Sept. 5, 1944. W. H. MACHIN 2,357,752

LIPSTICK CONTAINER

Filed March 21, 1940

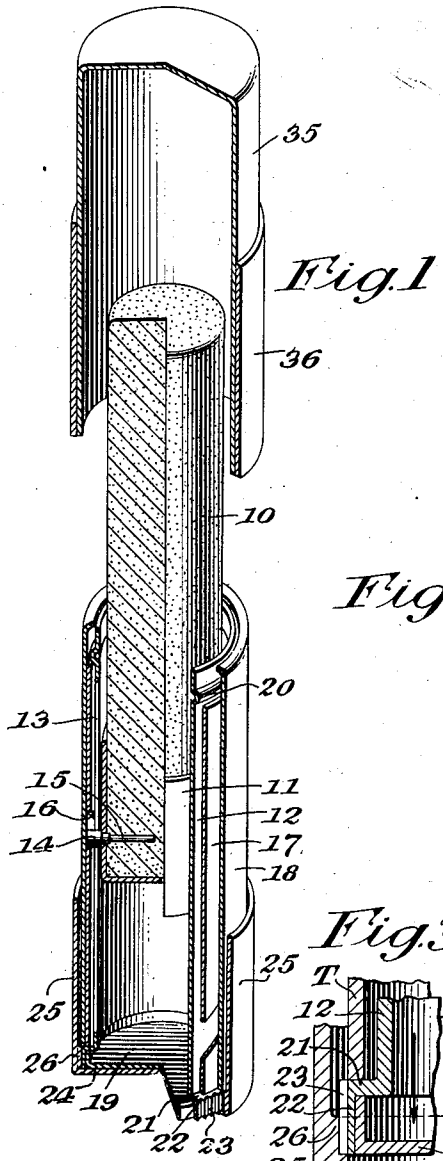


Fig. 1

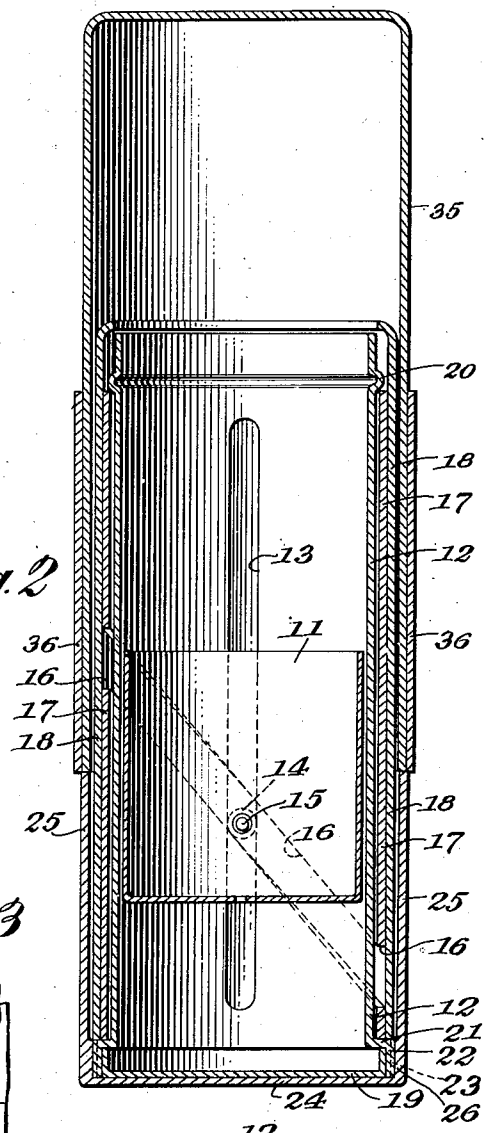


Fig. 2

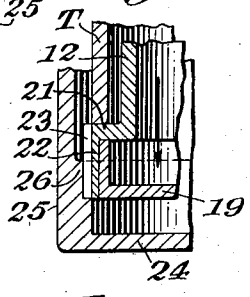


Fig. 3

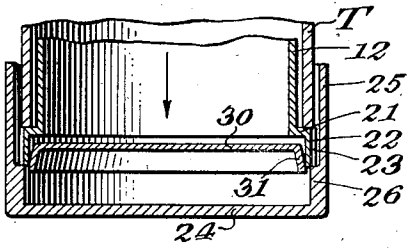


Fig. 4

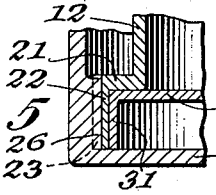


Fig. 5

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Patented Sept. 5, 1944 2,357,752

UNITED STATES PATENT OFFICE

2,357,752

LIPSTICK CONTAINER

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Application March 21, 1940, Serial No. 325,195

4 Claims. (Cl. 206—56)

This invention relates to holders of the type in common use today for holding a lipstick. The invention is particularly concerned with so-called swivel lipstick containers which are characterized by means, operable in response to relative rotary motion between parts, to propel a lipstick material, to project it from the confines of the holder body, or to retract it after such projection.

