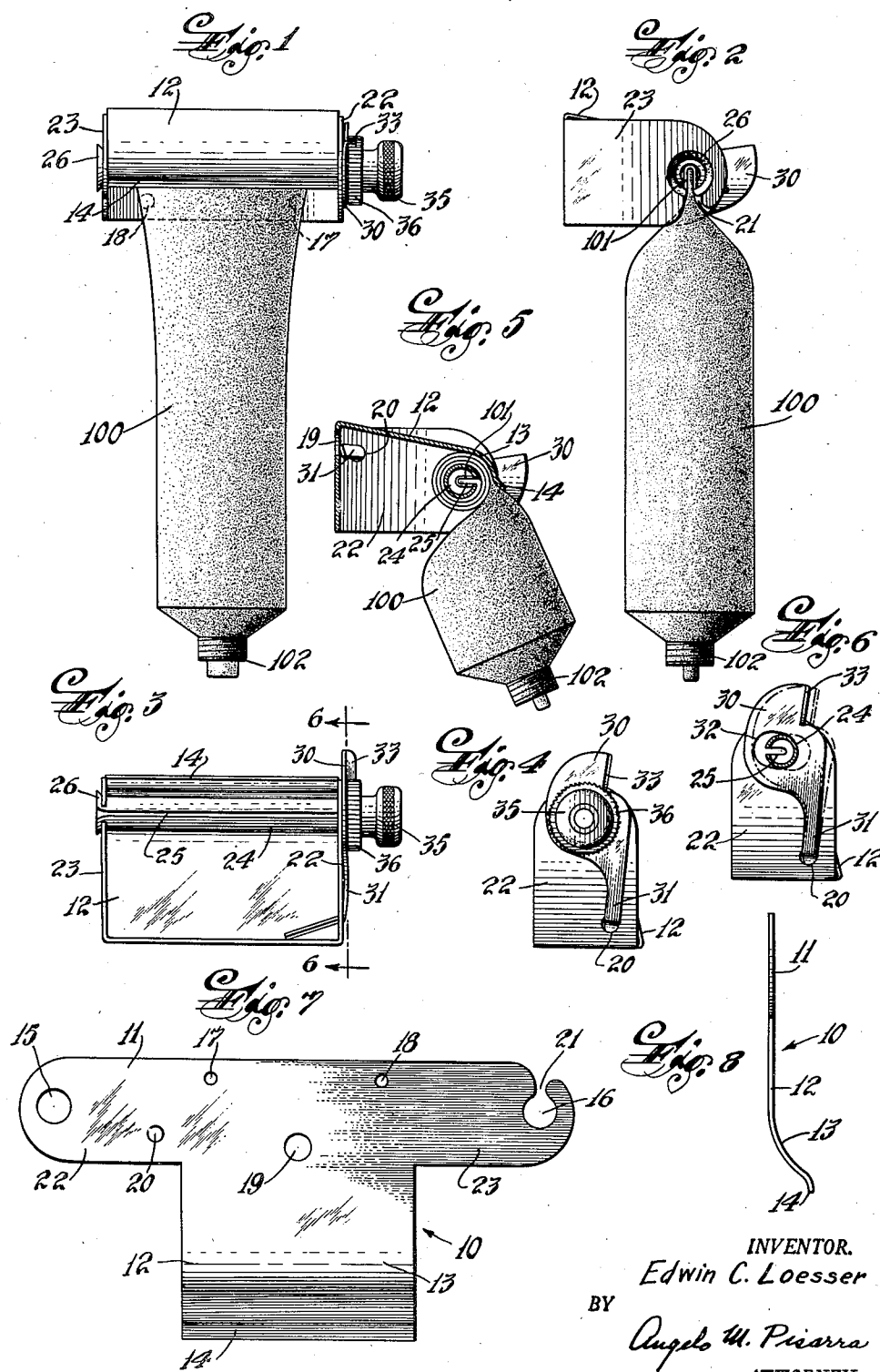


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COLLAPSIBLE TUBE HOLDER

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COLLAPSIBLE TUBE HOLDER

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This invention relates to tube holders and more particularly, to devices for holding collapsible tubes and particularly, the common collapsible tubes containing therein a paste, cream or the like such as tooth paste, shaving cream or the like. One of the main objects of this invention is to provide a device of this character which is of rugged and simple construction and which is relatively inexpensive to manufacture. The invention consists, in the preferred construction and arrangement, of the several parts which will be hereinafter fully described and claimed. Referring to the drawings:

Figure 1 is a view in front elevation of a device embodying the present invention and illustrates the manner in which a collapsible tube, containing cream or paste therein, is operably coupled with said device.

