Feb. 18, 1930. W. P. McCORKINDALE 1,747,590

HOLDER DEVICE FOR COLLAPSIBLE TUBES

Filed June 8, 1927

Fig. 1.

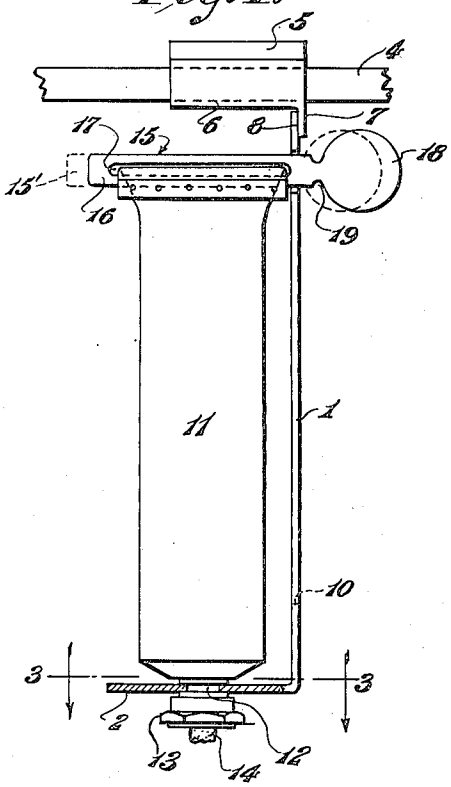


Fig. 2.

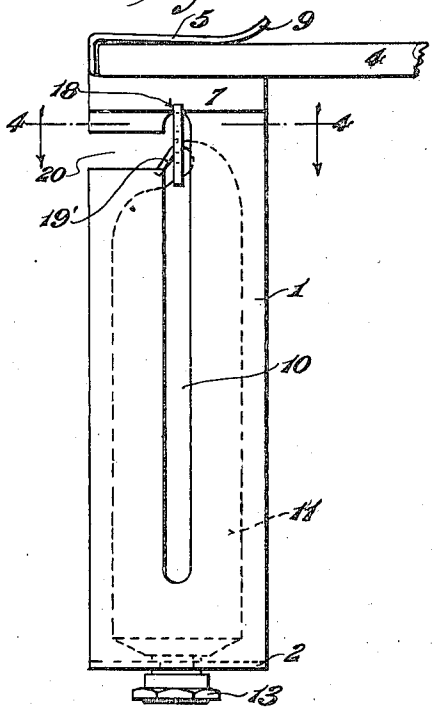


Fig. 3.

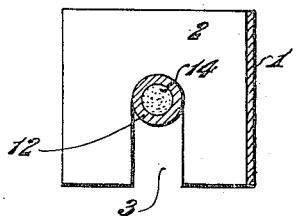
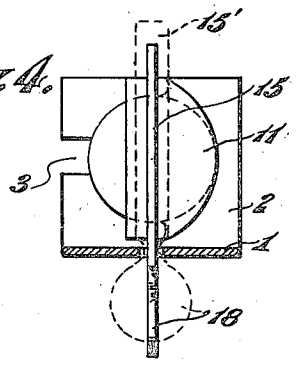


Fig. 4.



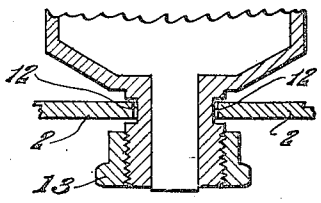


Fig. 5.

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UNITED STATES PATENT OFFICE

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HOLDER DEVICE FOR COLLAPSIBLE TUBES

Application filed June 8, 1927. Serial No. 197,368.

This invention relates to improvements in holder devices for collapsible tubes which are designed to contain dental paste creams or other pasty materials, as soap which is discharged from the tube by compressing or collapsing the same by pressure, or, by means of a winding key.

An object of the invention is to provide a holder for such tubes that will readily permit the holder to be readily attached to and removed from a shelf, whereby the holder is located in a depending or vertical position.

A further object is to provide a holder for such tubes which permits the tube to be readily inserted and removed. Broadly it comprises a strip of metal having an offset shelf or foot portion at the bottom and an offset portion at the top. The vertically arranged metal strip is formed with a slot to receive the winding key. The upper portion of the strip terminates in a clamping device for attaching the holder to a shelf or the like. The offset foot piece or lower end portion of the holder is slotted to receive the neck of the tube, and the upper end of the vertically arranged strip is laterally slotted to receive the winding key, whereby the tube may be readily inserted and removed from the holder when required.

Referring to the drawings:

Fig. 1 is a side elevational view, showing a collapsible tube in place on the holder and with the spring clamp attached to a shelf, and, the winding key located on the compressible end of the tube.

Fig. 2 is a rear elevational view looking from the right of Fig. 1, showing the slotted portion of the holder and the winding key located in the slot; also, the spring attaching clamp at the upper end of the holder.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1 showing the slotted foot portion of the holder and the grooved neck of the tube in the slot.

Fig. 4 is a view on the line 4—4 of Fig. 2, illustrating the winding key on the upper end of the tube, and

Fig. 5 is a detailed sectional view of the neck portion of the tube showing the annular groove formed therein.

