

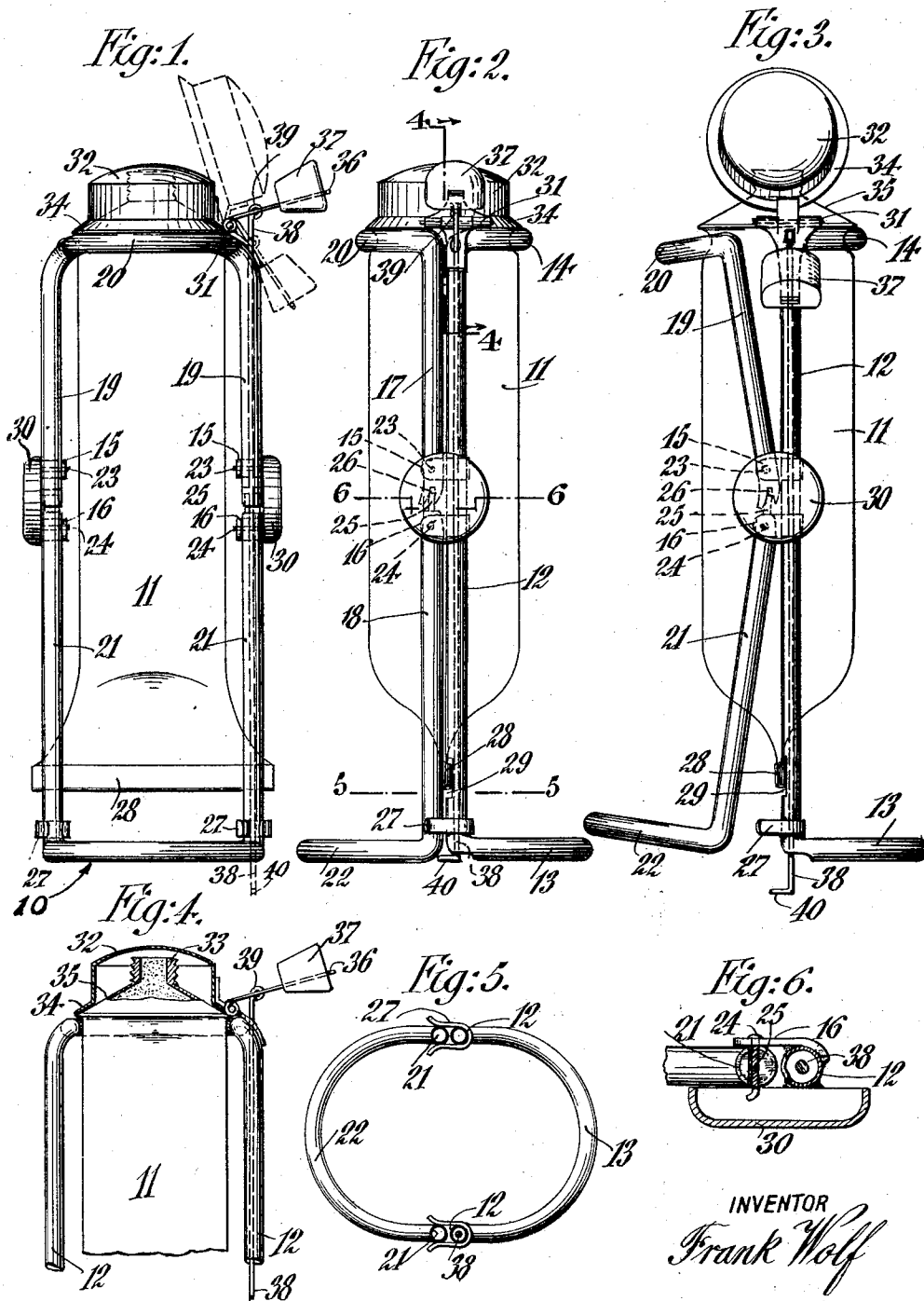
Sept. 16, 1930.

F. WOLF

1,775,797

HOLDER FOR COLLAPSIBLE TUBES

Filed Jan. 18, 1928



INVENTOR
Frank Wolf
BY *C. P. Guepel*
ATTORNEY.

UNITED STATES PATENT OFFICE

FRANK WOLF, OF NEW YORK, N. Y.

HOLDER FOR COLLAPSIBLE TUBES

Application filed January 18, 1928. Serial No. 247,500.

This invention relates to holders for collapsible tubes, such as are used for vending tooth paste, shaving cream and similar substances, and has particular reference to a portable holder with a service cover which will be automatically moved to opened and closed positions.

Collapsible tubes of the above mentioned character are provided with neck portions at their outlet ends which are screw threaded for the reception of a closure cap, and considerable inconvenience has been found in removing and applying such screw threaded closure caps, and frequently they are lost, making it necessary to subsequently leave the tube uncovered. A number of suggestions have been made with a view to providing collapsible tubes with captive caps, but all of such suggestions have been comparatively costly in that they must necessarily be applied to the tubes by the manufacturers thereof, and furthermore, they have been objectionable, because they were not convenient for manipulation.