It is among the general objects of the inenvtion to provide a novel, simple and improved construction especially designed to facilitate manufacturing economy while insuring permanency and rigidity of the assembled parts.

A further object of the invention is to provide in a lipstick holder of the type herein referred to, an operating member joined to its associated parts in a novel, simple and efficient manner excluding the necessity of the use of solder or additional rivets or threaded elements and which thus lends itself to smoothness and grace of exterior appearance. This object is also coupled with a further object which is to provide an operating cap which encloses a portion of the side of the holder body providing an improved gripping area for the cap, while permitting the contour of the cap to be designed to blend into the configuration of the assembly, thus to enhance its attractiveness of appearance.

More specific objects will become apparent from a consideration of the following specification taken in connection with the accompanying drawing in which:

Figure 1 is a view partly in section of one form of the invention illustrating the cap as detached from the body;

Figure 2 is a transverse section through that form of the invention shown in Figure 1;

Figure 3 is a detail section showing certain parts in the course of assembly;

Figure 4 is a fragmentary section of a modified form of the invention, the parts being shown prior to completed assembly; and

Figure 5 is a detail fragmentary section of that form of the invention shown in Figure 4 with the parts fully assembled.

The invention is primarily concerned with the structure of the internal operating sleeve and the external operating member or cap and with a method for assembling them together in an economical manner which insures rigidity and permanency of their union. The invention may be briefly described as providing on the sleeve a knurled or serrated head and providing, within the cap, a shoulder of internal diameter slightly less than the external diameter of the head whereby, as a result of the application of force, the teeth of the head will bite into the material of the shoulder causing the parts to unite with a permanent rigid connection. In the modified form of the invention, the union is further facilitated by the provision of an inverted cup, the edges of which are tapered outwardly. Upon forcing the head into the cap, the edges of the cup act to further provide a pressure for uniting the parts and for maintaining them permanently and rigidly in their united relation.

A feature of the invention is the arrangement of the operating cap as receiving and enclosing the end of the body of the holder. The method of assembly permits a smooth exterior for the cap and its extension up the sides of the body not only lends grace of contour to the assembly but provides ample gripping area for the cap, thus providing for ease of manipulation.

Referring now to the drawing, the lipstick material is indicated by the numeral 10, as is conventional in such devices the material is mounted in a carrier cup 11. The cup 11 is slidably mounted in the operating sleeve 12 which is provided with an elongated slot 13 through which extends the head 14 of a pin 15 carried by the cup 11. The pin extends into the cup to assist it in securing the lipstick material therein while the external head 14 of the pin extends through the slot 13 and into a helix 16 formed by a relatively stationary spiral 17 which, in turn, is mounted within an outer casing or body shell 18. Such structure is, in general, common to this art and does not in itself constitute patentable novelty. In operation, it will be seen that when the operating sleeve 12 is rotated with respect to the spiral 17 it will, in turn, rotate the holder cup 11 by virtue of the extension of the head 14 of the pin 15 through the slot 13. Since the head 14 also extends into the helix 16 of the spiral 17 rotary motion of the pin will cause the pin and cup to move up or down the helix to project or retract the lipstick material from the end of the shell 18.

In that form of the invention here shown, the sleeve 12 is of tubular, open ended construction, a bead 20 is provided adjacent its upper end which engages the upper end of the spiral 17 while the lower end of spiral 17 as well as the lower end of the body shell 18 rests upon the upper transverse area of a shoulder 21 the latter constituting a head 22 of greater diameter than the body of the sleeve, the outer surface of which is knurled as at 23. The knurling in the present preferred embodiment of the invention is in the forming of coining which provides a serrated sur-

face although other forms of knurling are contemplated by the invention.

In that form of the invention shown in Figures 1 to 3, the lower end of the operating sleeve 12 is closed by a cap 19 seated within the head 22 and precluding the admission of foreign matter to the lipstick chamber as well as reenforcing the side flanges of the head and preventing inward collapsing thereof during assembly. The entire assembly is closed at its lower end by an operating cap 24, the side walls 25 of which preferably extend upwardly over the body sleeve 18 for a substantial distance.

