May 2, 1967 P. A. BRAGINETZ ETAL 3,317,077

PLASTIC BOX WITH DOVETAILED HINGING AND LATCHING MEANS

Filed Nov. 17, 1964 4 Sheets-Sheet 1

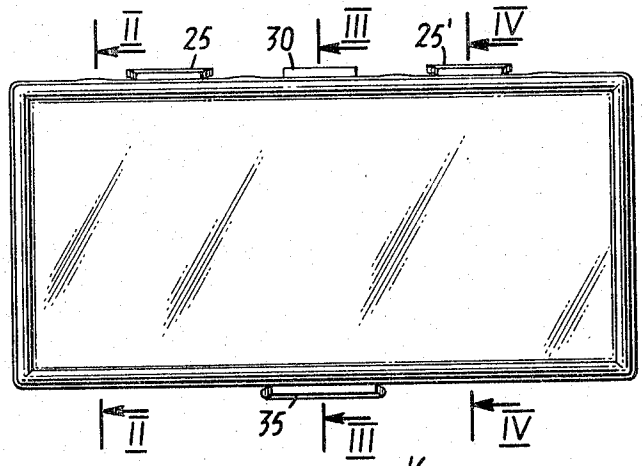


FIG. 1

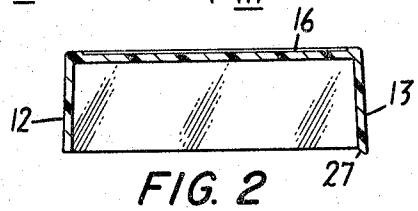


FIG. 2

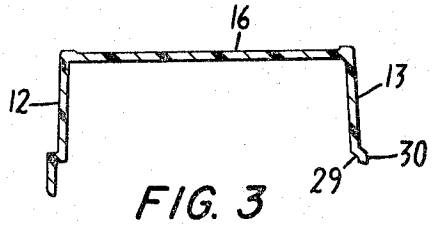


FIG. 3

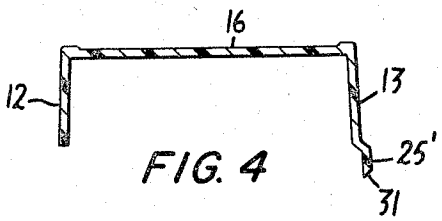


FIG. 4

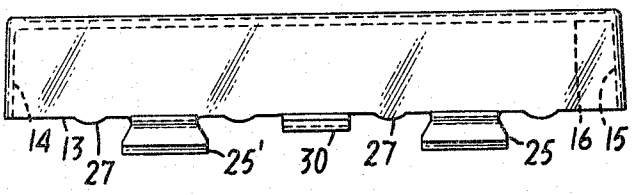


FIG. 5

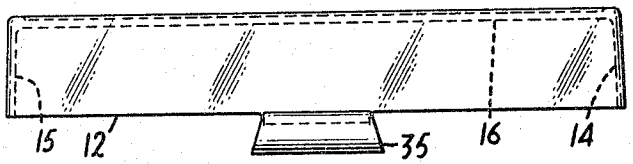


FIG. 6

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PLASTIC BOX WITH DOVETAILED HINGING AND LATCHING MEANS

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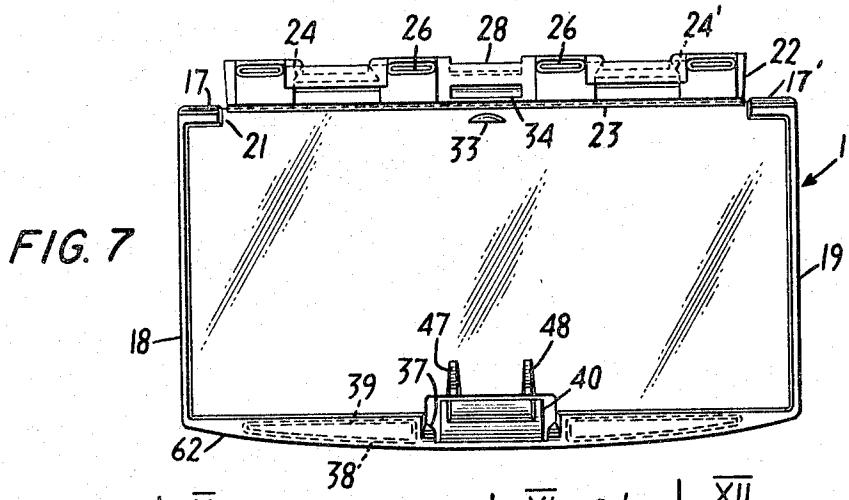


