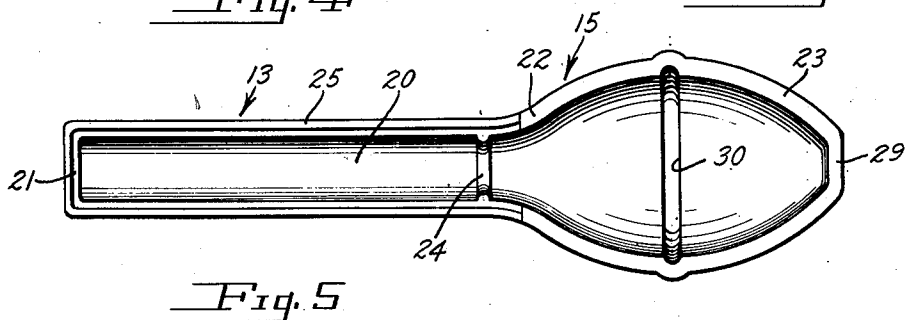
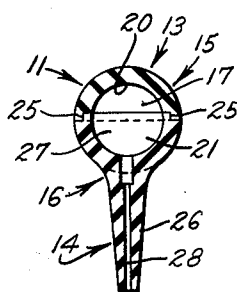
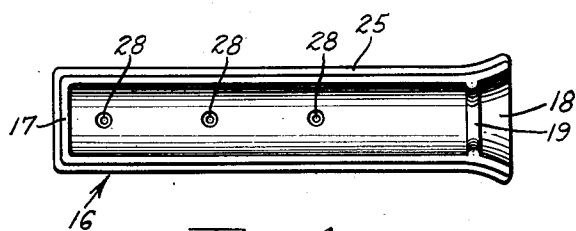
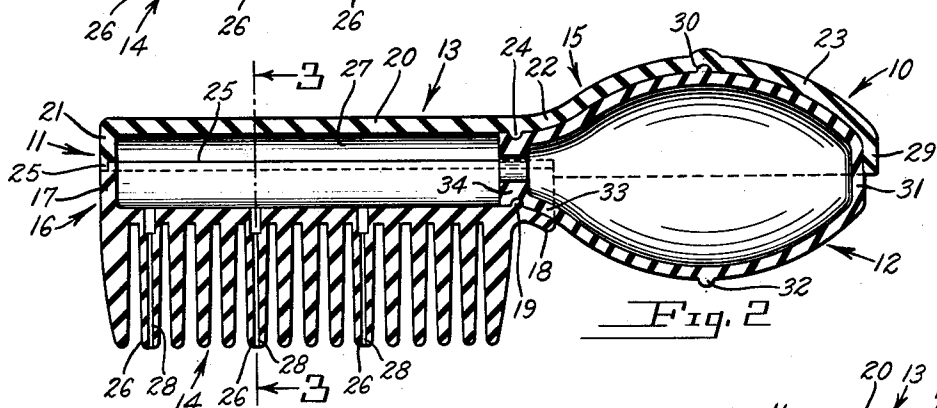
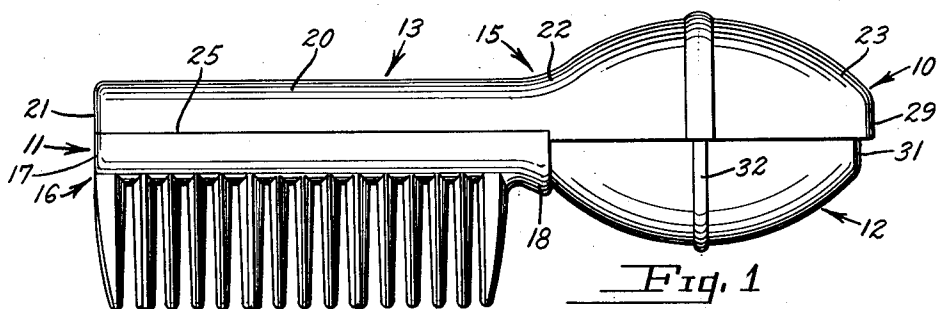


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INSECTICIDE COMB-APPLICATOR

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1 Claim. (Cl. 119—86)

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This invention relates to new and useful improvements in means for applying insecticides to the underlying portions of an animal's fur and for combing and dressing such fur and is concerned chiefly with an insecticide comb-applicator.

