

Dec. 29, 1953

M. P. HANRYON

2,663,891

CONTACT DELIVERY DEVICE FOR PERFUME

Filed June 9, 1949

FIG. 1.

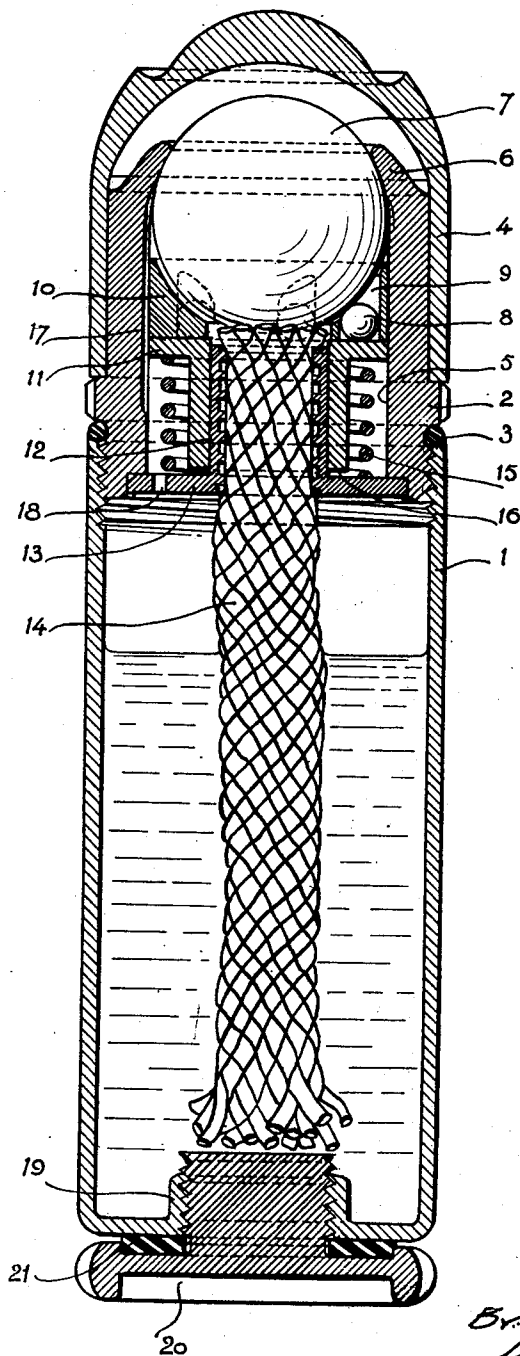
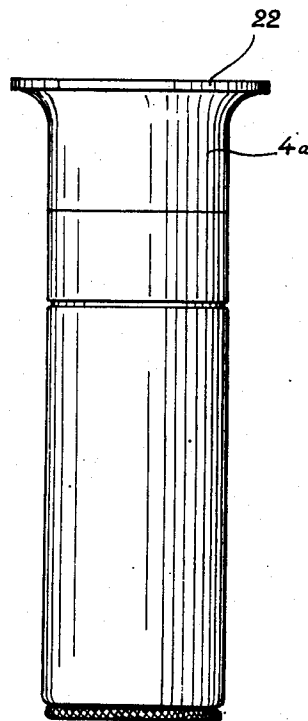


FIG. 2.



INVENTOR
MAURICE P. HANRYON
BY *Young, Ewing & Thompson*
ATTY.

UNITED STATES PATENT OFFICE

2,663,891

CONTACT DELIVERY DEVICE FOR PERFUME

Maurice Paul Hanryon, Compiègne, France

Application June 9, 1949, Serial No. 98,091

Claims priority, application France July 8, 1948

1 Claim. (Cl. 15—132.7)

1

This invention relates to a delivery device for perfume, and it is a general object to provide means whereby perfume contained in a tube like container may be delivered to a surface such as the human skin in minute controlled quantities and only on contact.

Another object is to provide a perfume-delivery device which is very economical both in construction and in use and in which loss of valuable perfume by evaporation is minimized.

With the above objects in view the invention provides a perfume contact-delivery device or touch-stick which essentially comprises a tubular head or plug adapted to be fitted over a perfume-container in the form of a tube, said head defining a mouth-opening, a spring-pressed ball partly protruding out of said head through said opening, and a wick extending out of said head into said container and adapted to dip into the perfume in said container at one end of said wick and brushing against a portion of said ball at the opposite end of said wick so as to spread a minute film of perfume over said ball as the ball is rotated in contact engagement with a surface to which perfume is to be applied.

To use the device the ball-end of the stick is rubbed over a receiving surface such as the human skin and the ball thereupon deposits a slight trace or film of perfume on said surface.

It is a specific object of the invention to provide means in a touch-stick of the type just described whereby the device is at all times ready to operate successfully and regardless of the position in which it is held. For this purpose means are provided according to the invention effective to maintain the ball in a permanently moistened condition. A further specific object is to assure that the device may at any time be positively successfully operated under a very slight pressure of the ball-end of the device against the skin.

The above and further objects, features and advantages of the invention will appear from the ensuing disclosure, made in reference with the accompanying drawings which illustrate by way of example a preferred but non-restrictive form of embodiment thereof:

Figure 1 is a general view in longitudinal section, of a perfume delivering device or "touch-stick" according to the invention, on an enlarged scale, while.

