Nov. 3, 1953 H. BECKER 2,657,411

LIPBRUSH AND HOUSING THEREFOR

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Fig. 1

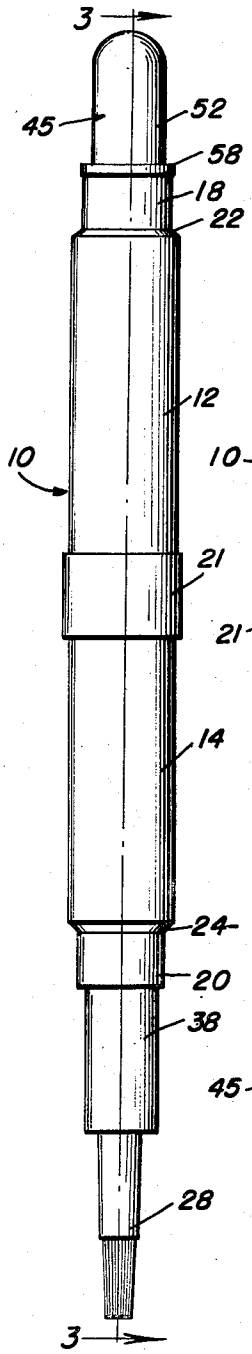


Fig. 2

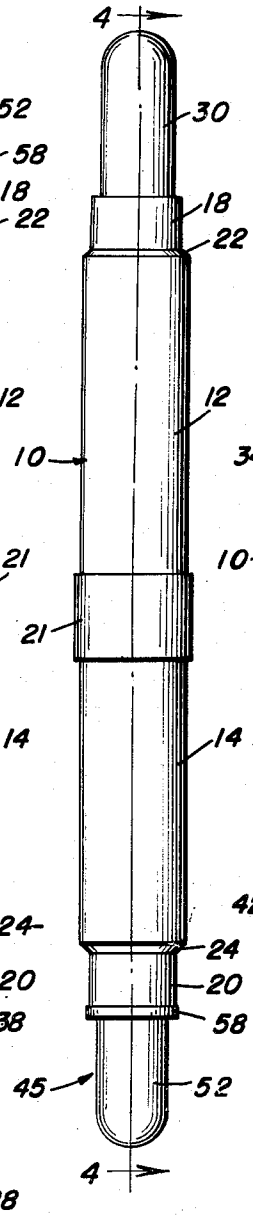


Fig. 5

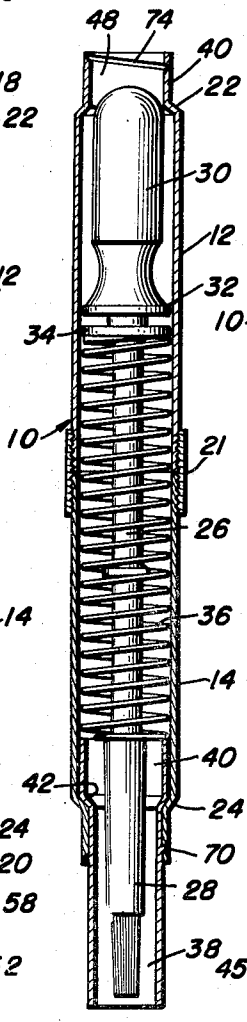
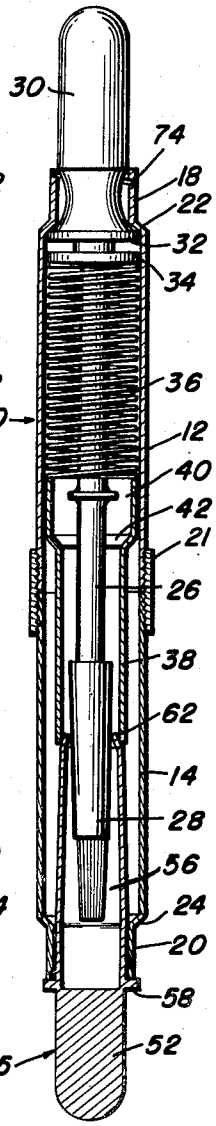


