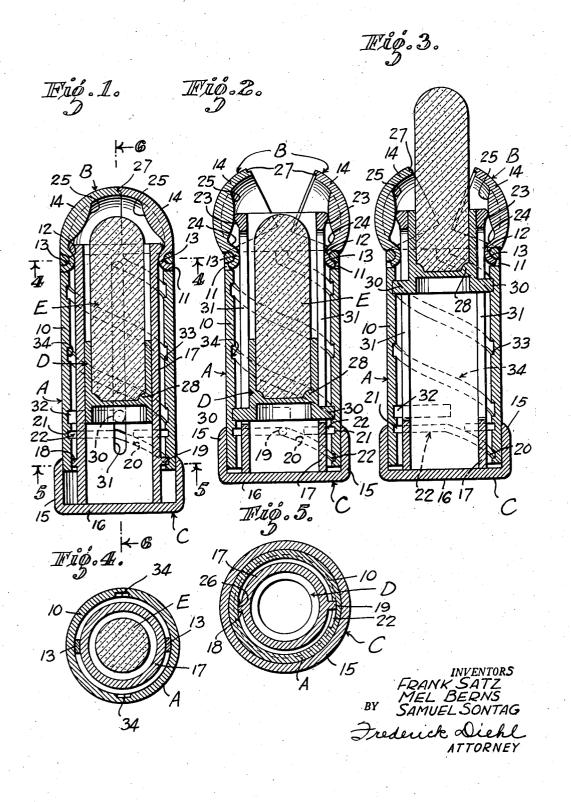
F. SATZ ET AL ARTICLE HOLDER 2,443,361

Filed Aug. 21, 1945

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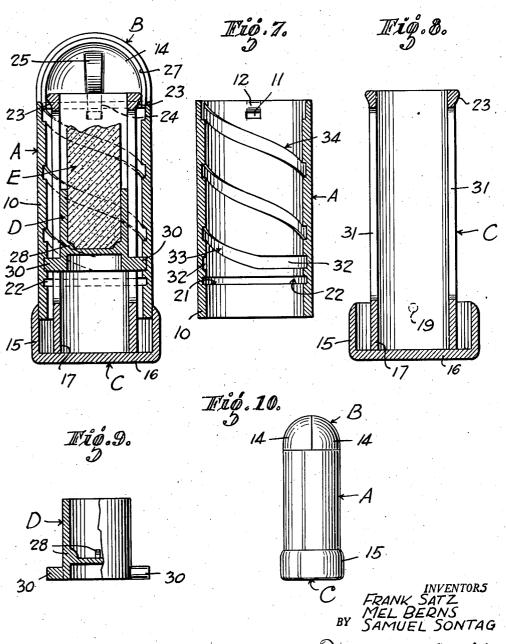
# June 15, 1948.

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Fig.G.



Frederick Diehl

# 2,443,361

# UNITED STATES PATENT OFFICE

### 2.443.361

## ARTICLE HOLDER

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## 12 Claims. (Cl. 206-56)

1 This invention relates generally to receptacles or dispensing packages, and more particularly to holders for cosmetic sticks and other articles.

An object of this invention is to provide an article holder which embodies a case or handle 5 adapted to enclose a stick of lip rouge or other article, and having a cover movably mounted to open or close the case according as the article is advanced from the case for use, or is retracted into the case, all by a novel arrangement and 10 functioning of elements enabling a cosmetic stick or other article of maximum length to be contained in a case of minimum size, whereby to provide a device of extreme compactness in relation to the size of the cosmetic stick, having "15 the important advantage of convenient manipulation of a unitary structure free of all extraneous parts such as a separate cap or closure which may be lost or misplaced.

Another object of this invention is to pro--20 vide an article holder of the above described character which is structurally distinguished by the smooth exterior surface of the case whose cover, when closed, affords a perfect seal against the ingress of foreign matter, and is maintained '25 closed against accidental opening by jarring and such other movements as might tend to open the cover during carrying of the device in a handbag or on the person, to the end of fully protecting the cosmetic stick or other article.

It is a further object of this invention to provide an article holder which in its more specific aspect, embodies mounting and actuating mechanisms for the cover and article by which operation thereof is effected in successive order with 35 tube 10 is the annular manipulating flange 15 of a novel arrangement of rotatable and axially movable parts enabling an article of maximum length to be enclosed in and dispensed from a relatively small and slender case.

vention resides in the combinations, arrangements and functional relationships of elements as set forth in the following specification and particularly pointed out in the appended claims.

