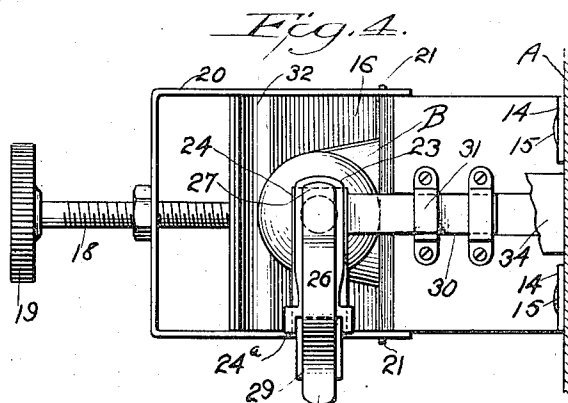
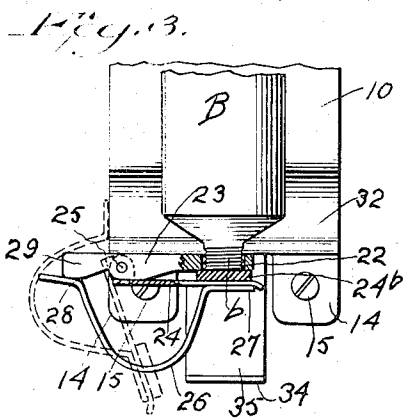
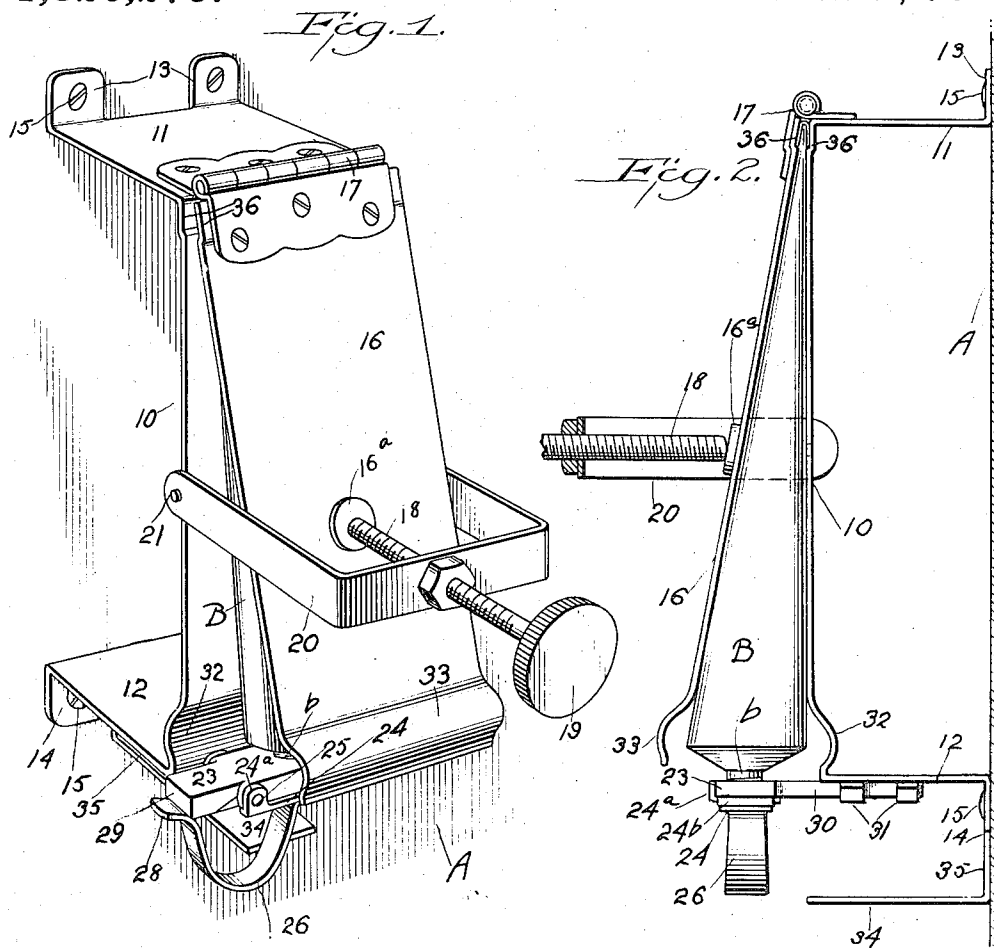