Referring to the drawings in detail:

1 designates the vertically arranged portion of the holder having the offset foot piece or support 2 that is formed with a laterally arranged slot 3 to receive the neck of the tube. Located at the upper end of the vertically arranged piece 1 is the spring clamp for attaching the holder to the edge of the shelf, the shelf being indicated at 4, and the spring clamp for the holder comprising the upper and lower members 5 and 6. This clamping member is attached to the member 1 by means of the downwardly extending lip portion 7, that is permanently secured to the part 1 by brazing or otherwise secured thereto as indicated at 8. For convience in attaching the clamp to the shelf 4 the portion 5 is curved upwardly as indicated at 9. 10 designates a longitudinal slot in the member 1 which extends downwards nearly to the offset foot piece 2, its upper end terminating below the lip 7 as shown in Fig. 2. The collapsible tube is indicated at 11, in which is placed the dental cream. The neck portion of the tube is formed with an annular groove 12, see Fig. 5. This annular grooved neck portion 12 enters the slot 3 of the foot piece 2 and provides a support for the tube 11 on the upper surface of this offset foot piece 2. The cap is indicated at 13 and the portion of the ribbon cream at 14. 15 is a winding key which comprises a flat piece 16 formed with a slot 17, at one end of which key is a flat thumb piece 18. This key is formed with a narrow neck portion 19 that permits the key to be rotated in the slot 10 when the neck portion 19 is in the slot 10 as indicated by the dotted line position 15′.

The upper end portion of the piece 1 is formed with a laterally located entrance slot 20, through which the winding key 15 passes when the tube is put in place on the holder. This slot terminates at the slot 10 as shown in Fig. 2, whereby the key will be located in the slot 10.

It is of course apparent that the grooved neck 12 enters the slot 3 at the same time that the key enters the slot 20. The tube is therefore retained in place for use by means of the

neck 19 of the key 15, being located in the slot 10.

It will be seen from this description that the tube 11 may be readily inserted in and removed from the holder by inserting the groove or annular neck portion 12 in the slot 3 and inserting the winding key 15 through the slot 20 into the slot 10 of the portion 1. The slot 17 of the key is placed over the pinched end 19′ of the tube 11, also the holder and the tube may be readily attached to and removed from the shelf indicated at 4.

It is to be understood that I do not limit myself to the exact arrangement of the offset foot piece 2 and clamping members 5 and 6 as other equivalent structures may be employed.

The main object is to provide a holder for collapsible tubes that may be readily inserted and removed from the holder, and means for attaching the holder to a shelf member.

The piece 13 is the usual cap piece for closing the opening in the lower end of the neck of the tube 11. In the present invention this piece has its lower end removed to permit the paste to escape without removing a cap. In other words the piece 13 serves as a collar to assist in retaining the neck part of the tube in place in the laterally arranged slot 3, as the groove 12 is comparatively of shallow depth.

What I claim is:

1. In combination with a holder for supporting a collapsible paste receiving tube, the holder having a foot piece or supporting part which is formed with an open ended slot laterally arranged to receive the neck portion of the tube, whereby that end of the tube may be laterally inserted in or removed from the foot piece of the holder, the holder having a longitudinal slot and a transverse winding key receiving slot opening into the longitudinal slot, means for supporting the holder in a depending position on the edge of a shelf or the like, comprising a spring and a spaced fixed clamping jaw at the upper end of the holder, means for expelling the paste, comprising a slotted key that is rotatably located in the longitudinal slot of the holder, whereby when the key is rotated it will move along in the slot.

2. A holder for the purpose described comprising a flat piece of material, formed with a vertically arranged slot and a lateral slot which extends into the vertically arranged slot, the upper and lower ends of the flat piece having laterally extending offset portions, the offset portion at one end having a slot to receive the discharge neck of a collapsible tube, and the offset portion at the other end forming a portion for attaching the holder to a shelf or the like, the vertical slot being designed to receive a winding key for compressing the tube.

3. In combination, a holder for removably supporting a collapsible paste receiving tube which comprises a member that is formed with an offset slotted foot piece, or portion, the slot extending to an outer edge of the foot piece and designed to receive the neck portion of a collapsible tube, said member having a pair of clamping jaws for removably attaching the holder on the edge portion of a shelf or the like, the neck portion of the said tube entering the slot in the offset portion as described, and means for compressing the tube for expelling the paste.

4. A support for a collapsible paste receiving tube comprising a member having a longitudinal slot, which member is formed with an offset portion at its opposite ends, the offset at one end having a slot to receive the neck portion of a tube, the offset at the other end forming a part of a clamping device for supporting the member, said longitudinally slotted member having a laterally extending slot to receive a winding key on the collapsed end of the tube, for permitting the said key to enter the longitudinal slot, the construction and arrangement being such that the neck portion of the tube and the collapsed key receiving end may both be inserted in the holder at the same time.

5. In combination with a holder for supporting a collapsible paste receiving tube, the holder having a piece or supporting part which is formed with an opening to receive the neck portion of the tube, whereby that end of the tube may be inserted in or removed from the supporting part of the holder, means for supporting the holder in an upright position, comprising a leaf spring and a fixed clamping jaw at one end of the holder, the spring being spaced from the fixed clamping jaw, and means for expelling the paste.

6. A holder and support for collapsible tubes comprising, in combination, a base piece, a spring secured to the base piece for frictionally gripping a supporting shelf, or the like, a part attached to the base piece, and formed with an opening to receive the neck part of the collapsible tube, and means for opening and closing the discharge outlet of the tube.

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