Figure 2 is a side view of Figure 1 and is taken on the left hand side of Figure 1.

Figure 3 is a view looking upwardly towards the bottom of Figure 1, but with the tube removed therefrom.

Figure 4 is a side view of the device shown in Figure 3 and is taken on the right hand side thereof.

Figure 5 is a sectional view illustrating the manner in which the cream or paste depleted portion of the tube is rolled.

Figure 6 is a side view similar to Figure 4, but with the handle and ratchet combination removed.

Figure 7 is a top plan view of a preformed blank, certain parts of which may be bent with relation to certain other parts in order to provide a supporting frame.

Figure 8 is an end view of the blank shown in Figure 6.

As shown in Figure 7, there is provided a blank 10 which is roughly of T configuration and consists of an elongated cross piece 11 having a relatively wide tail member 12 integral therewith and extending therefrom. The blank 10 is preferably a thin sheet composed of any suitable metal such as a spring metal or alloy. The tail 12 is preferably curved at 13 and has an outer marginal narrow lip 14 at its free longitudinal extremity. The outer ends of the cross arm 11 are preferably of curvilinear contour. An opening 15 extends through arm 11 near one end thereof and a corresponding opening 16 extends through the cross arm 11 near the opposite end thereof. A pair of openings 17 and 18 extend through the cross arm 11 near the free longitudinal end thereof and are located within the side planes of the tail 12. An opening 19 extends through the cross arm 11 at the mid-length thereof and close to the line of juncture between cross arm 11 and tail 12. A relatively small opening 20 extends through the arm 11, is located near one edge of the arm 11 and is roughly between the openings 15 and 19. The cross arm 11 has a guide slot 21 therein com-

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municating with the opening 16 and generally being in the form of a chute. The blank 10 as shown in Figure 6, may be readily and easily produced. After the blank 10 as shown in Figure 6, has been produced, the outer ends of the arm 11 are bent upwardly to provide a pair of roughly similar ears 22 and 23 disposed parallel to each other and having openings 15 and 16 in alignment with each other. A line through the center of said openings 15 and 16 is approximately parallel to that part of the original cross arm 11 having the openings 17-19 therein. Then the tail 12 is bent towards the mid-portion of original cross arm 11 so that it is located between the inner opposing face of the ears 22 and 23. The inner face of the curvilinear portion 13 is normally located adjacent to the openings 15 and 16 and the lip 14 extends outwardly, a slight distance beyond the outer extremities of the ears 22 and 23. A rigid hollow tubular member 24 has a narrow elongated slot 25 therein extending lengthwise from one extremity of member 24 to a point near but spaced from the other extremity thereof. That extremity of said tube through which said slot 25 extends, is bent outwardly to provide a narrow outwardly extending flange or lip 26. The length of the tubular member 24 is materially greater than the distance between ears 22 and 23. The length of the slot 25 is greater than the distance between ears 22 and 23, but less than the length of member 24.

A thin rigid flat spring metal member 30 has a tail 31 integral therewith and depending therefrom. The member 30 has an opening 32 therethrough. The width of the opening 32 is just slightly greater than the diameter of the tubular member 24 and its length is materially greater than said diameter. The free end of the tail is bent to provide a retaining element. A part of the member 30 is bent outwardly to provide a grip element and pawl 33. A small diameter grip wheel or handle 35 is integral with a ratchet wheel 36 and this integral assembly has an opening therethrough adapted to accommodate the tubular member 24.

This novel device may be readily and easily assembled. The frame element consisting of the parallel ears 22 and 23 together with the resilient backing element 12 in the relative positions as shown in Figure 3, is placed on a supporting table, then the bent portion of tail 31 is inserted through the opening 20 and the free extremity thereof bears against the inner face of the intermediate portion of the original cross arm 11. The inner face of the remainder of tail 31 and element 30 is disposed close to the outer face of ear 22, with the opening 15 communicating with the opening 23 and pawl 33 extends outwardly away from the outer face of element 30. Then the handle and ratchet assembly is disposed adjacent element 30, with the longitudinal opening therethrough being in communication with the openings 15 and

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32. The tubular member 24 is now through openings 15, 16 and 32 in that order and finally into the opening of the handle and ratchet assembly with which it is firmly and rigidly fixed in any convenient manner. The handle and ratchet assembly locks one end of the tubular member 24 from sliding longitudinally and the flange 26 locks the other end of member 24 for the same purpose while the tubular member may be rotated.