In the accompanying drawings,

Figure 1 is a longitudinal axial sectional view of one form of article holder embodying this invention, and showing the fully closed position of the holder;

Figure 2 is a view similar to Figure 1, with the 50 cover of the holder opened;

Figure 3 is a view similar to Figure 1, with the cover opened and the cosmetic stick or other article moved to an advanced position for use;

**2**® taken on the lines 4-4 and 5-5, respectively, of Figure 1;

Figure 6 is a longitudinal sectional view taken on the line 6—6 of Figure 1;

Figure 7 is a detail longitudinal sectional view of the case embodied in the invention;

Figure 8 is a detail longitudinal sectional view of the combined actuator and guiding element embodied in the invention;

Figure 9 is a view in side elevation; partly broken away, of the article support or carrier; and

Figure 10 is a view of the artcile holder in side elevation, and in fully closed position.

Referring specifically to the drawings, the invention in its illustrated embodiment comprises a case A constituting a handle in the particular use of the invention as a holder for a cosmetic stick, and composed of cylindrical tube 10 of suitable plastic or other material. The case A is open at both ends and is provided adjacent one end at diametrically opposed locations, with openings II of generally rectangular outline extending through the wall of the tube. Between the openings II and the respective end of the tube 10, its wall is rounded internally into the openings to form journal portions 12 on which are mounted semi-cyclindrical bearing portions . 13 on the sections 14 of a two-section dome-30 shaped cover B to pivotally or rockably mount these sections on the case A for movement to occupy the closed and open positions shown in Figures 1 and 2, respectively.

Telescopically receiving the other end of the a cup-shaped actuator C which also includes a tube 17 projecting from the transverse wall 16 of the actuator in concentric relation to the flange 15, and extending freely through the tube With these and other objects in view, the in- 40 10. At diametrically opposed locations, the tube 17 is provided with outwardly projecting radial pins 18 and 19, the former of which is adapted to slide against the internal surface of the tube 10 to maintain the tube 17 centered in the tube 45 10 in opposition to the lateral thrust imposed on the tube 17 by working of the other pin 19 in the active and dwell portions 20 and 21, respectively, of a cam groove 22 in the internal surface of the tube 10.

The active portion 20 of the camegroove 22 is inclined or helically arranged for co-action) with the pin 19 in feeding the actuator C axially in one directions or the other according as the actuatorais manually rotated on one direction Figures 4 and 5 are transverse sectional views 55 or the other. Upon feeding of the actuator ax-

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ially by the pin 19 and groove 22 the relatively short distance from the extreme position shown in Figure 1 to that shown in Figure 2, the pin 19 enters the circumferential dwell portion 21 of the groove 22 so that continued rotation of the actuator will be ineffective to further feed the actuator axially, for a purpose to be later fully described.

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At its other or free end, the tube 17 is provided with an annular camming lip, the beveled 10 or inclined surface of which constitutes a cam 23 adapted to co-act with complementary cam surfaces 24 on the bearing portions 13 of the cover sections 14 to move the latter to the closed position shown in Figure 1 in response to axial feeding of the actuator C in one direction. The cam 23 also co-acts with oppositely beveled or inclined cam surfaces 25 on the cover sections, to move the latter to the open position shown in Figure 2, in response to axial feeding of the actuator in the opposite direction.

At a location confronting the pin 18 when the actuator C occupies the extreme axial position wherein the cover sections 14 are closed, the internal surface of the tube 10 is provided with a slight protuberance 26 over which the end of the pin rides to set up sufficient friction to releasably retain the actuator against accidental movement, thus maintaining the cover sections closed against being opened by jarring or movements of the device in a handbag or pocket. The confronting diametric edges of the cover sections 14 are provided with a lapped joint 27 to provide a highly efficient seal against the ingress of dust, dirt and other foreign substances into the case.

Slidably mounted in and guided by the tube 17 of the actuator C is an article support or carrier D which, in the present instance is a relatively deep cup rigidly supporting a cosmetic stick E which is snugly received therein and is confined against rotation by teeth 28 in the support embedded in the cosmetic stick. Projecting at diametrically opposed points from the support D are pins 30 which extend through longitudinal slots 31 in the actuator tube 17, so as to operatively connect the support to the actuator C for rotation as a unit, yet permit relative axial movement between the support and actuator.

The ends of the pins 30 are adapted to work in the circumferential dwell portions 32 of cam 50 grooves 33 in the internal surface of the case tube 10, and in helical active portions 34 of such grooves which form continuations of each other for co-action with the pin 19 and its cam groove 22 in actuating the cover sections 14 and the 55 article support D in a successive order in the operation of the invention which is as follows:

With the working parts of the invention occupying the positions shown in Figure 1 wherein the cosmetic stick E is retracted into the case A and the sections 14 of the cover B are closed, the pin 18 will co-act with the protuberance 25 in frictionally restraining the actuator C against movement, so as to retain the cover sections closed. In this position of the parts, the pin 19  $\,65$ will be disposed at the starting end of the active portion 20 of the cam groove 22, and the pin 30 will be at the starting end of the dwell portion 32 of the cam groove 33.