FIG. 7

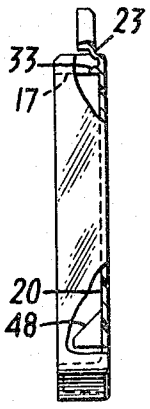


FIG. 14

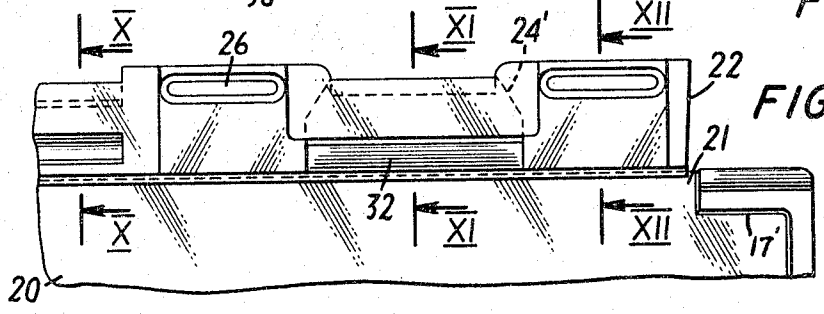


FIG. 8

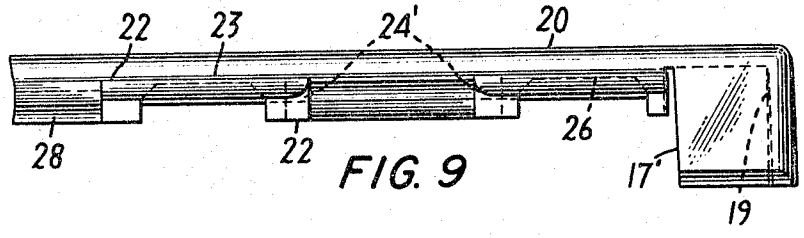


FIG. 9

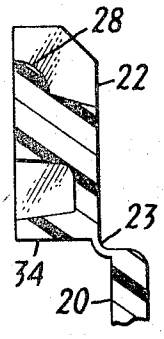


FIG. 10

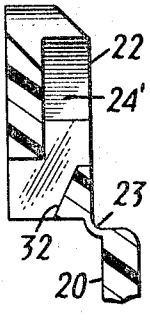


FIG. 11

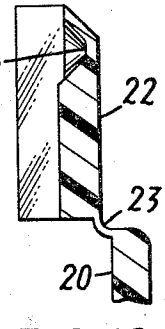


FIG. 12

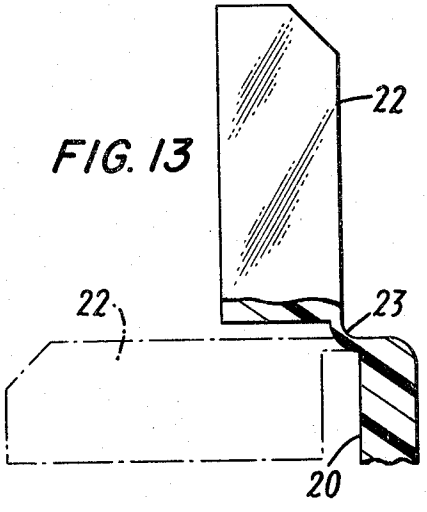


FIG. 13

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PLASTIC BOX WITH DOVETAILED HINGING AND LATCHING MEANS

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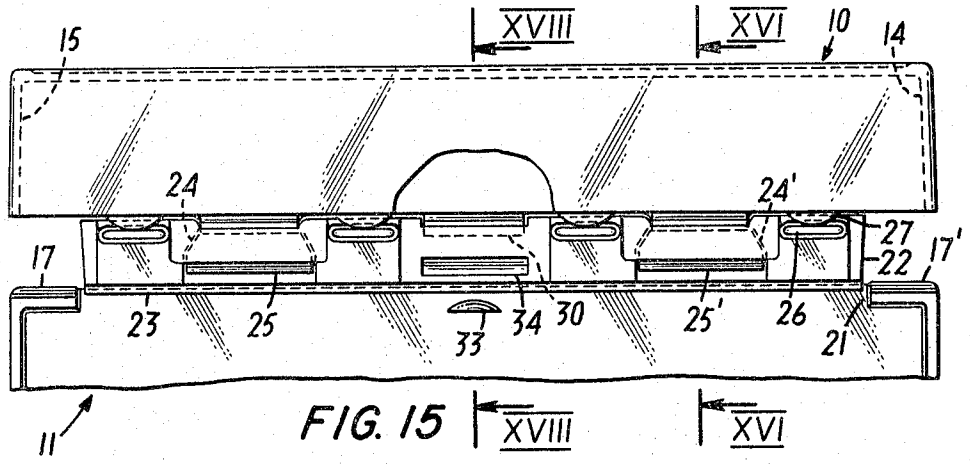


