Dec. 29, 1953 J. HOCH 2,664,088

APERTURED TUBE FOR THE TREATMENT OF PILES OR THE LIKE

Filed Oct. 15, 1952

Fig. 3

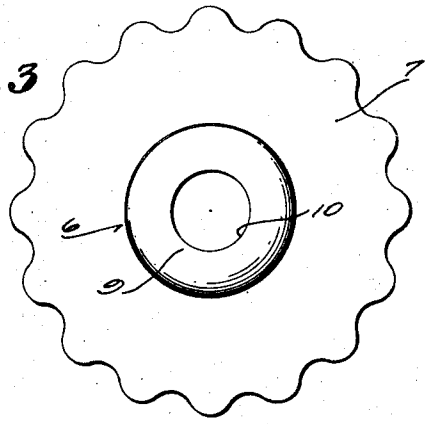
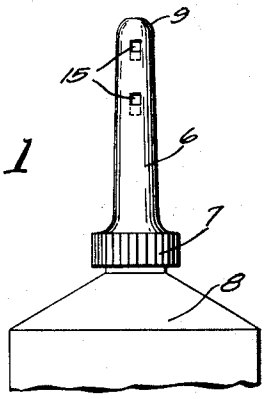


Fig. 1



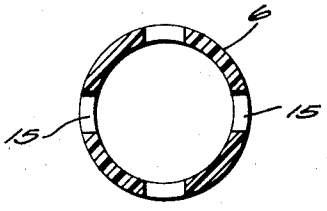


Fig. 4

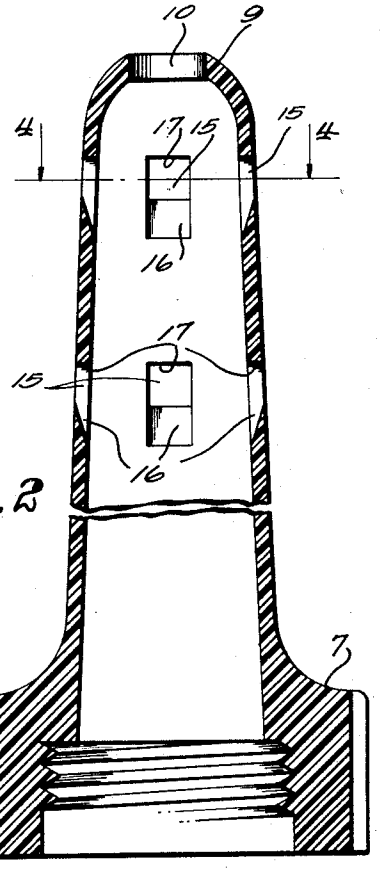


Fig. 2

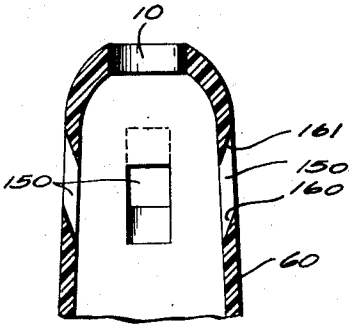


Fig. 5

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Patented Dec. 29, 1953 2,664,088

UNITED STATES PATENT OFFICE

2,664,088

APERTURED TUBE FOR THE TREATMENT OF PILES OR THE LIKE

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Application October 15, 1952, Serial No. 314,883

2 Claims. (Cl. 128—261)

1

This invention relates to an apertured tube for the treatment of piles or the like, the tube being threaded to serve as an extension for a collapsible tube containing medicament.

Tubes for the same purpose are commercially available, the present invention being specifically directed to the nature of the apertures provided in the side walls. Regardless of the shape of these apertures in outline, the invention contemplates that the lower margins, and desirably the upper margins also, these being the margins proximate to the base and remote therefrom, shall be beveled toward the base to facilitate or even effect a flow of the ointment or other medicament from the interior of the tube to the exterior thereof.

