Feb. 9, 1943. E. LUX 2,310,641

DISPLAY BOX

Filed May 28, 1941

Fig. 1.

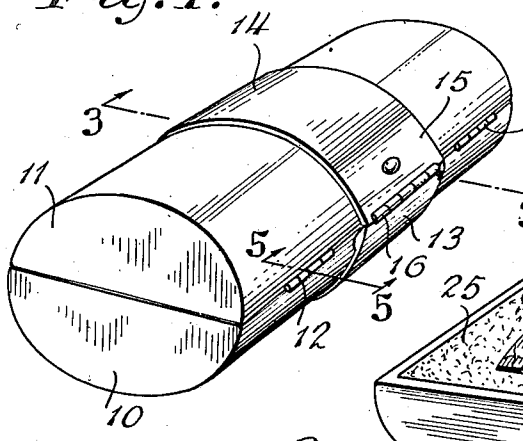


Fig. 2.

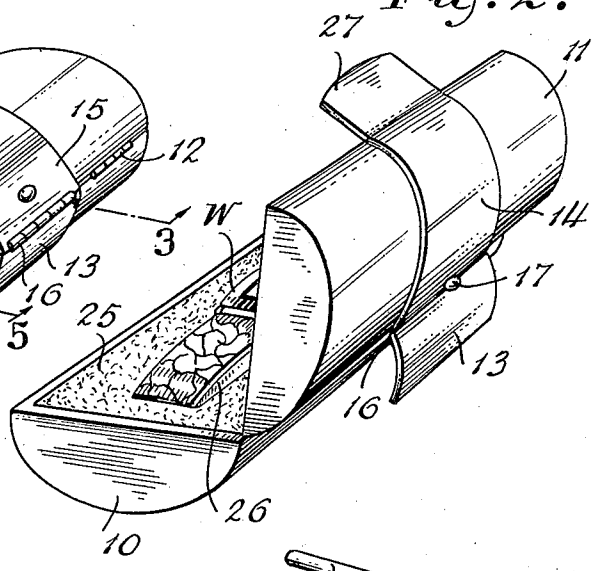


Fig. 3.

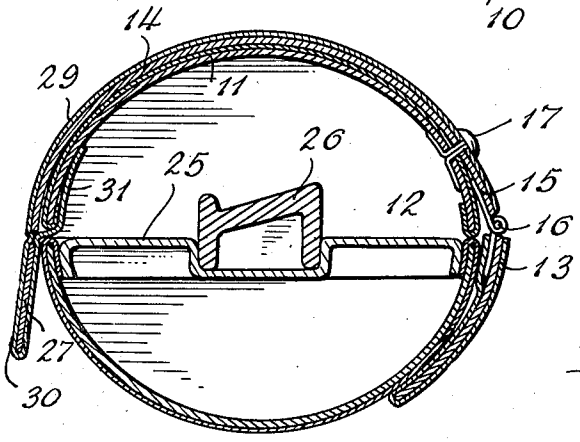


Fig. 4.

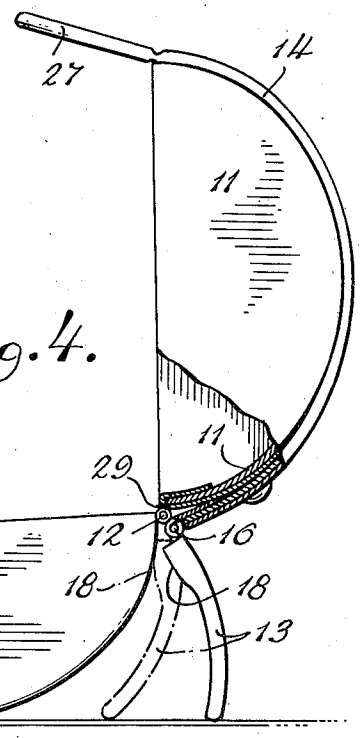
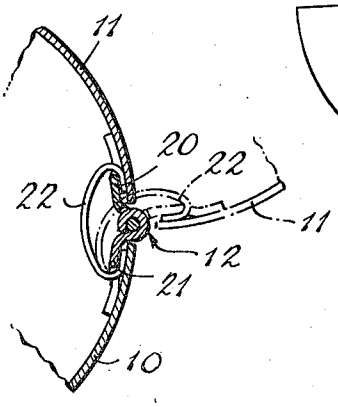


Fig. 5.



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UNITED STATES PATENT OFFICE

2,310,641

DISPLAY BOX

Eugene Lux, New York, N. Y., assignor to Bulova Watch Company, Incorporated, New York, N. Y., a corporation of New York

Application May 28, 1941, Serial No. 395,512

6 Claims. (Cl. 206—75)

This invention relates generally to display boxes for items of jewelry and the like.