FIG. 15

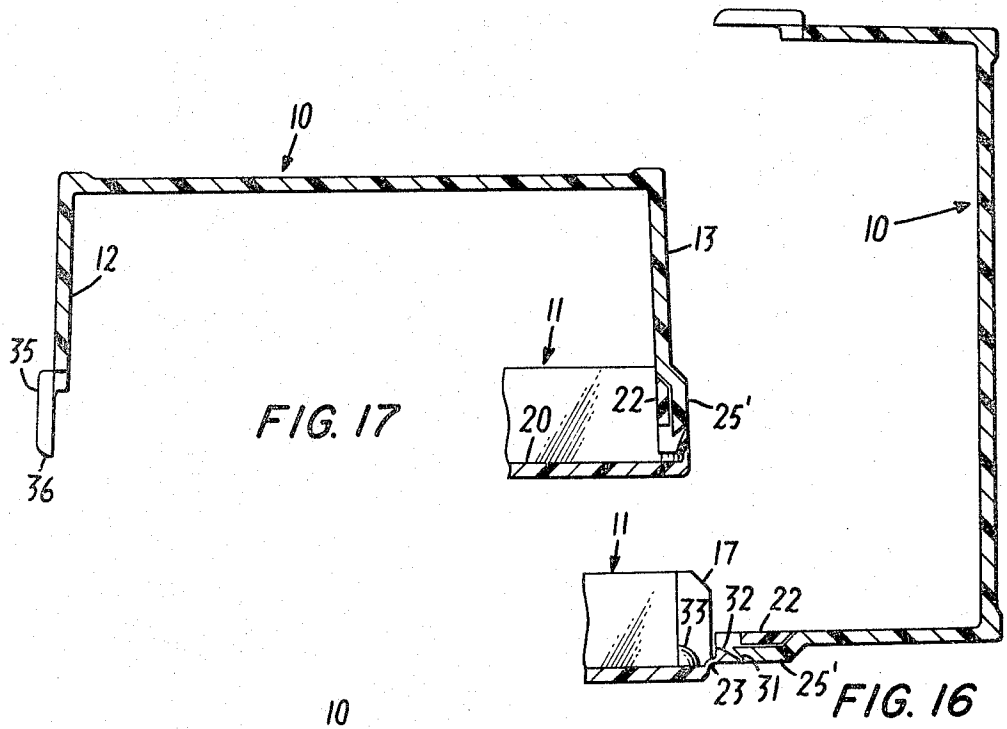


FIG. 17

FIG. 16

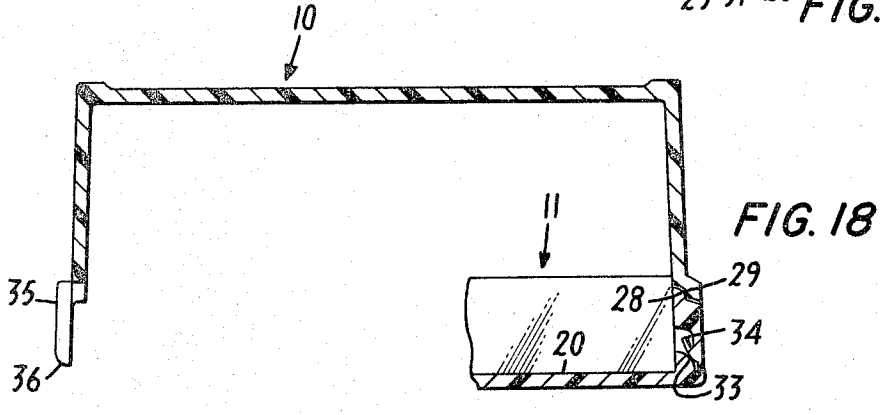


FIG. 18