It will, of course, be obvious that a permanently rigid connection must be established and maintained between the cap 24 and the sleeve 12 in order to provide for the rotation of the sleeve with the rotation of the cap. Heretofore in assemblies of this type, it has been usual to solder or rivet the external operating member to the internal operating sleeve, other connecting means have also been suggested but each provided a difficulty or a multiplication of parts which the present structure and method avoids.

The cap of the present invention is provided with an internal shoulder 26 which reduces the internal diameter of the bottom of the cap below the external diameter of the knurled head 22. The width of the shoulder 26 is at least in part determined by the depth of the knurling 23, since it is essential to the invention that the internal diameter of the shoulder should not be less than the outer diameter of the head 22 taken at the bottom of the knurling and in practice it is suggested that the internal diameter of the shoulder be approximately equal to the external diameter of the head taken intermediate the base and crest of the serrations.

It will be seen that when the parts are partly assembled as in Figure 3 the shoulder 26 is in the path of the knurling 23 and further entry of the sleeve within the cap is precluded except by the use of force. When force is applied in the direction of the arrow in Figure 3 as by a cylindrical tool T, the knurlings bite into the shoulder 26 cutting or broaching themselves into a permanent rigid union with the cap. Such union is automatically established upon forcing the head to the bottom of the cap and soldering or other securing means is not required.

From the foregoing, it will be seen that the method of the present invention includes the step of uniting a lipstick operating sleeve with an operating member by forcing the knurlings of one of said members into the material of a shoulder of the other member whereby the knurlings cut for themselves their own permanent seat in the shoulder.

Referring now to Figures 4 and 5, it will be seen that the invention may be modified to provide a further assurance of positive engagement between the parts. In this form of the invention, the cap 19, is substituted by an inverted cap 30, the side walls 31 of which are flared or tapered outwardly so as to approach, at the outer edges, the inner surface of the shoulder. After these parts are loosely assembled as in Figure 4, pressure is applied in the direction of the arrow by a suitable tool such as shown at T in Figure 3 and the walls of the cap 30 are deformed to right angles with the base of the cap, the pressure required for such deformation acting to force and retain the head within the cap. Such structure also provides means inhibiting the collapse of the head as might under some circumstances occur.

The container is completed by the provision of a cap 35 preferably including a decorative reenforcing band 36 which surrounds its open end and provides a grip to assist in removing the cap from the body shell 18. It will be noted that the cap is adapted to extend over the shell 18 and to the upper edge of the operating cap 25 thus providing a symmetry of design when in position.

In a consideration of this invention, it will be seen that the present structure avoids the use of any turned or screw machine parts. The structure and method of assembly permit all parts to be formed of sheet or tube material by simple drawing, rolling or spinning operations which materially assists in economy of manufacture. It will, of course, be understood that various changes and modifications and the full use of equivalents may be resorted to in the practice of the invention without departing from the spirit or scope of the appended claims.

I claim:

1. A lipstick holder comprising an operating sleeve having a lower outwardly extending shoulder and a downwardly and outwardly offset flange on said shoulder, spiral and body sleeves rotatably supported on said shoulder, a lipstick holder in said operating sleeve having connection to the spiral of said spiral sleeve, a flanged operating cap having a bottom wall and a side flange, said side flange having at its interior lower portion means to interlock with said flange of the operating sleeve, and a flanged cap fitting into said operating sleeve at the lower flanged portion thereof and having a part engaging against said shoulder.

2. A lipstick holder comprising an operating sleeve, a spiral sleeve, a body sleeve, an operating cap, and a lipstick holder cup, said operating sleeve having at its lower end an offset portion, axially-aligned circumferentially-spaced knurlings projecting outwardly from said offset portion, said operating cap having at its lower inner portion a thickened wall overlapping said knurlings and interlocked therewith.

3. A lipstick holder as claimed in claim 2, characterized by the formation of a shoulder projecting at substantially right angles outwardly from the lower end of said operating sleeve and connecting with the outer upper end of a depending flange on which said knurlings are directly carried.

4. A lipstick holder according to claim 2, in which the offset portion of said operating sleeve comprises an outturned shoulder on the lower end of said operating sleeve and a flange downturned from the outer edge portion of said shoulder on which the knurlings are directly formed, said flange being open at the bottom, and a closing cap having a flange adapted to be snugly fitted within said first named flange, said closing cap diametrically reinforcing said operating sleeve flange, said shoulder acting as a stop for said closing cap and its flange.

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