

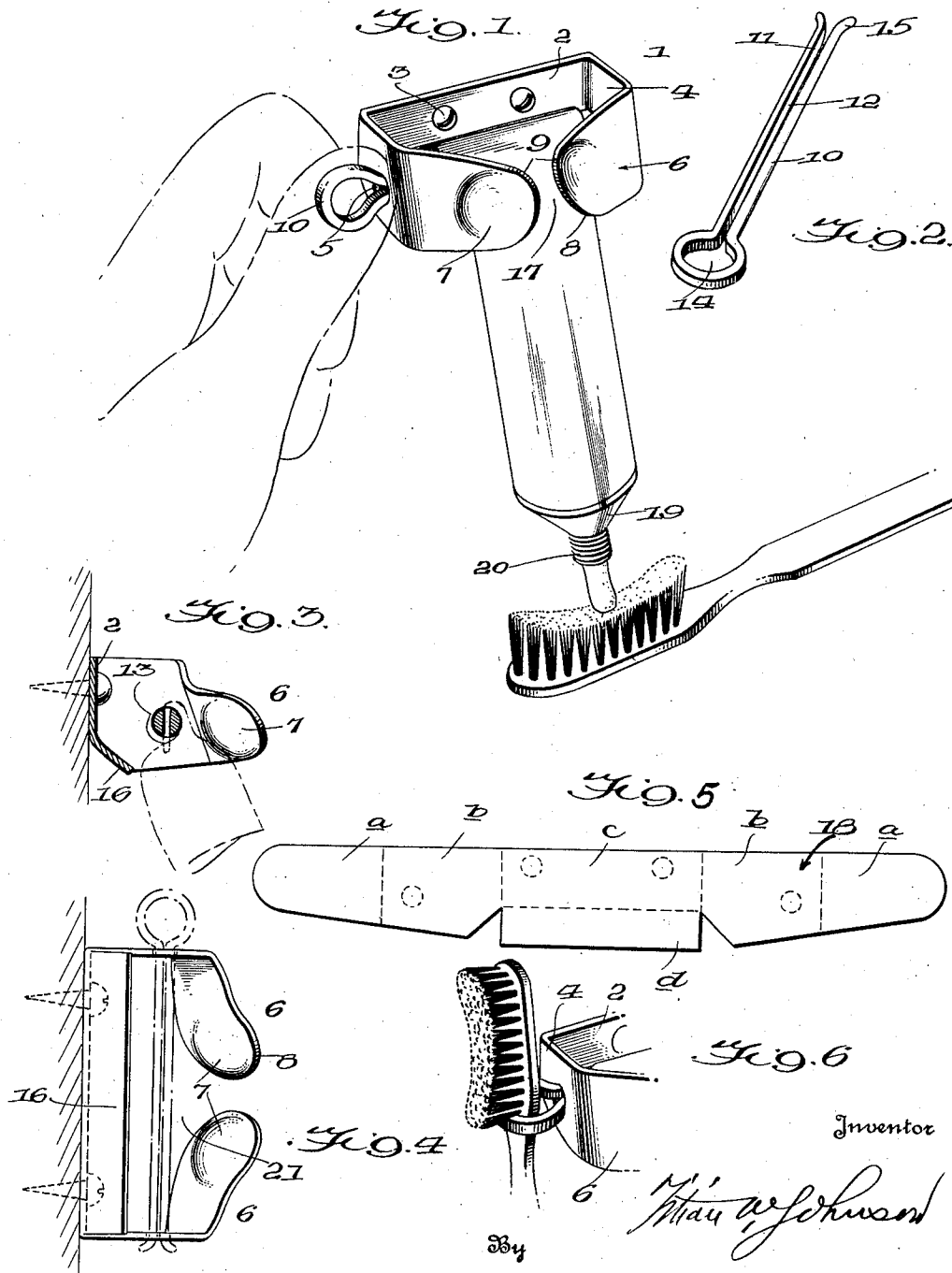
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DISPENSER FOR TOOTH PASTE, SHAVING CREAM, ETC

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DISPENSER FOR TOOTH PASTE, SHAVING CREAM, ETC.

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The invention relates to a device for dispensing tooth paste, shaving cream and the like, substances commonly vended in collapsible tubes.

5 The invention consists in a very simple contrivance of the character indicated, comprising two parts only, the holder being of such form that it can be stamped from a suitable strip of metal and appropriately
10 shaped to perform the functions required of it, in connection with a slotted key of peculiar construction, both of which may be produced and assembled at a very inconsiderable cost.

15 The object of the invention is to improve on certain patented devices for this same purpose in the way of construction, cheapness, sightliness, and efficiency in operation.