It is the practice today to package items of jewelry such as wrist watches and the like in attractive boxes so contoured and ornamented that when the box is opened the item is presented to the eye in position against an attractive background, and in a package which itself is contoured and ornamented so as to make the entire box assembly attractive.

To this end, the boxes are given shapes and contours of various kinds, and this invention has particular reference to boxes, which are contoured exteriorly so that when placed upon a surface, they will be in a state of instability, unless some provision is made to overcome this. The particular type of box to which my invention has reference is one in which the base is curved so that when placed upon a surface, the box will readily swing or wobble.

One of the objects of my invention is the provision of an arrangement in a box having a base of unstable shape, whereby the box can be set on a surface in a definite position of stability.

This object I attain generally by an arrangement whereby after the box is opened, there would be forced out of its normal position within the contours of the box's exterior, a device which temporarily assumes an abnormal position exterior to the box contours in which it engages the supporting surface to hold the box against movement, so that the box, when opened for display of the item will stay in a predetermined position.

My invention relates generally to a new and improved box, in which the outer contour of the base is curved or otherwise unstable, and the box is nevertheless rendered stable for display purposes.

These objects and such further objects as will hereinafter appear or be pointed out are attained in the illustrative embodiment of my invention shown in the drawing, in which:

Figure 1 is a perspective view of my improved display box, showing the box closed;

Figure 2 is a perspective view similar to Figure 1, except that the cover is shown in a raised position and with the prop or leg in its supporting position;

Figure 3 is a sectional view on an enlarged scale, taken substantially in the plane indicated by the line 3—3 of Figure 1;

Figure 4 is an end view of my improved display box on an enlarged scale with the cover of the box raised and the prop in its supporting position, and portions thereof being broken away to disclose the construction; and

Figure 5 is a sectional view on an enlaged scale taken substantially in the plane indicated by the line 5—5 of Figure 1, and showing the dead center hinge construction.

Referring now to the drawing in detail, I have shown at 10 and 11 respectively the base and the cover of a display box, united by the hinges 12, whereby the cover may be brought from its closed position of Figure 1 into the open position shown in Figure 2, or vice versa.

It will be observed that the box is shown as being of a generally cylindrical configuration, but with the cross-section elliptical, instead of circular. When the box is placed on a level surface, it will be readily rocked or swayed from its position of equilibrium, because the contact of the base of the box with the surface is along a single straight line, about which pivoting readily occurs. While the elliptical cross-section gives sufficient stability to the box as long as the box is closed, it will be observed that when the box is open, as shown in Figure 2, the box is overbalanced by the cover and will topple over rearward.

In order to stabilize the box when the cover is raised, and to prevent its toppling over, I have shown a prop or leg 13, which is carried by a member 14, which is shown by way of example as in the form of a sheet or plate superposed over the cover of the box and conforming to the configuration thereof. I have found this construction satisfactory in practice, as well as being attractive in appearance. One end portion 15 of the plate 14 is shown offset slightly outwardly from the cover of the box and as carrying a hinge 16, the pintle of which is also offset from the cover and also offset from the axis of the hinges 12, both in a horizontal and in a vertical direction. The plate 14 may be secured to the cover in any suitable or preferred manner, as by rivets or other fastening means indicated at 17, or by cementing, or by both riveting and cementing.

The hinge 16 is shown secured at one side to the end portion 15 of the plate 14, and at the other side it is secured to the aforementioned prop 13. The latter, as clearly shown in Figures 1 and 3, may be contoured to conform to the configuration of the box, whereby it is in an unobtrusive position and merges with the general outlines of the box, as shown in Figures 1 and 3, when the box is closed, which serves to impart an attractive appearance to the box.

Adjacent to the hinge 16 the prop 13 is shown provided with a protruberance 18 which serves as a fulcrum about which the prop 13 may pivot. This action will be clearly understood from an inspection of Figures 3 and 4. As the cover 14 is swung about the hinges 12, the hinge 16 describes an arc about the hinges 12, which will bring it from the position shown in Figure 3 to the position shown in Figure 4. It will now be observed that the hinge 16 has travelled inwardly

towards the base 10, thereby moving the upper end of the prop 13 with it, that is in an outward direction toward the base 12. As a result of this inward motion the prop 13 pivots about the point of contact of the protuberance 18 with the base 10, and moves outwardly from the position shown in Figure 3 and finally reaches the position shown in full lines in Figure 4. The dot and dash line position of the prop 13 in Figure 4 indicates an intermediate position thereof.

As will be apparent from Figure 4, when the prop 13 is in the full line position shown therein, it acts as a support which prevents pivotal movement of the base 10, even though the cover is in the position shown in the said figure.