Figure 2 illustrates on a somewhat smaller scale a modified form of the device in outer elevation.

As shown in Fig. 1, the device comprises a

2

tubular container 1 and a tubular head or plug unit 2 is adapted to be threadedly engaged in the open end of the container 1 with the interpositional of a seal ring 3. The plug unit may in turn preferably have a cover or hood 4 fitted over it when not in use.

The plug unit is formed with a cylindrical bore 5 provided at its outer end with a rounded tapered configuration as at 6 so as substantially to conform to the shape of a ball 7 partly protruding therefrom and sealingly engaging the rounded end of the bore 5. The ball 7 is preferably formed of a suitable plastic material. The ball 7 rests on an antifriction bearing means comprising a plurality of smaller balls 8 seated in bores 9 slightly larger in diameter than the balls 8 and formed in an annular member 10 which through its flat under-face rests upon a plunger 11 and which at its top is formed as a spherical cavity the surface of which is spaced from the surface of the ball 7 by an amount equivalent to that by which the bearing balls 8 project above the said top surface of the member 10.

The plunger 11 is slidable on a bushing 12 which is formed at its bottom end with a flange 13 crimped in the plug member 2. Internally the bushing is screw-threaded and a generally cylindrical wick 14 is threaded into the threaded bore of the bushing so as to have its end projecting out of the bushing into brushing contact engagement with the bottom surface of the ball 7. A coil-spring 15 is arranged to urge the plunger 11 upwardly to press the ball 7 against its seat 6 thereby sealing the plug; when on the other hand pressure is applied in use onto the ball 7 from outside, the ball will transmit said pressure through the ball bearings 8 to the plunger 11 which is capable of moving downwards a small amount as determined by the spacing from the under face 16 of the plunger to the top face of the flange 13 in normal position.

In order that the wick will be at all times imbibed with the perfume so that the liquid perfume composition in container 1 will rise up and through the wick into contact with ball 7, it is necessary that atmospheric pressure be maintained within the container. This result is obtained by the provision of a groove 17 formed along a generatrix of the cylindrical cavity 5; through this groove air is allowed to penetrate into the cavity 5 each time the ball 7 is moved off its seat. The said cavity in turn is in communication with the inner space of the container through an orifice 18 formed through the lower flange 13 of the bushing. With atmospheric pres-

3

sure thus maintained within the container, it will be understood that the wick will at all times be properly moistened and the device will be ready to operate at an instant's notice and in any angular position in which it may be held. At the same time, it will be seen that the device remains perfectly sealed, especially owing to the configuration of the ball-seat 6 conforming to the contour of the ball 7 over an extensive area of the latter's surface.

At the base of the tubular container 1 there is provided a screw-threaded refill inlet 19 sealed by means of a threaded plug 20 with the interposal of a resilient seal 21. Thus the device may be readily refilled without requiring removal of the tubular head 2. In order to facilitate the filling operation, the top cover 4 may be provided with a shape similar to that indicated in Fig. 2 at 4a, with an enlarged flat top surface 22 on which the device may be stood in inverted condition during a filling operation.

Moreover, if the aperture 19 of the container is formed with a sufficiently large diameter, it will be possible to replace the wick without having to unscrew the tubular head 2, a suitable instrument such as small pliers or tweezers or the like being used to thread the wick into and through the top aperture in the bushing.

It will of course be understood that the invention is in no way limited to the specific embodiment illustrated and described and that departures may be made from the specific details shown without exceeding the scope defined by the ensuing claim.

What I claim is:

A contact-delivery device comprising a perfume container having an open end, a tubular plug sealingly fitted to the open end of said container and having a substantially cylindrical cavity therein terminating in a circular outlet of lesser radius than said cylindrical cavity to pro-

4

vide an annular ball seat, a plastic ball in said cavity engageable with said seat for closing said opening, an internally screw-threaded bushing mounted coaxially within said cavity and formed with a radial flange at the container end thereof, said flange being fixed to the inner end of said plug, an annular member slideably mounted within said plug cavity externally of said bushing and formed at the end thereof adjacent the plug-outlet with a piston-like radial flange, a coil spring in said cavity compressed between the flanges of the bushing and annular member, ball-bearing means disposed above said piston-like flange and beneath said ball for transmitting the pressure exerted by said spring on the piston-like flange to the plastic ball urging it onto its seat, said plug having a vent duct therein extending from the cavity in the plug at a position adjacent the seat for the plastic ball to interior of the perfume container and a cylindrical wick extending through the internally screw threaded bushing from the interior of said perfume container into brushing contact with the plastic ball, and threadedly engaged with the threads of said bushing.

MAURICE PAUL HANRYON.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
30 756,797	Peck	Apr. 5, 1904
1,485,131	Grund	Feb. 26, 1924
1,500,426	Townsend	July 8, 1924
1,563,408	Sutherland	Dec. 1, 1925
1,687,647	Garvey	Oct. 16, 1928
35 2,122,580	Morris	July 5, 1938
2,425,198	Moore	Aug. 5, 1947

FOREIGN PATENTS

Number	Country	Date
40 12,262	Great Britain	Aug. 20, 1914