Many more considerations are involved in
20 the production of a device of this character than would, at first blush, appear. At the outset to produce a practical dispenser it must be able to properly take care of tubes of various diameters from the largest to the
25 smallest. Consequently, the width of the holder is made to take care of the largest, but at the same time so shaped that with equal facility it can take care of the smaller tubes, in such a way that, in any event, all
30 of the contents of the tube will be expelled when the tube is entirely wound into the holder. Furthermore, the construction is such that when a tube has been entirely emptied it is only necessary to grasp the end of
35 the empty tube and pull it from the holder, exposing the slot in the key for the reception of the flattened end of a new tube. The key is really a modified cotter pin, that is to say, the pin is so modified that when in
40 the holder a uniform longitudinal slot will be formed for the reception of the flattened or seamed end of a tube, and the ends of the pin are so bent that when the free ends of the pin expand the pin will be locked against
45 lateral movement under ordinary working conditions, but nevertheless will permit the pin, as will appear, to be readily withdrawn when the holder is empty, to be reversed as may be necessary or desirable to suit the
50 convenience of the user, as to more readily permit left-hand or right-hand manipulation as may be preferred.

55 An object of the invention, in connection with the pin is to so form it as to enable it to perform a three fold function, namely, as a reversible key, a winding or collapsing

key, and lastly, a key so shaped at the end as to constitute a tooth brush holder.

Whether the tube is large or small it is desirable that it occupy the center of the
60 holder, and therefore an object of the invention is to so position and shape the lips of the holder that the tendency of the tube will be to feed laterally to the center of the holder. Another object of the invention is
65 to so construct the holder that the key may be positioned quite far forward therein so as to give plenty of space between the key and a flat surface to which the device is attached, to conveniently grip and turn the
70 key.

In the drawings illustrating the invention:

Figure 1 is a perspective view of the device with a tube therein and a tooth brush
75 in position relative to the tube for receiving the paste.

Figure 2 is a perspective view of the key.

Figure 3 is a vertical section of the holder attached to a support.

Figure 4 is a bottom plan view.

Figure 5 is a blank from which the holder
80 may be shaped.

Figure 6 is a detailed perspective view showing the eye of the key serving as a tooth
85 brush holder.

At the outset it will be understood that while the device is now intended for use in the largest commercial field where it would be useful it may be used for dispensing from
90 tubes, contents of plastic character.

Referring to the drawings:

The numeral 1 designates the holder constituted in the main by a flat back 2, perforated at suitable points for the passage of
95 screws 3, by which the device may be attached to any flat surface; side pieces 4, provided with oppositely positioned round holes 5, for the reception of the key, and inwardly and forwardly extending tongues
100 or lips 6, adapted to bear upon the tube to aid, in combination with the key, in gradually expelling the contents from the tube after the cap has been removed therefrom. The tongues are provided each with a depression
105 7 so made in manufacture as to cause the lower edges 8, of the tongues to flare outwardly, out of vertical line with the upper edges of the tongue, and the upper edges 9 to flare inwardly so that when the tube passes through the holder the effect
110 upon the tube is very much the same as would be brought about by the pressure of

the ends of two thumbs similarly positioned. It will be observed that the tongues as a whole flare outwardly. In other words, their edges are out of parallelism with the back of the holder. This flare of the tongues permits and causes a tube of the smaller size to feed to the center of the holder where it belongs, regardless of how carelessly the tube has been inserted in the holder.

10 The numeral 10 designates the key. This is made of resilient metal, (a point where it differs from an ordinary cotter pin), and normally its outer ends flare slightly as indicated at 11; but when the key is in place 15 in the holder these ends will be drawn together in one or the other of the apertures 5, to such an extent as to form a uniform longitudinal slot 12, for the reception of the flattened end or seam 13, which is common 20 to all tubes of the character upon which this device is intended to operate. Next, the key is so shaped as to form an eye 14, of a size and shape suitable for receiving the handle of a tooth brush as shown in Figure 6, so 25 that the device not only serves as a dispenser but as a tooth brush holder. The ends of the key are bent more sharply as indicated at 15, so as to prevent the withdrawal of the key from the holder by any 30 lateral movement other than that intended to effect withdrawal. However, when it is desired to withdraw the key for reversing it, for the purposes hereinbefore intimated, it is only necessary to press the ends of the 35 key together with the thumb and forefinger when it may be readily withdrawn.

The back of the holder is bent inwardly as indicated at 16 to form an abutment against which the tubes, especially the larger 40 ones swing, the abutment serving to prevent the tube from swinging to exactly vertical position, thus leaving a space between the wall and the support so that if necessary the tube may be grasped conveniently, for the 45 purpose of putting on the cap after a sufficient amount of contents has been dispensed. Furthermore, the part 16 strengthens the back of the holder.

It will be noted that there is a space 17 50 left between the tongues 7 and 8. This aids, when the holder is attached to the support, in adjusting the seam of the tube in the key as the slot in the key may be viewed through the opening.

55 The numeral 18 indicates the blank from which the holder is made and in the finished holder the parts *a* form the tongues 7 and 8. The parts *b* form the side pieces 4. The part *c* forms the back, and the dotted circles 30 indicate the points at which the material is punched to form the holes for the screws 3, and the holes 5, for the key, while the part *d* is bent forwardly in one of the operations of bending to form the part 16.