Obviously, if desired, the prop may be manipulated by hand at any time so that it will perform its function of support whether the cover is in its open or in its closed position.

As an added feature of my invention the hinges 12 may be of the "dead center" variety. In Figure 5 I have shown a hinge 12 as provided with a pair of hinge plates 20 and 21, the former being attached to the cover 12, while the latter is attached to the base 12. A spring 22 of bowed conformation has its end portions bent inwardly so as to engage the hinge plates 20 and 21. It is so disposed relatively to the hinge plates that it has two equilibrium positions. The full line position of the hinge in Figure 5 represents one of these equilibrium positions of the spring, while the dot and dash line position represents its other equilibrium position. In order to pass from one of these positions to the other, a tensing of the spring is necessary, so that the cover will tend to move, unless it is brought into one of the two equilibrium positions.

For convenience in manipulation of the cover, I have shown in the drawing, by way of illustration, a construction that I have found very satisfactory in practice. This construction consists in a tab or flap 27 carried by the plate 14 and connected thereto by the outer lining 29 which covers plate 19. The lining 29 may cover the tab 27 as shown at 30, and have an extension 31 thereon that is led inside the cover 11, where it is secured in place. In this manner, I not merely provide a connection between the tab 27 and the plate 14, but the extension 31 also serves to secure the plate 14 to the cover 11.

While the box herein described has been referred to as a display box and is particularly adapted for that purpose, it is obvious that my invention is equally well adapted for boxes used for other purposes. Where the box on which it is used is a display box, such as the one shown in the drawing, suitable inserts may be provided, such as pieces 25 and 26, the latter of which has been shown by way of example, as mounted on the former and as supporting a wrist watch and strap W (see Figure 2).

While I have herein disclosed one illustrative embodiment of my invention it will be understood that the same may be embodied in many other forms, as will be obvious to those skilled in the art. It will further be understood that the disclosure herein is by way of illustration merely, and is not to be interpreted in a limiting sense, and that I do not limit myself other than as called for by the prior art.

Having thus described my invention and illustrated its use, what I now claim as new and desire to secure by Letters Patent is:

1. A receptacle comprising a base that is rockable when placed on a flat surface, a cover hingedly mounted on said base, a prop hingedly mounted on said receptacle for movement relatively to the cover for rendering said base stable, and means for moving said prop from an inactive position to an active position upon movement of said cover about its hinge.

2. A receptacle comprising a base that is rockable when placed on a flat surface, a cover hingedly mounted on said base, a prop for rendering said base stable, said prop being mounted for movement relatively to the cover, and means for moving said prop from an inactive position to an active position by movement of said cover about its hinge.

3. A receptacle comprising a base that is rockable when placed on a flat surface, a cover hingedly mounted on said base, a prop for rendering said base stable hingedly mounted on said cover, and means for moving said prop from an inactive position to an active position by movement of said cover about its hinge.

4. In combination in a display box: a body, a cover, hinge means uniting said body and cover, a prop, a pivotal mounting for said prop on said cover, the axis of said pivotal mounting being parallel to but offset from the axis of said hinge means, so that said pivotal mounting is moved bodily about the axis of the hinge means when the cover is moved about its hinge means and means on said prop which engages the body member when the cover member is moved to open position to cause said prop to pivot about its pivotal mounting to a position in which it projects therefrom and thereby acts as a support for the box.

5. In combination in a display box: a body, a cover, hinge means uniting said body and cover, a prop, a pivotal mounting for said prop on said cover, the axis of said pivotal mounting being parallel to but offset from the axis of said hinge means, so that said pivotal mounting is moved bodily about the axis of the hinge means when the cover is moved about its hinge means and means on said prop which engages the body member when the cover member is moved to open position to cause said prop to pivot about its pivotal mounting, said means on said prop being positioned adjacent to said pivotal mounting and said pivotal mounting being so positioned relatively to said hinge means that when the box is opened by moving its cover about said hinge means, the pivot of said pivotal mounting will move inwardly toward the body and said prop will be caused to pivot about said fulcrum means and to move from its position adjacent to said body to a position in which it projects therefrom and thereby acts as a support for the box.

6. In combination in a display box: a body, a cover, hinge means uniting said body and cover, a prop, a mounting for pivotally supporting said prop on said cover, the axis of said mounting being parallel to but offset from the axis of said hinge means, and means on said prop positioned adjacent to said pivotal mounting, said pivotal mounting being so positioned relatively to said hinge means that when the box is opened by moving its cover about said hinge means, said prop will be caused to swing from a position adjacent to said body to a position in which it projects therefrom and thereby acts as a support for the box.

EUGENE LUX.