To open the device for use of the cosmetic stick 70 E, rotational movement of the actuator C is effected in a direction for the pin 19 to travel in the active portion 20 of the cam groove 22 and thus feed the actuator axially for co-action of the cam

cams 25 of the cover sections 14, to move the latter about their pivotal mountings 12-13 to the open position of the cover sections shown in Figure 2. This movement of the cover sections from closed to open position is accomplished with a relatively short axial motion of the actuator, as will be apparent from Figures 1 and 2. During this opening movement of the cover sections which requires only about ninety degrees of rotational movement of the actuator C, the pins 30 travel idly in the dwell portions 32 of the cam grooves 33, so that the article support D rotates with the actuator as a unit, but is confined against axial feeding by the actuator, the slots 15 31 being of an excess length to provide lost motion permitting the aforestated axial movement of the actuator relative to the pins 30.

However, upon completion of the opening movement of the cover sections, the pin 19 will enter the circumferential dwell portion 21 of the 20 cam groove 22, so that further rotational movement of the actuator C will no longer feed it axially. As the pin 19 enters the dwell portion 21, the pins 39 leave the dwell portions 32 of the cam grooves 33 and enter the active portions 34 of such grooves for co-action therewith in axially feeding the article support D as rotation of the latter by the actuator through the operative connection of the pins 30 and slots 31 in the tube 17 is continued in the original direction, thus ad-30 vancing the cosmetic stick E from the case A between the opened sections 14 of the cover B without touching the latter, as is shown in Figure 3. To fully advance the cosmetic stick from the 35 case A requires approximately one revolution of the actuator C.

To close the device, the actuator C is rotated in the reverse direction to first cause the cosmetic stick to be retracted by the pins **30** and co-acting 40 portions 33 of the cam grooves 34 in feeding the article support D inwardly of the case to its fully retracted position shown in Figure 2, following which continued rotation of the actuator will cause the pins 30 to enter the dwell portions 32 45 of the cam grooves 33 and the pin 19 to leave the dwell portion 21 of the cam groove 22 for coaction of the pin 19 with the active portion 20 of the cam groove 22 in reversely feeding the actuator C towards the position shown in Figure 1.

During this movement of the actuator, the cam 23 on the tube 17 of the actuator engages the cam surfaces 24 of the cover sections 14 to move the latter to, and maintain them in closed position upon completion of such movement of the actuator, so that all working parts will be restored to the positions shown in Figure 1.

From the foregoing description, it will be manifest that the actuations of the cover sections 14 and the article support D are accomplished in 60 successive order, and that the provision of the above described arrangement and functional relationship of elements, a cosmetic stick of maximum length in proportion to the length of the case can be housed therein, thus providing for a large quantity of the lip rouge in a compact, attractive package, and all while enabling the rouge to be advanced from the case for use, or returned to the case by a simple, convenient and quick manipulation of the actuator C.

We claim:

1. A device of the class described comprising: a case; a cover mounted on the case for movement to open and close an end of the case; an 23 on the leading end of the tube 17 with the 75 article support mounted in the case for movement axially thereof to occupy a retracted position in the case and an advanced position wherein an article carried by the support will be exposed from said end of the case for use; a rotatably mounted actuator having a tubular 5 portion extending into said case and in which said article support is guided in its movements; means coacting with said actuator and case to axially move the actuator relative to the case in one direction or the other according as the actu- 10 ator is rotated in one direction or the other; means co-acting with said tubular portion and cover to open or close the latter according as the actuator is axially moved in said one direction or the other; and means co-acting with said article 15 cam provided with an active portion and a dwell support, tubular portion and case to confine the article support against axial movement during opening and closing of the cover, and operable in response to continued rotation of the actuator following opening or closing of the cover as 20 aforestated, to accordingly move the article support to said advanced or retracted position:

2. A device of the class described comprising: a case; a cover movably mounted on the case for movement to open and close same; an actu-25.ator having a tubular portion extending into the case; means co-acting with said case and actuator to mount the latter for axial movement relative to the case in one direction or the other according as the actuator is rotated in one direc-30tion or the other; means co-acting with said tubular portion and cover to open or close the latter according as the actuator is axially moved in said one direction or the other; an article support; means mounting said support in said tubular portion for movement axially and nonrotatably relatively to the actuator; and means co-acting with said actuator and case to confine the article support against axial movement during axial movement of the actuator, and operable in response to continued rotation of the actuator following sufficient rotation thereof to open or close the cover, to accordingly axially move the article support to an advanced position wherein an article carried by the support 45 portion; an actuator for the cover having means. will be exposed from the case for use, or will be retracted into the case.