Fig. 4



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Fig. 3

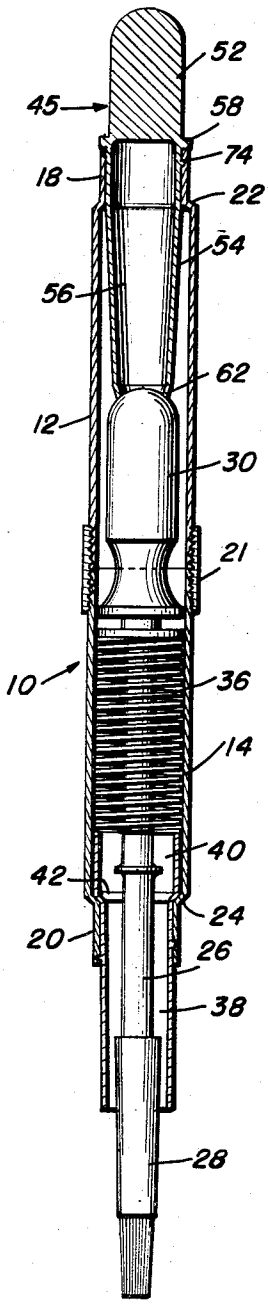


Fig. 7

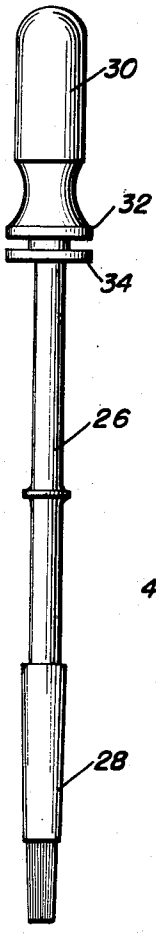


Fig. 8

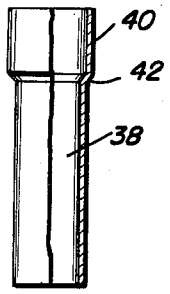


Fig. 6

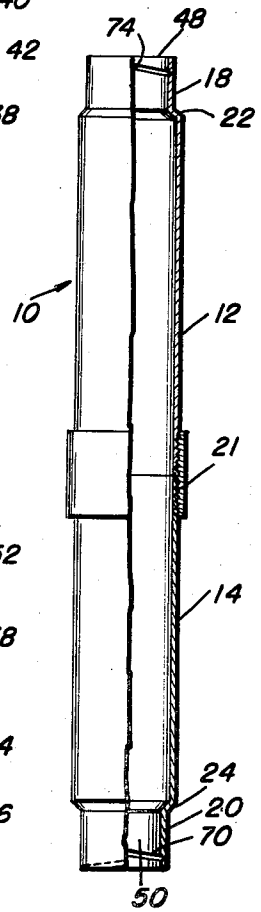
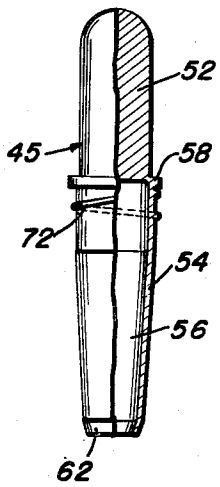


Fig. 9



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UNITED STATES PATENT OFFICE

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LIPBRUSH AND HOUSING THEREFOR

Henry Becker, Los Angeles, Calif.

Application March 6, 1951, Serial No. 214,141

4 Claims. (Cl. 15—184)

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This invention relates to an improved cosmetic applicator.

An object of this invention is to provide, as a new article of manufacture, a cosmetic applicator brush embodying improved mechanical features of construction and operation whereby a single closure is used to protect the bristles of the brush when the brush is not in use and also to prevent other articles from coming into contact with the bristles and also for projecting the bristles outwardly of the housing or tube which contains the brush thereby effectively lengthening the composite handle which is formed by the tube or housing and the brush.

Another object of this invention is to provide in a construction as described previously, a locking device to hold the closure within an aperture at one end of the housing so that the shank is displaced with respect to the housing thereby arranging the brush bristles outwardly of the housing.

Another object of this invention is to provide an improved cosmetic applicator which has a spring so arranged as to retain the shank under a constrained spring load when the applicator is in such position as to be inoperative and also to retain the shank under a similar load tending to retract the shank in the housing.

Ancillary objects and features of importance will become apparent in following the description of the illustrated form of the invention.

In the drawings:

Figure 1 is an elevational view of the device showing it in such condition as to be used by a person;

Figure 2 is an elevational view of the device showing it in the closed or inoperative condition;

Figure 3 is a longitudinal sectional view of the structure of Figure 1 and taken substantially on the line 3—3 of Figure 1;

Figure 4 is a longitudinal sectional view taken substantially on the line 4—4 of Figure 2;

Figure 5 is a longitudinal sectional view of a subassembly, the closure being omitted and showing the spring in the neutral position;

Figure 6 is an elevational view, portions being broken away in section, to show the housing which constitutes a handle of the device;

Figure 7 is an elevational view of the shank with its brush at one end;

Figure 8 is a partial section and partial elevational view of the sleeve which constitutes a part of the device, and;

Figure 9 is a partial section and partial elevational view of the improved closure which is used for several purposes and to perform several functions.

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In the instant device there is a housing 10 which is preferably, not necessarily, tubular in form and which serves the purpose of a handle. The housing is sectional, including a top section 12 and a bottom section 14, the section 12 being provided with a neck 18 at its outer end and the section 14 being provided with a neck 20 at its lower end. The confronting ends of the sections are connected together by suitable means, as the threaded collar 21. Shoulders 22 and 24 separate the neck portions 18 and 20 from the sections 12 and 14 respectively.