The devices previously available have been provided in their side wall portions with apertures or elongated slots opening to the ends of the tube and having, in all cases, sides cut upon the shortest path from the inside to the outside. Neither has proven entirely satisfactory and neither has permitted a free and adequate flow of medicament through the sides of the tube as distinguished from the apertured end thereof. Through the use of the present invention, the medicament flowing under pressure through the tube expands, even when the pressure is light, into the lateral ports, such expansion being attributable to the beveled lower margins of the apertures. When the material then encounters the upper margins of the apertures, it is urged outwardly in a manner which is not achieved in any previous arrangement known to me.

In the drawings:

Fig. 1 is a view in side elevation of a device embodying the invention as it appears when attached to the end of a collapsible tube of ointment, the latter being fragmentarily illustrated.

Fig. 2 is a very much enlarged view in axial section through an applicator embodying the invention.

Fig. 3 is a plan view of the applicator.

Fig. 4 is a view taken in section on the line 4—4 of Fig. 2.

Fig. 5 is a fragmentary detail view showing a slightly modified embodiment of the invention.

My improved applicator comprises a tubular member 6 having an internally threaded base portion 7 whereby it may be placed in screw-threaded connection to the end of a collapsible tube 8 such as is commonly used in the merchandising of ointment. The present invention is not primarily concerned with the tip portion 9 of the applicator, this being preferably convex

2

in accordance with conventional practice and desirably provided with a central aperture at 10.

Due to the conventional provision of the central aperture 10, most of the ointment expelled from the collapsible tube 8 tends to flow outwardly at 10 without any substantial distribution through the lateral openings with which the applicator wall 6 is provided at 15. However, in accordance with the present invention, the cross section of the tube is progressively reduced and the lower margins of the apertures 15 are desirably inwardly beveled at 16 in the manner clearly illustrated in Fig. 2. In the modified embodiment shown in Fig. 5, the tubular wall 60 has apertures 150 in which not only are the lower margins 160 inwardly beveled, but the upper margins 161 have parallel bevels, the result being that the bevel of the upper margin is outward and upward. In the construction shown in Fig. 2, the upper margin 17 is at right angles.

The openings 15, as shown, are rectangular in outline. In both embodiments, the side edges of the openings are parallel and square cut. The top edges of the openings 15 in Fig. 2 are also square cut. The openings should at least have their lower margins (the margins closest to the base 7) beveled inwardly and downwardly. Regardless of the form of the openings in outline, their upper margins may, if desired, also be beveled upwardly and outwardly in opposition to the bevel of the lower margins as suggested in Fig. 5.

In addition to promoting better lateral discharge of the medicament under the light pressures available in a device of this character, the beveled form of the application has a second advantage in that it facilitates manufacture. I prefer to make the item of a thermoplastic material such as polyethylene or vinyl, the former being the best for the purpose. Where such material is used, it is not even necessary to provide retractable core parts to produce the apertures 15. The core parts which form the apertures may be fixed with the core about which the entire applicator is molded and the applicator may nevertheless be withdrawn from such a core, desirably before it has fully set. In any event, its elasticity permits it, because of the bevel at 16, to clear the aperture-forming portions of the mold.

I claim:

1. A medicament applicator of resiliently pliable plastic composition and comprising a tube of progressively decreasing cross section having an internally threaded base portion and an aper-

tured tip, an intervening side wall provided at a plurality of spaced points with lateral apertures of rectangular outline, the side wall portion of said tube at the lower margin of each aperture proximate said base portion being beveled inwardly and toward the base portion to facilitate the expansion into the aperture of the medicament expelled through such tube.

2. The device of claim 1 in which side wall portions of the tube forming the margins of the respective apertures proximate the tip portions of the tube are beveled outwardly and upwardly toward said tip portion, whereby said upper aperture margins are beveled in opposition to the bevels of the lower aperture margins.

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