65 In operation it is only necessary to insert

the seam of the tube in the slot of the key, remove the cap and turn the key slightly, when the contents will be forced from the tube, gradually and uniformly, the amount 70 dispensed depending of course, upon the extent to which the key is turned. When the required amount of the material is dispensed the turning of the key, or the grasping of the tube will bring it to position for the convenient attachment of the cap. All of 75 the tubes, large or small are provided with a comparatively rigid cone-shaped end 19, and nipple 20. With the larger tubes this end, which is usually of soft metal, although considerably more rigid than the body of 80 the tube itself, will be crushed in the final emptying of the tube so that the last vestige of the contents may be expelled and utilized. In the smaller tubes this end 19 will be 85 crushed very flat, but since the nipple may with such sizes of tubes, pass through the opening 17, the end of the tube is worked over against the back 2, of the holder where it will be crushed between the back and the 90 key, whereby all the contents are removed.

Preferably the key fits loosely in its bearings; thus after every operation the tube may fall back automatically to almost vertical position in the holder, just as soon as the 95 fingers are removed from the key, thus immediately removing the pressure between the tube and the lips 6 to prevent continuation of the flow of contents of the tube after a sufficient quantity has been squeezed out.

It will be observed that between the flared 100 tongues 6 and the key there is formed approximately, a triangular space, wider at the bottom of the tongues than at the top due to the flare of said tongues. Through this space the tube is drawn in collapsing it, 105 and as intimated the tongues bear upon the upper portion of the tube preventing it from lifting when the key is turned, insuring tight winding of the tube on the key thereby insuring the expulsion of every vestige of 110 the contents.

Due to loosely mounting the key and to the play the tube has in the space between the key-shaft and the extruding tongues, the eye of the key may always be turned to position to bring the grip portion of the eye to 115 position to receive the brush, for obviously, should the key be tight in the bearings, at some time, the grip portion of the eye would be in vertical position, and to turn the key 120 to a position to receive the brush, would involve a winding or unwinding movement of the tube, which, in these circumstances, is not desirable.

Claims:

125 1. A device of the character described, comprising a body having a back portion adapted for attachment to a suitable support and forwardly extending side pieces, a col- 130 lapsing key mounted in the side pieces, ex-

truding means extending inward laterally from the side pieces in a position in advance of the key whereby a space between the extruding means and the key is provided through which the tube is drawn in contact with said extruding means when the key is turned to wind the tube thereon.

2. A device of the character described comprising a body having a back portion adapted for attachment to a suitable support and forwardly extending side pieces, a collapsing key mounted in the side pieces, extruding means extending inward laterally from the side pieces in a position in advance of the key, and obliquely with relation to the shaft of the key, whereby a substantially triangular space is provided between the key and extruding means through which a tube is drawn in contact with the extruding means when the key is turned to wind the tube thereon.

3. A device of the character described comprising a body having a back portion adapted for attachment to a suitable support and forwardly extending side pieces, a collapsing key mounted in the side pieces and extruding tongues rigidly connected with and extending inward laterally from the side pieces in a position in advance of the key and obliquely with relation to the shaft of the key whereby a substantially triangular space is provided between the key and extruding tongues through which a tube is drawn in contact with the extruding tongues when the key is turned to wind the tube thereon.

4. A device of the character described, comprising a body having a back portion adapted for attachment to a suitable support and forwardly extending side pieces, a collapsing key loosely mounted in the side pieces, extruding means extending inward laterally from the side pieces, in a position in advance of the key whereby a space between the extruding means and the key is provided through which the tube is drawn in contact with said extruding means, when the key is turned toward the back portion, the space being such as to permit of a swinging movement of a tube on the loosely mounted key.

5. A device of the character described,

comprising a body having a back portion adapted for attachment to a suitable support and forwardly extending side pieces, a resiliently expansible collapsing key loosely and reversibly mounted in the side pieces, extruding means extending inward laterally from the side pieces in a position in advance of the key whereby a space between the extruding means and the key is provided through which the tube is drawn in contact with said extruding means when the key is turned to wind the tube thereon.

6. A device of the character described comprising a body having a back portion adapted for attachment to a suitable support and forwardly extending side pieces, a collapsing key loosely mounted in the side pieces and having an eye portion adapted for the reception of the handle of a brush, said eye portion serving also as means for turning the key to wind the tube, extruding means extending inward laterally from the side pieces in a position in advance of the key whereby a space between the extruding means and the key is provided through which a tube is drawn in contact with said extruding means when the key is turned, the space being such that a swinging movement of the tube is permitted on the loosely mounted key whereby the eye portion of the key may be brought to position to receive the brush in substantially parallel position with said support without winding the tube.

7. A device of the character described comprising a body having a back portion adapted for attachment to a suitable support and forwardly extending side pieces, a collapsing key mounted in the side pieces, extruding means extending inward laterally from the side pieces in a position in advance of the key, the lower portion of the extruding means being out of vertical alignment with the upper portion of said means, thus producing a flare at the lower portion of the extruding means, and whereby a space between the extruding means and the key is provided through which the tube is drawn in contact with said extruding means when the key is turned to wind the tube thereon.

In testimony whereof he hereunto affixes his signature.

TITIAN W. JOHNSON.