PLASTIC BOX WITH DOVETAILED HINGING AND LATCHING MEANS

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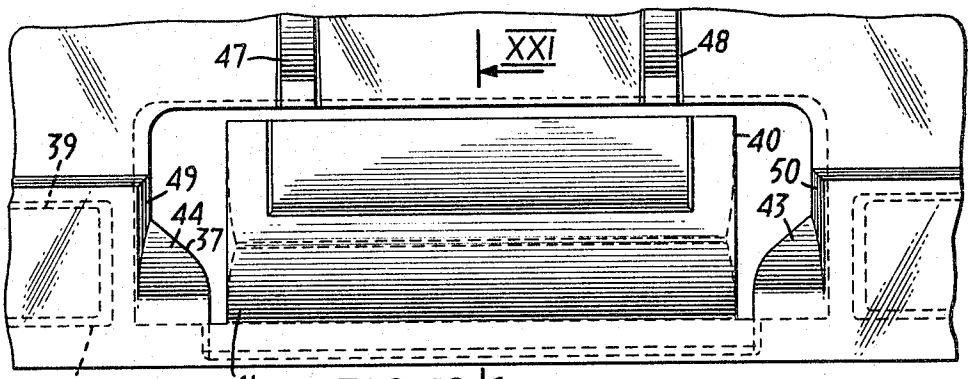