The lower edge of pawl 33 normally engages a tooth of the ratchet wheel 36 and is normally maintained in this position by the automatic spring action of tail 31. In this construction the handle 35 may be rotated to rotate the tubular member 24 in a clock-wise direction whereupon the pawl slips over the teeth of the ratchet wheel. In order to rotate the tubular member 24 in a counter clock-wise direction, it is necessary to move the pawl 33 to inoperative position. This may be done by pushing the element 30 rearwardly to disengage the pawl from the ratchet wheel. Then upon release of element 30, the element 30 moves automatically back whereupon the pawl is in operative position.

The aforedescribed device, illustrated in Figure 3, may be mounted on any support such as a wall or the like. In mounting the device, it is placed in the positions shown in Figure 1 and screws or other connecting means are inserted through openings 17, 18 and 19 to anchor the device to the supporting wall. The handle 35 is turned clockwise until the slot 21 in ear 23 is in communicating relationship with the slot 25 in the tubular member 24. Then the sealed end of a collapsible tube 100 is inserted into the open end of slot 25 and slot 21, then pushed so that it slides in slot 25 and ultimately has its side edges located well within the inner faces of the ears 22 and 23. Collapsible tubes, similar to tube 100 generally have an elongated narrow channel 101 at the sealed end. This channel 101 is located entirely within the tubular member 24 and its free longitudinal edges bear against the inside of that part of member 24 adjacent the slot to 25 to maintain the sealed end of the tube therein. After coupling the tube 100 with the mounted novel device, the tube is in the position shown in Figure 1. The cap may be removed from the discharge end 102 of the tube which is now ready for use. When some of the contents of the tube is desired, the thumb and forefinger grip the tube to squeeze the same whereupon some of its contents are expelled. After the tube has been depleted of an appreciable quantity of the cream or paste originally contained therein, that portion of the tube 100 close to the novel device is squeezed in order to move most of the material therein towards the discharge end of the tube. Then the handle 35 is turned clockwise to roll up the flattened portions of the tube against the automatic pressure action of the spring plate 12. After this is done, a number of times, the tube may be in the condition shown in Figure 5, and after the tube has become completely depleted of paste or cream contained therein, the element 30 is pushed against the action of the bent tail 31 to move pawl 33 out of operative position whereupon the pawl 33 is moved out of engagement with the teeth of the locking ratchet. While the pawl 33 is maintained in inoperative position, the discharge end 102 of tube 100 is pulled and the collapsed tube is unrolled from the tubular member 24. When the tubular member 24 has no winding of collapsed tube therein, but on the sealed end of the tube therein, the slot 25 is in the position shown in Figure 3. Then the sealed end of the collapsible

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tube is slid out of the tubular member 24, through the slotted extremity of member 24 and the slot 21.

I claim:

1. A collapsible tube mounting and supporting device comprising a base, a plurality of sides, said sides being connected to said base extending therefrom and being spaced from each other, an opening extending through each of said sides, a hollow shaft extending through said openings and projecting outwardly from said sides, said shaft having a longitudinal slot therein, said slot extending through one extremity of said tubular shaft and communicating with the space within said shaft, a handle secured to one end of said shaft for rotating said shaft, said handle being adjacent one of said sides, a slot in said other side, said slot in said other side communicating with the opening in and extending through an edge of said other side, the slotted other end of said shaft extending through said opening in said other side, and when said shaft is in one position, said slot in said other side communicating with the space within said shaft via said slot in said shaft for insertion of the normally sealed end of said collapsible tube.

2. A collapsible tube mounting and supporting device comprising a base, a pair of spaced ears secured to said base and extending therefrom, each of said ears having a transverse opening therethrough, an elongated member rotatably mounted in said openings and spaced from said base, one of said ears having a slot therein extending through an edge thereof, said slot communicating with said opening therein, said elongated member having an elongated slot therein extending through that extremity thereof located adjacent said ear having said slot, a handle connected to said elongated member for rotating said member said slots communicating with each other when said elongated member upon rotation is in a predetermined position.

3. A collapsible tube mounting and supporting device comprising a base, a pair of spaced ears secured to said base and extending therefrom, each of said ears having a transverse opening therethrough, a hollow tubular member extending through said openings, a handle secured to said tubular member at that portion thereof adjacent one of said ears, a longitudinal slot in said tubular member, said longitudinal slot extending through one extremity of said tubular member, a slot in and extending through an edge of said other ear and communicating with said opening therein, the end of said tubular member remote from said handle being adjacent said other ear and having said longitudinal slot extending through the extremity thereof, said tubular member upon rotation to a predetermined position having said longitudinal slot therein communicating with said slot in said other ear for insertion of the normally sealed end of said collapsible tube.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,546,221	Eriksson	July 14, 1925
1,747,590	McCorkindale	Feb. 18, 1930
1,854,483	Patterson	Apr. 19, 1932
2,104,954	Stanton	Jan. 11, 1938