An object of the invention is to provide a device of simple and rugged construction and which is thoroughly efficient for the application of insecticides or powders to the underlying portions of a dog's or other animal's fur where fleas, ticks, vermin or any parasitic insects generally harbor and which device is simultaneously effective for combing and dressing the fur of the animal being treated.

Another object is to provide a comb-applicator for the purpose stated and which is constructed for the efficient use of a minimum quantity of dusting materials while eliminating the occasion for direct manual contact with such materials by the party applying them.

A further object is to provide a structure of the character set forth and which is free of screw threaded or other machined parts.

Other objects and advantages of the invention will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein a satisfactory embodiment of the invention is shown. However, it is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

Fig. 1 is a side elevational view of the comb-applicator of the invention;

Fig. 2 is a central longitudinal sectional view through the same;

Fig. 3 is a transverse sectional view taken along the plane of the line 3—3 of Fig. 2;

Fig. 4 is an elevational view of the tooth carrying section of my improved applicator, the view being taken looking into the hollow side of said section; and

Fig. 9 is an elevational view of the other section of my applicator, the view being taken looking into the hollow open side of such section.

Referring in detail to the drawing, my improved insecticide comb-applicator, there generally designated 10, is shown as comprising a comb 11 and a flexible or collapsible bulb 12. Comb 11 includes a hollow cylindrical or tubular back, generally designated 13, and a row or series of teeth 14 extending from one longitudinal edge of such hollow elongated back 13. These parts are shown as molded of a suitable plastic and as made up of a pair of parts including the upper part 15 of the back and the lower part 16 thereof. Lower part 16 comprises a semi-cylindrical body portion

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having an end wall 17 and toward its opposite end the part is slightly tapered providing a flared portion 18. This flared portion, as will later appear, comprises one-half of the entrance to the hollow back 13 and immediately inwardly of said flared portion the part 16 is provided with a bead or rib 19 which, in the assembled device, comprises one-half of a choke ring.

The part 15 includes a hollow semi-cylindrical body portion 20 at one end having an end wall 21 and at its opposite end including a flared portion 22 comprising the inner portion of a hollow semi-bulbous or semi-ellipsoidal extension 23. This body 20 also includes a semiannular inner bead or rib 24 which, in the assembled applicator, forms a continuation of the rib or bead 19 whereby a complete choke ring results.

The upper and lower sections 15 and 16 have their edge portions relatively offset as at 25 and these sections are assembled with their open sides facing one another and then these offset edge portions 25 overlap, as shown in Figs. 2 and 3. These overlapping edge portions are cemented or glued together in any suitable manner so that in the assembly the upper and lower parts or sections 13 and 14 are rigidly connected and their body portions serve to provide an elongated cylindrical receptacle 27 closed at one end by the wall portions 17 and 21 and having an entrance at its opposite end, which entrance may be described as defined by the flared or funnel-shaped structure resulting from the assembly of flared portions 18 and 22 of the respective parts. The choke ring comprising the semi-annular ribs 19 and 24 is located immediately inwardly of this flared or funnel-like entrance.

Certain spaced ones of the teeth, in the drawing those teeth are numbered 26, have passageways 28 extending longitudinally therethrough and such passageways at their inner ends communicate with the chamber or receptacle 27 and at their outer ends pass through the outer ends of the teeth 26. The purpose of this structure will appear.

The semi-ellipsoidal extension 23 is shown as molded integral with the upper section 15 of the comb and such extension, in addition to tapering into the flared inner portion 22, includes an outer wall or end portion 29 and is substantially midway its ends provided with a groove or recess 30. The flexible, collapsible bulb 12 is partially received within the extension 23 and, in fact, about one-half of the bulb is so received. This bulb includes an outer end wall 31 and approximately midway its ends, a bead or rib 32 which is located in the groove 30 and then toward its inner end the bulb includes a tapered portion 33 which seats in the flared or funnel-like portion defined by the extensions 18 and 22. Beyond such portion 33, the bulb includes a neck 34 which passes

through the choke ring formed by the bead sections 19 and 24 and seats such choke ring as best illustrated in Fig. 2.

From the above description it will be seen that the comb-applicator of the invention is of rugged yet simple and inexpensive construction. It comprises, in addition to the flexible, collapsible bulb 12, but the two molded parts 13 and 14. These parts are easily assembled and secured by a suitable adhesive in assembled relation. The overlapping edges or edge portions 24 insure proper assembly of these parts. No screw threaded or other parts which must be machined are employed.