FIG. 19

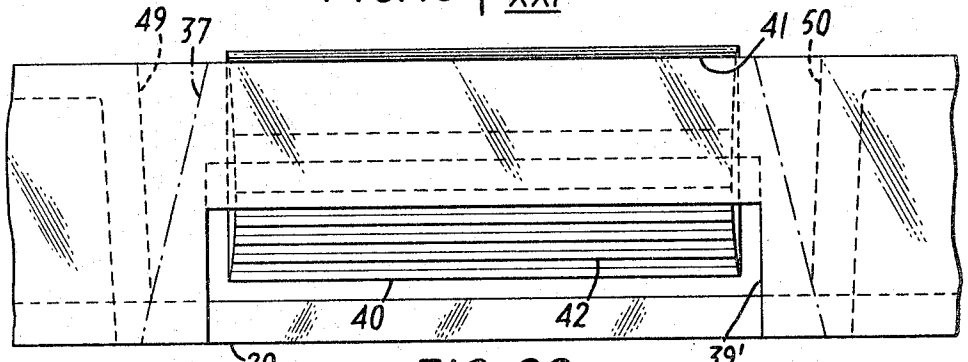


FIG. 20

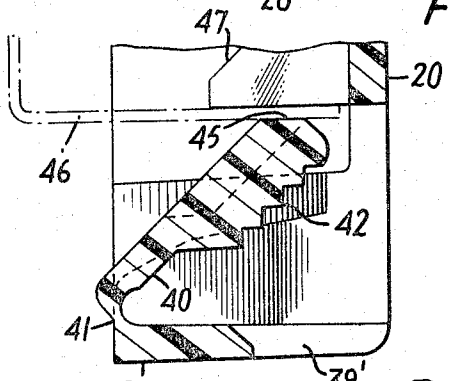


FIG. 21

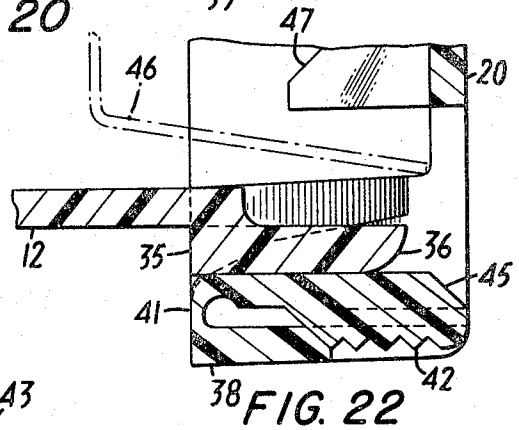


FIG. 22

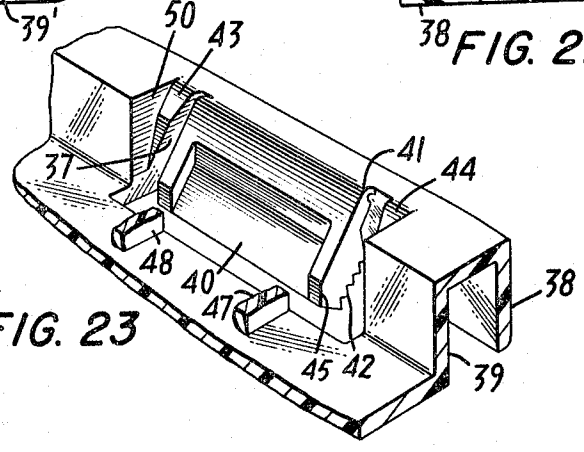


FIG. 23

United States Patent Office 3,317,077 Patented May 2, 1967

3,317,077

PLASTIC BOX WITH DOVETAILED HINGING AND LATCHING MEANS

Paul A. Braginetz and George A. La Cas, Staunton, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia

Filed Nov. 17, 1964, Ser. No. 411,916
25 Claims. (Cl. 220—31)

This invention relates to a box and refers more particularly to a plastic box having novel hinging and latching means and employing novel coupling means for connecting the cover with the box receptacle.

Modern day packaging practices involve substantial use of plastic merchandise containers for packaging drugs, cosmetics, household goods, foodstuffs and similar items, it being desirable that these containers combine an attractive appearance with functionability and simplicity of construction. It is thus quite common that the container cover be made of a transparent plastic to enable purchasers to ascertain more readily the character of the merchandise while, on the other hand, the container housing or receptacle may, for purposes of contrast and serviceability, be made of an opaque or translucent plastic of a type different from that used for the cover. Since clear and opaque plastics made of materials having different molecular structures are dissimilar in texture, special problems may arise relative to the manner in which they are coupled together or hinged one with the other. The hinging means employed should be sufficiently rugged to maintain proper alignment between the housing and cover after repeated opening and closing, should lend itself readily to current molding techniques, and should represent only a small cost in the manufacture of the container. Another important requirement is that the cover should be held securely closed by simple and reliable latching means, and the task of opening the container should be made as simple and effortless as possible.

It is, therefore, an important object of the present invention to provide a plastic merchandise box which employs novel hinging and latching means.