A shank 26 is provided with a brush 28 at one end and a decorative somewhat domical portion 30 at the opposite end. A first flange 32 is formed on the shank 28, extending laterally thereof and spaced a short distance therefrom is a second flange 34 which constitutes a seat for the yielding means, preferably a spring 36 which is located in the housing 10.

Referring to Figure 8 there is a sleeve 38 having an enlarged portion 40 at one end which is separated from the remainder of the sleeve by means of the shoulder 42. This sleeve is located in the lower end of the housing 10, the shoulder 42 abutting the shoulder 24 to prevent separation of the sleeve 38 from the housing and also to constitute a stop to limit the extent of axial movement of the sleeve with respect to the housing 10, a portion of which the sleeve forms.

An elongated member 45 is illustrated in Figure 9 and this elongated member constitutes a closure for the open ends of the housing 10, the housing being provided with an aperture 48 in the neck portion 18 and an opening 50 in the neck portion 20. The closure has a somewhat domical shaped end portion 52 and a hollow portion 54 connected to one end thereof, the hollow portion having a pocket 56 in order to accommodate the bristles of the brush 28 when the closure is inserted in the opening 50. There is a flange 58 at approximately the junction of the hollow portion 54 and the domical portion 52 of the closure 45 and this flange is adapted to contact the lower edge of the neck 20 in order to limit the extent of inward movement of the closure 45 with respect to the housing 10.

In assembly the shank 26 is located within the housing 10 after the sleeve 38 has been fitted in the housing and the shoulders 42 and 24 come to rest upon each other. At the time that the shank 26 is inserted in the housing, the spring

36 will have already been arranged in concentric fashion with the shank so that the lower end of the spring 36 rests upon the upper end of the sleeve 38, which constitutes a seat for it. The opposite end of the spring contacts the lower surface of the flange 34 so that if there is any movement of the sleeve 38 with respect to the shank, the spring 36 will be extended or compressed.

As disclosed in Figure 4 when the closure 45 is inserted in the aperture 50, the inner end of the sleeve portion 54 of the closure 45 fits in the open lower end of the sleeve 38, there being a bevelled end 62 on the closure to permit ease of insertion and prevent it from slipping from the bore of the sleeve. Accordingly, the sleeve 38 being moved inwardly of the housing and the spring 36 being seated on the sleeve, the shank 26 is retracted inwardly of the housing. When the flange 32 contacts the shoulder 22, the shank can move no more axially with respect to the housing. At that time the spring 36 becomes compressed thereby placing the shank 26 under a constrained spring load. Moreover, at this time the domical end portion 30 of the shank will have been urged through the aperture 48 so as to provide ornamentation at this end of the housing.

There is a locking device operatively connected with the neck 20 and the closure 45, this locking device comprising a helical groove 70 in the inner surface of the neck 20 and a similarly arranged ridge 72 on the outer surface of the closure 45. Therefore, after the closure 45 has been inserted in the aperture 50, if it is rotated, the ridge 72 will engage in the groove 70, thereby preventing separation of the closure from the housing until rotated in the opposite direction.

When the closure 45 is removed from the housing by rotation of the closure with respect to the housing in the proper direction, the holding of the spring 36 is released, thereby allowing the spring to urge the sleeve 38 to the position disclosed in Figure 5 and thereby allowing the spring to urge the brush and shank correspondingly outwardly and through the opening 50. Then, the closure 45 is inserted in the aperture 50 thereby pushing the shank outwardly of the housing further and projecting the brush 28 through the lower end of the sleeve 38. However, at this time since the spring 36 is seated upon the flange 34 and the upper end of the sleeve 38, it is compressed as disclosed in Figure 3. Upon rotation of the closure 45, the ridge 72 is engaged with the helical groove 74 in the neck 18, thereby releasably fastening the closure in

place and effectively lengthening the composite handle and shank together with the brush whereby it is ready for use. Upon removal of the closure 45 from the aperture 48 the spring 36 is released, retracting the shank to the position disclosed in Figure 5.

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

1. In a cosmetic applicator, a tubular housing having open front and rear ends, a sleeve slidable out of the front end of the housing to form an extension of the housing and being slidable inwardly of said front end out of extension forming position, a shank in the housing with a brush on one end and an enlarged portion on its other end, said shank being axially movable outwardly of the front end of the housing and outwardly of said sleeve to project the brush out of the sleeve and being movable inwardly of said front end and sleeve to retract the brush into the housing and project the enlarged portion of the shank out of the rear end of the housing, a flange on the shank within the housing, a spring in the housing acting against the sleeve and flange to slide the sleeve outwardly and to move the shank inwardly, and a closure member for the ends of said housing engageable with said sleeve and said portion selectively to slide said sleeve inwardly and move said shank outwardly respectively.

2. In a cosmetic applicator according to claim 1, coacting shoulders on said housing and on said sleeve limiting sliding of the sleeve outwardly.

3. In a cosmetic applicator according to claim 1, said closure-member being tapered to fit into the sleeve.

4. In a cosmetic applicator according to claim 1, coacting shoulders on said shank and housing limiting inward movement of said shank.

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