The bulb 12 is inserted into place by placing its neck portion 34 within the described entrance or throat-like portion and then by a slight pressure, the bulb is forced into place disposing its outer end wall 31 at the inner side of the end wall 29 of the semi-ellipsoidal extension 23. This seats the bulb so that it is retained in place and serves to establish a seal between the inner portions of the bulb and the entrance portions and other parts and mounts the bulb without the use of screw threaded or other parts which are machined.

When the applicator of the invention is to be used, the user may grasp the exposed portions of the bulb 12 partly collapsing the same and then tilt its end portion 31 outwardly to free it from the wall 29 after which the bulb is simply lifted out of place. The insecticide powder or the chalk or fuller's earth or any of the various antiseptic powders which are to be used may be placed in the hollow semi-ellipsoidal extension 23. Thereafter the secured together parts 13 and 14 will be tilted upwardly to dispose the end wall portions 17 and 21 downwardly and the powder moves downwardly through the flared or funnel-like entrance into the receptacle 27.

The receptacle or reservoir 27 should be filled to near capacity and thereafter the bulb is replaced by inserting its neck 34 through the entrance and then by rocking movement, while pressing the bulb toward the entrance, the bulb is shifted back into place with its end wall 31 at the inner side of the wall 29 of extension 23 and the tapered portion 33 of the bulb seated against the walls of the flared funnel-like entrance. A pressure tight seal is established at the indicated point.

The cubic capacity of the receptacle or reservoir 27 being that desired or having the proper relationship to the cubic capacity of the flexible or collapsible bulb 12, on the latter being thereafter squeezed and released, there will be an intake of the powder into the bulb from the reservoir or receptacle 27 but not sufficient powder will be taken in to minimize the compressibility of the flexible bulb. The intake of the powder by the bulb on its release following its first compression is advantageous by providing a uniformly consistent quantity of powder to be entrained by the air with each subsequent compression of the bulb regardless of the plane upon which the device is held during normal operation.

As a pressure tight seal is established between the bulb and the entrance to the receptacle or reservoir 27, it necessarily results that any air set in motion by compression and release of the bulb must be expelled through and be taken back through the hollow teeth 25. This alternate reversing of forces or pressure through the hollow

teeth prohibits or inhibits any clogging or impacting of the powdered materials in the receptacle or in the passages through the teeth such as might result if such materials were of inferior quality and not uniform as to particle size.

The applicator having been filled or loaded as described, it is ready for use. When using the device of the invention the bulb 12 and extension 23 constitute a handle. As the teeth 14 are carried through the animal's fur to comb it, the bulb is squeezed and released whenever it is desired to deposit insecticide. Such operations should take place while the ends of the teeth are at the roots of the fur and against or adjacent the animal's skin whereby to deposit the insecticide where it will best or most effectively serve. Thus, the applicator of the invention is used to deposit the insecticide or other dusting powder and to simultaneously dress the animal's fur and the operator is kept from contact with such insecticide or dusting powder.

Having thus set forth the nature of my invention, what I claim is:

In an insecticide comb-applicator, upper and lower sections each comprising a semi-cylindrical body portion having a wall at one end and a semi-cylindrical tapered portion at its other end, said sections secured together with their open sides in opposing relation whereby a hollow cylindrical receptacle closed at one end and having a tapered entrance throat at its opposite end is formed, semi-circular ribs on the inner surfaces of said sections at the inner ends of said tapered portions and in opposed relation and in said receptacle defining a choke ring, teeth extending from the underside of the lower section, passages communicating at their inner ends with the interior of said receptacle and extending longitudinally entirely through spaced ones of said teeth, a rigid hollow shell-like extension integral with the outer larger diameter end of the tapered portion of the other body section, said extension comprising a semi-bulbous structure having an arcuate inner surface and open through its lower side and having an outer end wall opposite and facing said tapered entrance throat, a flexible bulb partly received in said shell-like extension and seated against its arcuate inner surface portion and including a tapered portion received in said flared portion and a neck portion beyond said tapered portion and extending inwardly of said tapered portion and through said choke ring, and said bulb of a length whereby to have an outer end surface pressing against said outer end wall of said extension whereby the bulb is yieldingly maintained with its tapered portion seated in said flared entrance.

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