3. A device of the class described comprising: a case; a cover opening and closing the case; an actuator for the cover; means mounting the ac- 50 tuator for axial movement relative to the case in one direction or the other in response to rotation of the actuator in one direction or the other; means co-acting with said actuator and cover to open or close the latter according as the actuator is axially moved in one direction or the other; an article support; means mounting said support in the case for movement axially relative to the actuator; and means co-acting with said actuator and case to confine the article support against axial movement during said axial movement of the actuator, and to advance or retract the article support axially according as continued rotation of the actuator following sufficient rotation thereof to open or close the cover, 65 is effected.

4. A device of the class described comprising: a case: a cover opening and closing the case; an actuator for the cover; means mounting the actuator for axial movement from one extreme po- 70 sition to another in response to a predetermined rotational movement of the actuator, means operable beyond the aforestated movement of the actuator, by which the actuator will be freed for continued rotation without being axially moved; 75 with an active portion and a dwell portion; cover

means for opening or closing the cover according as the actuator is axially moved to said one position or the other; an article support; means mounting said support in the case for movement. axially relative to the actuator, to occupy advanced and retracted positions; and means confining the article support against axial movement during said axial movement of the actuator. and operable in response to said continued rotation of the actuator to move the article support to said advanced position.

5. A device of the class described comprising. a case; a cover opening and closing the case; an actuator for the cover; the case having a first portion; an actuator for the cover having means co-acting with the active portion of said cam to move the actuator axially from one extreme position to another in response to a predetermined rotational movement of the actuator, beyond which said means co-acts with the dwell portion of said cam to permit continued rotation of the actuator without axially moving same: the actuator and cover having means operable to open or close the cover according as the actuator is axially moved to said one position or the other; and an article support movably mounted in the case; the case having a second cam provided with a dwell portion and an active portion; and means operable in response to rotation of. the actuator as aforestated, to co-act with said dwell portion of the second cam in maintaining the article support against axial movement, while said first means is co-acting with the active portion of the first cam to open said cover, and co-

25 acting with said active portion of the second cam to move the article support to an advanced position while said first means is co-acting with the dwell portion of the first cam to confine the actuator against further axial movement. 40

6. A device of the class described comprising: a case; a cover opening and closing the case; an actuator for the cover; the case having a first cam provided with an active portion and a dwell

co-acting with the active portion of said cam to move the actuator axially from one extreme position to another in response to a predetermined rotational movement of the actuator, beyond which said means co-acts with the dwell portion of said cam to permit continued rotation of. the actuator without axially moving same; the actuator and cover having means operable to open or close the cover according as the actuator 55 is axially moved to said one position or the other; and an article support movably mounted in the case; the case having a second cam provided with a dwell portion and an active portion; said actuator having an axially extending slot; said 60 article support having a pin projecting through said slot to compel rotation of the article support with the actuator; said pin co-acting with said dwell portion of the second cam while the actuator is being rotated as aforestated, to maintain the article support against axial movement while said first means is co-acting with the active portion of the first cam to open said cover, and co-acting with said active portion of the second cam to move the article support to an advanced position while said first means is co-acting with the dwell portion of the first cam to confine the

actuator against further axial movement. 7. A device of the class described comprising: a case having two cam grooves, each provided

sections pivotally mounted on the case to open and close an end of same; an actuator having a longitudinally slotted tubular portion extending into the case, and provided with a pin co-acting with the active portion of one of said cam grooves to move the actuator axially relative to the case in response to rotation of the actuator, and to co-act with the dwell portion of said one cam groove to confine the actuator to rotational movement; and an article support slidably mounted 10 in said tubular portion and having a pin projecting through the slot of the latter for coaction therewith in compelling rotation of the article support with the actuator; said last pin co-acting with the dwell portion of the other of 15 said cam grooves while the actuator is being rotated as aforestated, to maintain the article support against axial movement while the first said pin is co-acting with the active portion of said one cam groove to open said cover sections, and 20 co-acting with said active portion of the other cam groove to move the article support axially to an advanced position while the first pin is co-acting with the dwell portion of said one cam to confine the actuator against further axial 25 movement.