An important object of the present invention is to provide a portable holder for collapsible tubes with a service cover which can be very quickly, and in fact, automatically opened when the tube is desired for use.

Another object of the invention is to provide such a device with means for automatically closing the service cover when the holder is replaced upon a shelf or other suitable supporting surface.

More specifically, the invention contemplates the provision of a holder which will support the collapsible tube in a substantially upright position and having a hinged cover to fit over the outlet end of the tube and capable of being swung away from the same for the purpose of removing some of the contents thereof. A suitable counterbalance weight is associated with said hinged cover, so that when the holder is taken up for use, a slight tilting motion will result in automatically opening the cover, and connected with the same is a vertically movable rod, which, when the cover is opened, extends below the plane of the base of the holder and is adapted to be

moved upwardly to close the cover, as will hereinafter be explained.

The foregoing and other objects, features and advantages of the invention will be more readily apparent from the following description, taken in connection with the accompanying drawings, wherein one form of the invention has been shown by way of illustration, and wherein—

Figure 1 is a front view of a holder having a collapsible tube in place and with the hinged cover in closed position,

Figure 2 is a side elevation of the same,

Figure 3 is a view similar to Figure 2, but showing the cover in opened position and the tube holding means in unlocked position,

Figure 4 is a fragmentary vertical transverse sectional view on the line 4—4 of Figure 2,

Figure 5 is a horizontal sectional view on the line 5—5 of Figure 2; and

Figure 6 is a fragmentary sectional view on a larger scale taken on the line 6—6 of Figure 2.

Referring now to the drawings in detail, it will be seen that the improved holder 10 is in the nature of an upright stand which is adapted to support the collapsible tube 11 in substantially upright position, leaving the same accessible for the manual extrusion of the contents thereof. The stand 10 which has been specifically illustrated, comprises a pair of spaced parallel upright members 12, which may be conveniently formed of tubing, and which are connected at their lower ends by an integral laterally curved base member 13, and they are further connected at their upper ends by a similarly curved horizontal portion 14, which, in this embodiment, functions to clamp and support the tube 11. The upright members 12, at one side of the device, are provided intermediate the ends with a pair of spaced lugs 15 and 16 for connection of a pair of tube clamping elements 17 and 18 respectively. The tube clamping element 17 may be formed of the same kind of tubing as is used for the members 12 and comprises a pair of parallel leg portions 19 which are adapted to be aligned with the upright portions 12 and which are connected

together at their upper ends by a curved integral portion 20 which is substantially similar to the portion 14 previously described. The lower member 18 is similarly formed of tubular stock and has a pair of spaced parallel leg portions 21 adapted to be axially aligned with the portions 19 and connected together intermediate their ends by a laterally curved portion 22 which extends in the opposite direction from the curved portions 13, and combines therewith in forming a supporting base for the holder 10.

The curved members 14 and 20 are so proportioned as to be capable of firmly clamping the upper end of the tube body 11 in such a manner as to deflect the wall portions thereof and actually form a retaining groove from which the tube cannot be accidentally displaced, and the arrangement is such that manipulation of the lower clamping member 18 will result in operation of the upper clamping member 17 in such a manner as to lock or unlock the tube 11 in or from the desired position. For this purpose, the leg portions 19 of the clamping member 17 are pivoted as at 23 to the ears 15, and similarly, the legs 21 of the lower clamping member 18 are pivoted as at 24 to the ears 16. Extending upwardly from the extremities of said leg members 21 and movable therewith are a pair of pins 25 which engage within suitable slots 26 in the extremities of the leg portions 19 between said pivotal connections 23 and 24. It will be evident, that by virtue of this arrangement, pivotal movement of the lower member 18 will result in a similar movement of the upper member 17 and preferably, a pair of spring clips 27 are secured to the upright members 12 adjacent the lower ends thereof and adapted to yieldingly engage the lower ends of the leg portions 21 in such a manner as to hold the parts in tube clamping position.

The spacing between the upright members 12 is preferably less than the width or thickness of the closed end 28 of the tube 11, and by virtue of this arrangement, it is possible to engage and firmly hold said lower end of the tube, as clearly shown in Figures 1 and 2. For this purpose, the upright portions 12 are provided on their inner sides with transverse notches or grooves 29, within which said lower end 28 of the tube is adapted to take a seat and to be held therein by the spaced leg portions 21 of the clamping member 18. If desired, a pair of dished finger pieces 30 may be secured to the upright members 12 in such a manner as to overlie the hinge connections 15, 16, 23 and 24, whereby to conceal and protect the same and provide a convenient grip whereby the inner device may be lifted for use.