E. G. ROACH.  
 DEVICE FOR EXTRUDING PASTE FROM TUBES.  
 APPLICATION FILED MAR. 8, 1919.

1,320,275.

Patented Oct. 28, 1919.



WITNESSES

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# UNITED STATES PATENT OFFICE.

EDWIN G. ROACH, OF NEW YORK, N. Y.

DEVICE FOR EXTRUDING PASTE FROM TUBES.

1,320,275.

Specification of Letters Patent.

Patented Oct. 28, 1919.

Application filed March 8, 1919. Serial No. 281,335.

*To all whom it may concern:*

Be it known that I, EDWIN GOODMAN ROACH, a citizen of the United States, and a resident of the city of New York, borough of Bronx, in the county of Bronx and State of New York, have invented a new and Improved Device for Extruding Paste from Tubes, of which the following is a description.

My invention relates to means for extruding the contents of various collapsible tubes, such as those containing dental paste, skin creams, artists' colors, grease paints, adhesive pastes, glues, etc., and particularly relates to a device to be secured to a wall or other fixed support and adapted to receive the tube, means being provided to subject the tube to pressure for extruding the contents as required.

My invention has for an object to provide a device of the indicated character improved in various particulars whereby certain advantages and results are obtained, among which are the following: The tube may be readily placed and the empty tube removed with convenience. The pressure means is of a character to make it unlikely that an excessive amount of the contents of the tube will be expelled at a given operation even by children. The relatively rigid front end of the tube and adjacent portion of the holder provided therefor, that the pressure applied to the tube will not disrupt the same at the juncture of the body and cap; substantially the whole contents of the tube can be expelled thereby preventing loss of the contents by leaving some of the contents unexpelled; the neck or threaded nipple on the cap of the tube is received in an orifice in a supporting member, a spring-pressed cover being provided to close the open end of the tube when in position and its contents is not being expelled, and also, the holder is removable with the spring-pressure closure device, the whole being effective in promoting cleanliness and sanitation; a novel and simple means is provided to afford support for the toothbrush beneath the discharge end of the tube; and finally, the device in general is of a character to reflect practical considerations with respect to simplicity and durability as well as convenience of adjustment and operation.

Reference is to be had to the accompany-

ing drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a perspective view of an extruding device embodying my invention, showing the same in supported position and with the tube in place;

Fig. 2 is a side elevation thereof, the supporting frame for the pressure screw being in section and said screw being shown in part;

Fig. 3 is a detail in vertical section of the lower end of the device with the tube in position;

Fig. 4 is an inverted plan view, a portion of the toothbrush seat being broken away.

The device may be formed of any suitable material, the illustrated form being designed to be produced mainly from stamped metal. In any event it will include a base or back 10, here shown as a stamped metal plate having the upper end 11, constituting the top of said back, and the lower end 12, constituting the bottom of said back, bent rearwardly to offset the major portion of the back. To secure the device in the present example, upstanding ears 13 are provided on the top 11 and depending ears 14 on the bottom 12, said ears being adapted to receive screws 15 or like fasteners, to secure the device in position on a wall indicated at A or other fixed support. The top 11 and bottom 12 afford temporary support for a brush or the like. The clamp and squeezing jaw 16 is hinged at its upper end as at 17 adjacent to the top of the back 10, so as to be movable relatively to the base, whereby when the tube B is in position beneath said clamp jaw, pressure on the latter will act to extrude the paste or the like through the tube. The pressure advantageously and in the preferred form is produced by a screw 18 having a knurled head 19 or its equivalent, said screw turning in a yoke-like bracket or frame 20 secured at its inner ends as at 21 to the base 10. A protuberance or thickened portion 16<sup>a</sup> may be provided on the pressure clamp 16 to take the pressure of the screw 18. The pitch of the screw 18 in practice is such that one turn thereof will cause sufficient paste to be extruded in cleaning the teeth for example, and any greater quantity may optionally and deliberately be expelled from the tube by a further turning