Another important object of the present invention is to provide novel coupling means for coupling or connecting together a box cover and box housing or receptacle made of dissimilar plastic materials.

Another object is to provide hinging and latching means for a plastic box which are readily adapted to manufacture by modern molding techniques.

Still another object is to provide a plastic box having hinging and latching means which cooperate to swing the box cover to an open position when the latch means is released.

A further object is to provide a plastic box having novel cover latching means which may be released by simply pressing a push button made integral with the box receptacle or housing.

A still further object is to provide a plastic merchandise box which is simple and economical to manufacture, and convenient for the user to open and close.

Other objects of the present invention will become apparent during the course of the following specification.

In achieving the aforementioned objectives of the present invention it was found advantageous to provide a plastic box which has a housing or receptacle having an elongated flap extending along the rear thereof, the flap preferably being made integral with the receptacle and being connected therewith by means of a thin resilient filament of material providing for swinging movement of the flap with respect to the receptacle. The flap is provided with a number of dovetailed recesses for receiving similarly shaped projections carried at the rear of a plastic box cover thus providing a simple and effective coupling means for connecting the cover with the receptacle. The box cover also carries a dovetail shaped latch which, when the cover is swung to a closed position, engages in a dovetailed recess at the front side of the receptacle. A push button is carried by the receptacle and when the cover is closed, abuts on the latch. Applying a pressure on the push button causes it to swing, releasing the latch so that the cover swings upwardly to an open position. The opening of the cover is facilitated and aided by the resilient nature of the plastic cover and latch, and the fact that the filament connecting the flap to the receptacle acts as a spring means when the cover is closed or opened.

The invention will appear more clearly from the following detailed description when taken in conjunction with accompanying drawings showing by way of example, a preferred embodiment of the inventive concept. The particular embodiment is concerned with a plastic box suited for use as a case for a safety razor although it will be readily understood that it may be applied to use as a container for a wide range of merchandise and similar articles.

In the drawings:

FIGURE 1 is a plan view of the box cover;

FIGURES 2, 3 and 4 are sectional views as taken along lines II—II, III—III and IV—IV respectively, in FIGURE 1;

FIGURE 5 is a rear view of FIGURE 1, the latch projection on the front side of the cover not being shown;

FIGURE 6 is a front view of FIGURE 1, the dovetailed projections and cam locks at the rear side of the cover not being shown;

FIGURE 7 is a plan view of the box receptacle illustrating various moulded components therein such as the push button used for opening the box;

FIGURE 8 is a partial plan on enlarged scale of a rear corner portion of the receptacle;

FIGURE 9 is a rear elevational view of FIGURE 8;

FIGURES 10, 11 and 12 are sectional views as taken along lines X—X, XI—XI and XII—XII respectively, in FIGURE 8;

FIGURE 13 is a fragmentary sectional view on enlarged scale illustrating the manner in which the flap is connected with the receptacle;

FIGURE 14 is an end elevational view of the construction shown in FIGURE 7, some parts being broken away for purposes of clarity;

FIGURE 15 is a fragmentary plan view illustrating the connected together receptacle and cover of the box, the cover being shown in an open position;

FIGURE 16 is a sectional view as taken along line XVI—XVI of FIGURE 15;

FIGURE 17 is the same as FIGURE 16 except that the cover is shown in a closed position;

FIGURE 18 is a sectional view as taken along line XVIII—XVIII of FIGURE 15, the cover being shown in a closed position;

FIGURE 19 is a fragmentary plan view on enlarged scale of the receptacle illustrating the details of the push button construction;

FIGURE 20 is a front elevation of FIGURE 19;

FIGURE 21 is a sectional view as taken along line XXI—XXI of FIGURE 19, the cover being in an open position;

FIGURE 22 is the same as FIGURE 21 except that the cover is shown in closed position; and

FIGURE 23 is a fragmentary perspective view of the inner front side of the receptacle in the region of the push button and illustrates in particular the ramps and guide surfaces for guiding the dovetail latch into the dovetailed recess.

