Dec. 2, 1924. 1,517,914

J. MACDONALD

TUBE FOR APPLYING CREAMS AND THE LIKE TO THE SKIN

Filed Nov. 2, 1923

Fig. 1.

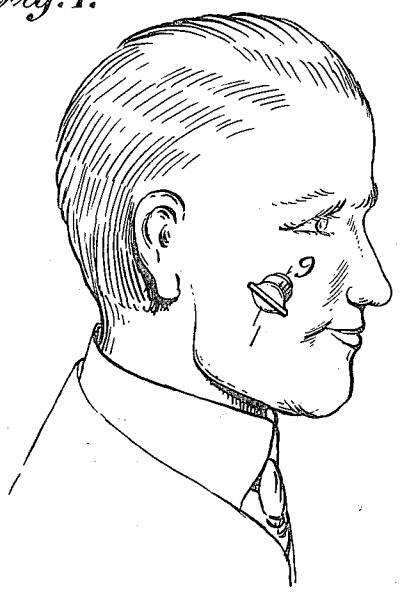


Fig. 3.

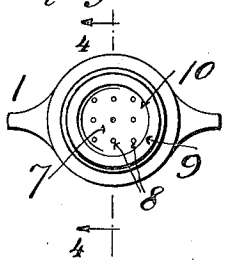


Fig. 2.

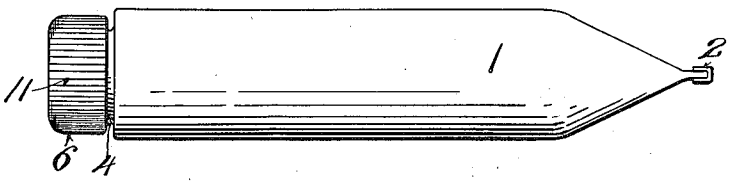
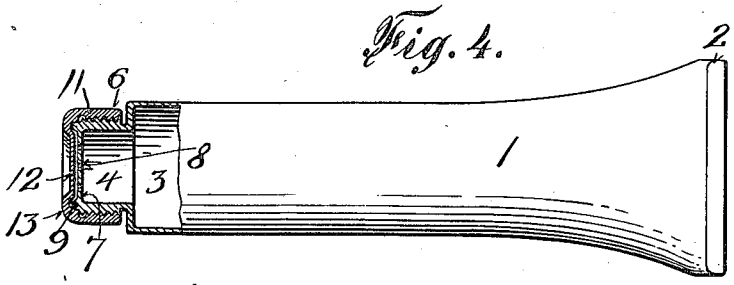


Fig. 4.



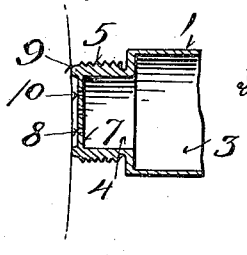


Fig. 5.

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UNITED STATES PATENT OFFICE.

JAMES MACDONALD, OF NEW YORK, N. Y.

TUBE FOR APPLYING CREAMS AND THE LIKE TO THE SKIN.

Application filed November 2, 1923. Serial No. 672,261.

To all whom it may concern:

Be it known that I, JAMES MACDONALD, a subject of the King of Great Britain, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Tubes for Applying Creams and the like to the Skin, of which the following is a specification.

My invention relates to tubes for applying shaving soap in paste form, cold creams, skin creams, or other materials in the cream or paste form to the face and I prefer to apply my invention to that form of tube the body of which is collapsible, so that the cream may be forced out of the tube by compressing the latter, although my invention relates more particularly to the nozzle and cap. One object of my invention is to provide a discharge nozzle for the tube which may be moved along the face or hands and which will spread a very thin layer of the cream or other material upon the skin. Heretofore these tubes have been made with a plain discharge nozzle which discharged a thick rod or ribbon of cream or other material upon the skin, which rod or ribbon had to be afterwards spread with the fingers or with a shaving brush over the skin as the original rod or ribbon was generally too thick and required this spreading operation. With the present device it is possible to use the nozzle of the tube to spread the material in a very thin coating upon the skin so that a comparatively thin coating may be spread over the whole face or any other portion thereof. For this purpose I provide a discharge member through which the material exudes and the wall containing the discharge apertures is surrounded by a raised flange which latter has a squeegee-like action upon the skin to limit the application of the material to a thin layer and the thickness of this layer may be controlled according to the pressure of the flange against the skin.