8. A device of the class described comprising: a case having two cam grooves, each provided with an active portion and a dwell portion; cover sections pivotally mounted on the case to open 30 and close an end of same; an actuator having a longitudinally slotted tubular portion extending into the case, and provided with a pin co-acting with the active portion of one of said cam grooves to move the actuator axially relative to 35 the case in response to rotation of the actuator, and to co-act with the dwell portion of said one cam groove to confine the actuator to rotational movement; and an article support slidably mounted in said tubular portion and having a pin 40 projecting through the slot of the latter for coaction therewith in compelling rotation of the article support with the actuator; said last pin co-acting with the dwell portion of the other of said cam grooves while the actuator is being ro- 45 tated as aforestated, to maintain the article support against axial movement while the first said pin is co-acting with the active portion of said one cam groove to open said cover sections, and co-acting with said active portion of the other 50 cam groove to move the article support axially to an advanced position while the first pin is coacting with the dwell portion of said one cam to confine the actuator against further axial movement; said tubular portion of the actuator hav- 55 ing a stabilizing pin riding against the wall of the case to maintain the first said pin of the tubular portion in working engagement with its cam groove.

a case having two cam grooves, each provided with an active portion and a dwell portion; cover sections pivotally mounted on the case to open and close an end of same; an actuator having a longitudinally slotted tubular portion extending 65 into the case, and provided with a pin co-acting with the active portion of one of said cam grooves to move the actuator axially relative to the case in response to rotation of the actuator, and to coact with the dwell portion of said one cam groove 70 to confine the actuator to rotational movement; and an article support slidably mounted in said tubular portion and having a pin projecting through the slot of the latter for co-action therewith in compelling rotation of the article sup- 75

port with the actuator; said last pin co-acting with the dwell portion of the other of said cam grooves while the actuator is being rotated as aforestated, to maintain the article support against axial movement while the first said pin is co-acting with the active portion of said one cam groove to open said cover sections, and coacting with said active portion of the other cam groove to move the article support axially to an advanced position while the first pin is co-acting with the dwell portion of said one cam to confine the actuator against further axial movement; said tubular portion of the actuator having a stabilizing pin riding against the wall of the case to maintain the first said pin of the tubular portion in working engagement with its cam groove; said wall of the case having a protuberance with which said stabilizing pin co-acts to releasably retain the actuator in its position of rotational adjustment wherein the cover sections are closed.

10. A device of the class described comprising: an open ended cylindrical case having two internal cam grooves, each provided with an active portion and a dwell portion; cover sections mounted on the case at one end thereof for pivotal movement laterally of the case to open said one end of the case; an actuator having an annular manipulating flange telescopically receiving the other end of the case and provided with a longitudinally slotted tubular portion extending concentrically into the case; said tubular portion having an annular cam and said cover sections having cam surfaces co-actable therewith to open or close the cover sections according as the actuator is moved axially in one direction or the other; said tubular portion having a pin co-acting with the active portion of one of said cam grooves to move the actuator axially in response to rotation of the actuator, and to co-act with the dwell portion of said one cam groove to confine the actuator to rotational movement; and an article support slidably mounted in said tubular portion and having a pin projecting through said slot of the tubular portion to compel rotation of the article support with the actuator; said last pin co-acting with the dwell portion of the other of said cam grooves while the actuator is being rotated as aforestated, to maintain the article support against axial movement while the first said pin is co-acting with the active portion of said one cam groove to open said cover sections, and co-acting with the active portion of the other cam groove to move the article support axially to an advanced position while the first pin is co-acting with the dwell portion of said one cam groove to confine the actuator against further axial movement.

11. A device of the class described comprising: a case; a cover mounted on the case for move-9. A device of the class described comprising: 60 ment to open and close same; an article support in the case; a rotatably mounted actuator for the article support; means for moving the actuator axially in response to rotation thereof; means for actuating the cover in response to rotation of said actuator; and means operatively connecting the article support to the actuator, by which the article support will be confined against movement towards an advanced position relative to the case during said axial movement of the actuator, whereas continued rotational movement of the actuator following sufficient rotation thereof in a direction to open the cover, will move the article support towards said advanced position.

12. A device of the class described comprising:

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Number

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a case; a cover mounted on the case for movement to open and close same; an article support in the case; a rotatably mounted actuator for the article support; means for moving the actuator axially in response to a predetermined ro-5 tational movement thereof in one direction, and to be ineffective to axially move the actuator during further rotation thereof; means co-acting with the actuator and cover to open the latter in response to the aforesaid axial movement of 10 the actuator; and means operatively connecting the article support to the actuator, by which said predetermined rotational movement thereof will be ineffective to move the article support, and further rotational movement of the actuator will 15 axially move the article support towards an advanced position relative to the case.

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