Throughout the specification like reference numerals are used to indicate like parts.

The box of the present invention includes a cover member **10** (FIG. 1) and a lower housing member or receptacle **11** (FIG. 7) to which the cover **10** is coupled for hinging movement as shown in FIGURES 15 to 18. Cover **10** is preferably made of a transparent plastic material such as one made from an acrylic resin, and has parallel front and rear walls **12** and **13** respectively, end walls **14** and **15** extending transversely of the front and rear walls, and a top panel **16** (FIGS. 5 and 6). Receptacle **11**, which for purposes of contrast is preferably made colored and of a plastic material such as polypropylene, also is provided with a front wall **62**, end walls **18** and **19** and a substantially flat floor **20** so that with the cover **10** connected to the receptacle **11**, and being in its closed position (FIGS. 17 and 18), the respective walls will align vertically one with the other.

The receptacle **11** is also provided with spaced rear wall portions **17**, **17'** which define an elongated, longitudinally directed slot **21** at the rear of the receptacle for receiving flap member **22**, the flap member being preferably molded integrally with the receptacle and being connected with floor **20** by a thin resilient, arcuate sectioned filament **23**. The filament **23** is known generally to those skilled in the art as a "living hinge." The flap member **22** is thus swingable with respect to the receptacle and locates in slot **21** when the cover is closed in the manner to be described later on in detail. Flap member **22** is generally of the same thickness as receptacle rear wall portions **17**, **17'** and is provided with a number of dovetailed recesses **24**, **24'** as best seen in FIGURES 7 and 8, the recesses receiving, respectively, similarly dovetailed-shaped projections **25**, **25'** carried by rear wall **13** of cover **10** (FIG. 5). Flap member **22** is also provided with a number of wells **26** located adjacent the sides of each dovetailed recess **24**, **24'**, the wells being adapted to supportingly receive the cam-like locks **27** carried by cover rear wall **13** (FIG. 5). The central portion of flap member **22** has a rounded shoulder **28** thereon (FIGS. 7 and 10) against which may ride the inner curved face **29** (FIG. 3) of a keeper block **30** carried by cover rear wall **13** (FIG. 5), the keeper block being provided to maintain proper alignment of the cover with the receptacle.

FIGURES 15 and 16 illustrate the manner in which the cover **10** is coupled or connected to receptacle **11**. Dovetail projections **25**, **25'** on the cover fit into recesses **24**, **24'** respectively on flap member **22**. As seen best in FIGURES 4 and 16, the lower face of the projections are angled as at **31** to generally correspond with similarly contoured surfaces **32** in the recesses (seen also in FIGURE 11) forming a wedge-like contact. In addition, the cam-like locks **27** on the cover engage on and ride over the upper surface of flap member **22** adjacent the wells **26** and hold the projections firmly engaged in the recesses so that the projections can only be removed from the recesses by the deliberate action of first unseating the cam-like locks from behind the wall of well **26**. Thus when the cover is moved to the closed position shown in FIGURE 17, the flap member **22** is caused to swing from the generally horizontal position shown in FIGURE 16 to the vertical position of FIGURE 17 and locates in slot **21** without any relative movement between or uncoupling of the cover and flap member, the filament **23** due to the properties of its material and its arcuate section acting as a hinging means.

The floor **20** of receptacle **11** is provided with an upstanding parti-rounded boss **33** (FIGS. 15 and 16) which is located adjacent the filament **23** and generally within the confines of slot **21**. The central portion of flap **22** has a yieldable filament-like wall section **34** (FIG. 10) adjacent the boss **33** which filament wall **34** deforms against the boss as shown in FIGURE 18 when the cover is latched in a closed position. When the cover is thereafter unlatched, the filament wall **34** tends to return to its molded form so that this action, along with the spring-like action of hinging filament **23** and the pressure applied to the cover by the after-described push button **40**, swing flap member from its vertical to a horizontal position thus swinging cover **10** to an open position.