of the screw. The screw 18, it is to be observed, is unconnected with the jaw 16 and merely bears thereon, so that said jaw is free to swing to vary its angular position as it turns on its hinge in compressing and without restraint or impediment.

The neck or nipple *b* of the tube B is adapted to be inserted in an orifice 22 provided therefor in a support or table 23 adjacent to the lower ends of the base 10 and jaw 16 and in connection with said table, I provide a closure 24 for the end of the tube and suitably secured by a pivot pin 25 to said table, the pin passing in the given example through ears 24<sup>a</sup> on said closure. A piece of felt 24<sup>b</sup> or the like is applied to the front end of the closure 24 to effectively exclude dust from the end of the tube. The closure 24 is spring-pressed to hold it in close engagement against the open end of the tube and the adjacent portion of the table 23, said spring in the illustrated form being bowed, its one end 27 being secured to the closure 24 while the other end 28 is free and bears against the adjacent end 29 of the table 23. In the preferred form the table 23 with the closure 24 and spring 26 is removably supported for which purpose in the illustrated example, said table is provided with a shank 30 extending rearwardly therefrom and removably receivable in keepers 31 on the under side of the bottom 12 of the base, so that the whole may be readily removed for a thorough cleaning.

In order to prevent the tube from being disrupted particularly adjacent to the juncture of the body with the more rigid material at the top or cap, I form the base 10 adjacent to the lower end with an offset, presenting a concave depression 32 and I similarly give a concave form as at 33 to the lower end of the jaw 16. Similarly, the upper end of the fixed base 10 and the upper end of the jaw 16 are oppositely offset as at 36, thereby presenting jointly a recess to accommodate the seam at the rear end of the paste tube. Thus the offset 36 coacts with the offset portions 32, 33 at the opposite end to accommodate the greater thickness of tube metal and thereby permit the tube to be flattened to a degree to cause the entire contents of the tube to be expelled.

To provide a seat or rest for the toothbrush at the bottom of the device and in position for the extruded paste to drop onto the bristles, I provide a bracket arm 34 extending horizontally or approximately so

in a forward direction, said bracket having a shank 35 integral with and depending from the bottom 12.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the mechanical details herein illustrated, since manifestly the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:

1. A device of the class described including jaws hingedly connected to be relatively movable and adapted to receive a paste tube therebetween, a frame on one of said jaws within which frame the other jaw has movement, and a pressure device carried by the frame and operable to exert pressure on the movable jaw, said pressure device bearing against said movable jaw but unconnected therewith so that the jaw is free to move with its hinge as a center and vary its angular relation to the pressure device when moving to or from the other jaw.

2. A device of the class described including a back adapted to be secured to a support and constituting a fixed jaw, a second jaw mounted in front of said back and movable relatively to the first jaw, said jaws being adapted to accommodate a paste tube, a member beneath the lower ends of the jaws and presenting a hole to receive the neck of the paste tube, and a spring pressure closure for said hole and swingable vertically to and from the same to permit escape of paste from the tube, and a bowed spring secured at one end to said closure to thus be carried by the closure, the opposite end of said spring shiftably engaging the adjacent end of said member.

3. A device of the class described including jaws hingedly connected at one end to be relatively movable and adapted to receive a paste tube therebetween for extruding the paste, a frame on one of said jaws, a pressure device carried by the frame and adapted to bear against the other jaw to exert pressure thereon to give relative movement to said jaws, the movable jaw being free to swing on the hinge unrestrained by the pressure device and irrespective of the direction of the bearing pressure exerted by said pressure device.

EDWIN G. ROACH.