Another object of my invention is to provide a novel form of closing cap for the nozzle which will effectively close the discharge openings in the nozzle and which will also permit the tube to be stood on end when not in use.

In the drawing forming part of this application,

Figure 1 is a view showing the manner in which the tube is held when applying the material to the face, the hand being omitted to more clearly show the tube,

Figure 2 is an elevation of the tube and cap,

Figure 3 is an end view of the nozzle end of the tube with the cap removed,

Figure 4 is a sectional view taken on the line 4—4 of Figure 3 with the cap attached to the nozzle, and

Figure 5 is a similar view with the cap removed and illustrating the manner of using the tube.

As stated herein, I prefer to apply my invention to a tube of the collapsible type although it is not limited to this application. In the drawing I have shown a tube 1 of tubular form closed at one end by the sealing strip 2 and forming a chamber 3 containing the material, which may be soap in paste form, cold cream, or any other product which it is desired to apply to the skin. The tube may consist of thin tin such as is commonly used for this purpose or it may be made of celluloid.

One end of the tube is shown reduced in diameter to form a nozzle 4 which is provided with external threads 5 to receive the detachable cap 6. This cylindrical nozzle is provided with an end wall 7 which has preferably a number of very small apertures 8 through which the material in the tube may be exuded by compressing the wall of the tube. Surrounding this end wall 7 there is a projecting flange 9 preferably of annular shape and having a smooth, round top edge. This flange together with the end wall 7 forms a small compartment 10 in which the material exuded through apertures 8 spreads, ready to be applied to the face.

The cap 6 comprises a cylindrical portion 11 having an interior thread to engage the thread 5 on the nozzle. The end of the cap comprises a depressed end wall 12 which, when the cap is screwed into place, lies close to or against the end wall 7 of the nozzle to close the apertures 8 and prevent the material from exuding into the small chamber 10. This end wall 12 is surrounded by the projecting rim 13 and this rim forms a suitable base whereby the tube may be placed on end with the cap resting on the surface supporting the tube. This form of support permits the tube to be placed on end in a cabinet.

In using the tube the cap 6 is unscrewed and removed and the nozzle is placed against the skin so that the entire flange 9 touches the skin; and while the flange is thus pressed against the skin the wall of the tube is compressed and the material exudes through the small apertures 8 into the small chamber 10. The tube is held at right angles to the surface of the skin and is moved along the latter so that the material in the chamber 10 is applied to the skin and the flange 9 pressing against the skin limits the application of the material to a very thin coating depending on how much pressure is used in pressing the tube against the skin. This layer of material may be sufficiently thin in the case of creams and the like so that the user will not have to afterwards spread the material with the hand and in the case of shaving soap the thin layer may be applied to the whole face instead of applying a thick ribbon locally and then having to spread it out with the hands or with the shaving brush.

Having described my invention, what I claim is:

1. A device of the class described comprising a container adapted to hold a cream like substance, a nozzle for said container, a wall in said nozzle having apertures through which the contents of the container is adapted to be exuded, and a flange projecting from the end of said nozzle and entirely surrounding said apertured walls, the latter being depressed below the top of the flange for the purpose set forth.

2. A device of the class described comprising a container consisting of a collapsible tube for holding a cream like substance, a nozzle for said tube, a wall extending crosswise of said nozzle and having apertures through which the contents of the tube is adapted to be exuded, and a flange projecting from the end of the nozzle and entirely surrounding said apertured wall, the latter being depressed below the top of the flange to form a pocket in which the substance from said apertures spreads, the flange being adapted to be pressed against the skin and to be moved parallel therewith and to limit the application of the substance to a thin layer.

3. A collapsible tube for the purpose set forth, having a nozzle, and a removable cap for closing said nozzle, said cap having a depressed central wall surrounded by a flanged edge, the tube being adapted to stand on end, resting on said flanged edge of the cap.

4. A device of the class described comprising a container adapted to hold a cream like substance, a nozzle for said container, a wall across said nozzle having apertures through which the contents of the container is adapted to be exuded, a flange projecting from the end of said nozzle and entirely surrounding said apertured wall, the latter being depressed below the top of the flange for the purpose set forth, and a removable cap for said nozzle, having an end wall adapted to lie close to or against the apertured wall of the nozzle and having a projecting, annular flange the container being adapted to be stood on end on said annular flange of the cap.

Signed at the city, county and State of New York, this 8th day of October, 1923.

JAMES MACDONALD.