Carried by the upper end of one of the upright members 12 is a hinge connection 31 for a service cover 32, said cover being adapt-

ed to extend over the outlet end 33 of the tube 11, and preferably having a peripheral flange portion 34 which snugly fits against the inclined cover 35 of said tube. Secured to said cover in any suitable manner is a substantially rigid arm 36 on which is mounted a counterbalance weight 37, which, with respect to the pintle of the hinge 31, is disposed at the opposite side from the service cover 32. A longitudinally extending rod 38 is disposed within the upright member 12 with which the hinge 31 is associated; said rod being slightly greater in length than the height of the stand or holder 10. The upper end of said rod 38 is connected as at 39 to the arm 36 and its lower end is provided with an off-set portion 40, which, when the cover 32 is in its open position, extends downwardly below the plane of the members 13 and 22, as best shown in Figure 3.

In the use of the device, the tube 11 is first placed in position between the fixed and adjustable members of the holder, whereupon the clamping members 17 and 18 are swung inwardly against the upright members 12 to effect the clamping engagement with the tube, as previously described. Thereupon, the screw threaded cap which is supplied to the tubes by the manufacturers can be removed and if desired, discarded, and the holder 10 placed upon a shelf or other suitable support. In so placing the holder, the off-set portion 40 of the longitudinally moving rod 38 is forced upwardly, and such movement is transmitted to the arm 36, overcoming the influence of the weight 37 and automatically moving the service cover 32 to its closed position, as shown in Figure 4.

It will be evident from the foregoing, that a tube holder of extremely simple construction has been provided, which will be of neat appearance and desirable, by virtue of the fact that collapsible tubes can be supported in upright position, occupying less space than is necessary when they are used as at the present time. The contents of the tube 11 can be very easily extruded, and the user will not be required to waste any time or effort in removing and replacing a screw threaded cap, and the desirability of this feature will be very easily recognized by those familiar with the art. Obviously, the invention is susceptible of numerous modifications in the details of construction and arrangement of the parts, and the right is herein reserved to make such changes as fall within the scope of the appended claims without departing from the spirit of the invention.

Having thus described my invention, what I claim is:—

1. In a holder of the class described, a portable stand for supporting a collapsible tube in upright position, a service cap for the outlet end of the tube, said cap being

70

75

80

85

90

95

100

105

110

115

120

125

130

hingedly mounted on the stand, and movable means for automatically closing said cap when the stand is placed upon a supporting surface.

5 2. In a holder of the class described, a portable stand for supporting a collapsible tube in upright position, a service cap for the outlet end of the tube, said cap being hingedly mounted on the stand, and means for automatically opening said cap as the holder is lifted for use.

10 3. In a holder of the class described, a portable stand for supporting a collapsible tube in upright position, a service cap for the outlet end of the tube, said cap being hingedly mounted on the stand, means for automatically opening said cap as the holder is lifted for use, and movable means for automatically closing said cap as the stand is re-

20 placed upon a supporting surface.
4. In a holder of the class described, a portable stand for supporting a collapsible tube, a service cap for the outlet end of the tube, said cap being hingedly mounted on the stand, and gravity actuated means extending

25 longitudinally of the tube for opening said cap when the holder is lifted for use.
5. In a holder of the class described, a portable stand for supporting a collapsible tube, a service cap for the outlet end of the tube, said cap being hingedly mounted on the stand, gravity actuated means for opening said cap when the holder is lifted for use, and cap closing means normally extending

30 below the plane of the base of the stand when the cap is open.
6. In combination with a stand for supporting a collapsible tube, a service cover for the outlet end of the tube pivoted to the upper end of the stand, means associated with said cover to automatically open the same as the stand is lifted for use of the tube, and longitudinally extending means cooperating with said opening means to automatically

45 close the cover when the stand is replaced upon a supporting surface.
7. In combination with a stand for supporting a collapsible tube, a service cover for the outlet end of the tube pivoted to the upper end of the stand, means including a weight acting to automatically open the cover, and a longitudinally extending rod connected at its upper end to the cover and having its lower end adapted to be moved to positions below the base of the stand or flush with the same respectively when the cover is moved to opened or closed positions.

50 8. In combination with a stand for supporting a collapsible tube, a service cover for the outlet end of the tube pivoted to the upper end of the stand, means for automatically opening the cover, including an arm rigidly secured to the cover and a weight on the outer end of said arm, and a longitudinally slid-

65 able rod concealed within a portion of the

stand, said rod being longer than the height of the stand and being connected at its upper end to said arm, and having its lower end flush with the base of the stand when the cover is in closed position.

9. In a holder of the class described, a portable stand for supporting a collapsible tube, a service cap connected with the stand and operative into and out of a position in which it will cover the outlet end of the tube, and means associated with the stand and cap adapted to be operated consequent upon impingement against an object for operating said cap in one direction.

In testimony that I claim the foregoing as my invention, I have signed my name hereto.

FRANK WOLF.

70
75
80
85
90
95
100
105
110
115
120
125
130