinet, each container having an outlet conduit, said containers adapted to receive and retain therein for dispensing a lacquer under pressure in admixture with a dissolved inert gas, an elongated tubular header mounted within said cabinet, a plurality of spaced inlet conduits in said header, valves in said outlet conduits of said containers and in said inlet conduits of said header, coupling means connecting said valves, a coupling member passing through the side of said cabinet, valve means with said header adjacent said coupling member, an elongated hose mounted in one end portion on said coupling member outside said cabinet, a dispensing valve secured to the other end portion of said hose with said hose mounted in and closed by said dispensing valve, a second hose of smaller diameter than said first-named hose positioned within said first-named hose and extending the full length thereof and into said coupling member to a point adjacent said valve means secured to said header, said second hose being secured to said dispensing valve, a valve operator with said dispensing valve, said device being constructed and adapted so that spray lacquer under pressure within said containers is constantly supplied to said header when said header and container valves are open so that when said valve means with said header adjacent said coupling member is open a measured amount of said lacquer can be supplied to said hoses, so that said valve means can be closed and said dispensing valve can be opened and said lacquer under pressure will then be exhausted to the atmosphere through said second plastic hose and said dispensing valve.

3. A dispenser for lacquer under pressure comprising, in combination, a housing, a container adapted to receive and retain a spray lacquer under pressure mounted in said housing, said container having an outlet conduit, a container valve mounted on said outlet conduit, an elongated tubular header closed at one end mounted within said housing, an inlet conduit on said header, an inlet valve mounted on said inlet conduit, coupling means joining said container valve and said inlet valve, a header valve mounted on the open end of said header, an elongated hose secured to the side of said housing, other coupling means connecting said hose to said header valve so that said header can be placed in fluid communication with said hose, an atomizing dispensing valve secured to the end of said hose remote from said cabinet, a second hose within said first hose and secured to said atomizing dispensing valve, said second hose extending the full length of said first hose and into said last-named coupling means, said first and second hoses being secured to said atomizing dispensing valve so that said second hose only is in communication with the atmosphere through said valve when said dispensing valve is open, said device being constructed and adapted so that spray lacquer under pressure within said container can be constantly supplied to said header through said container and inlet valves, whereupon said header valve can be open and said lacquer under pressure will be supplied to said hoses so that when said dispensing valve is opened said lacquer under pressure will be exhausted to the atmosphere through said second hose.

4. A dispenser comprising, in combination, a hollow housing, a header mounted within said housing, said header being closed at one end, a header valve secured to the open end of said header, a container mounted in said housing, means connecting said container and said header in fluid communication, a hose secured to the outside of said cabinet, a coupling member connecting said hose and said header valve, a dispensing valve secured to the end of said hose remote from said header valve, a second hose within said first hose extending the length thereof and secured to said dispensing valve, said hoses mounted within and closed by said dispensing valve so that only said second hose communicates with the atmosphere through said dispensing valve, said device being constructed and adapted so that fluid under pressure within said container will be constantly supplied to said header, so that when said header valve is opened a measured amount of said fluid will be supplied to said hoses to be discharged to the atmosphere through said dispensing valve.

5. A spray dispenser comprising, in combination, a hollow cabinet, a header mounted in said cabinet, at least one container mounted in said cabinet and operatively connected to said header to supply a fluid under pressure to said header, said container constructed to hold a liquid fluid under dissolved gas pressure, valve means closing one end of said header, a flexible hose secured in one end portion to the outside of said cabinet and communicating with said header through said valve, an atomizing dispensing valve secured to the other end portion of said hose, a second flexible hose mounted within said first hose and secured to said dispensing valve, said hoses being mounted within and closed by said dispensing valve so that only said second hose communicates with the atmosphere through said dispensing valve, said device being constructed and adapted so that fluid under pressure from said container can be supplied to said header and said fluid in said header can be supplied to said hoses through said header valve to be discharged to the atmosphere through said dispensing valve.

6. The device as claimed in claim 5 wherein said header valve consists of a coin operated side valve.

7. Dispensing means comprising, in combination, a closed header, outlet valve means connected to said header and operable to open and close said header to the passage of fluids, container means constructed to hold a liquid fluid under dissolved gas pressure removably and operatively connected to said header and operable to provide a liquid fluid under pressure to said header, a conduit flexible over a portion thereof operatively connected in one end portion to said header and in fluid communication therewith through said valve means, dispensing valve means connected to the other end portion of said conduit, a second conduit flexible over a portion thereof positioned within said first conduit and secured to said dispensing valve means, said conduits being mounted within and closed by said dispensing valve means so that only said second conduit communicates with the atmosphere through said dispensing valve means, said dispensing

means being constructed and adapted so that liquid fluid under pressure from said container can be supplied to said header and pass through said outlet valve means when open to said conduits for dispensing therefrom through said second conduit and said dispensing valve means.

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