As seen in FIGURES 1 and 6, the front wall **12** of cover **10** is provided with a downwardly depending, dovetail-shaped latch projection **35**, the lower edge of which is rounded as at **36** (FIGS. 17 and 18). When cover **10** is closed over the receptacle **11**, latch projection **35** fits into a dovetail latching recess **37** located on the inner side of receptacle front wall **62** (see FIGS. 20 and 23). As seen in FIGURES 7 and 23, the front wall of receptacle **11** comprises spaced outer wall portion **38** and inner wall portion **39**.

Referring in greater detail to FIGURES 19 to 23, the latching recess **37** is generally located in the central portion of the receptacle front wall, its sides tapering downwardly in the dovetail configuration best seen in FIGURE 20. As seen further in FIGURE 20, the lower part of outer wall portion **38** is slotted as at **39'** to provide finger access to a push button **40** swingably connected to outer wall portion **38**. Push button **40** is preferably molded integrally with outer wall portion **38** being connected thereto by a thin filament of material **41** forming the "living hinge" about which the push button swings (FIG. 23). Push button **40** is utilized for disengaging or releasing latch projection **35** from latching recess **37** to open cover **10** and its front side is serrated as at **42** to enable the user to apply a positive pressure thereagainst without having the finger slip which might be the case if the surface was merely smooth plastic. The front wall of the receptacle is also provided with downwardly and inwardly inclined guide ramps **43**, **44** located adjacent each margin of the latching recess **37** for guiding the latch projection into the latching recess when the cover is closed on the receptacle, guidance being further facilitated by guide surfaces **49** and **50** (FIG. 19) for reducing lateral movement of the latch projection during its travel down the ramps.

FIGURE 21 illustrates the position the push button occupies when the cover is open and latch projection **35** is not engaged in the latching recess. The resilient quality of hinging filament **41** tends to swing push button **40** inwardly of the receptacle, the push button having an angled lower inner surface **45** which bears against the side of an insert element **46** (shown in phantom view in FIGS. 21, 22) on which merchandise may be mounted. The present invention contemplates the use of the plastic box for holding a safety razor, the razor being mounted in known manner on a resilient insert removably carried in the receptacle. In this manner a single box type may be used with various sizes and shapes of safety razors by merely changing the design of the insert. As seen in FIGURE 21, the insert **46** has a depending side which is positioned between the push button and a pair of stops **47**, **48** molded integral with the floor **20** of the receptacle. When cover **10** is closed over the receptacle **11**, the latch projection **35** (specifically its lower curved edge **36**) rides down on ramps **43**, **44**, the latch projection being flexed inwardly until it registers with latching recess **37** whereupon it flexes outwardly toward the front side of the box and snaps into the recess, swinging push button outwardly to the position shown in FIGURE 22.

In operation:

The cover **10** is connected with or coupled to receptacle **11** by inserting the dovetail projections **25**, **25'** thereon in the companion or corresponding recesses **24**, **24'** in the flap member **22**, the flap member being in the generally horizontal position shown in FIGURES 15 and 16. This may be done by inserting the projections in the recesses at an angle inclined somewhat below the horizontal plane of the flap as it is seen in FIGURE 16, the recesses being open at the bottom for receiving the dovetail projections. The cover and, hence the dovetail projections, **25**, **25'** is

then rotated counterclockwise until the cam-like locks **27** carried by the cover at the sides of the projections engage on and snap over the edge of the flap member **22** adjacent each well **26** thereon as seen in FIGURE 15. This secures the coupling together of the cover and receptacle and the dovetail projections locked in place by the cam-like locks, cannot be dislodged from the recesses due to their geometry. The cover is then swung in a closing direction, filament **23** acting as a hinging means and the flap member will locate in the vertical position defined by slot **21** at the rear of the receptacle. As the cover **10** is closing, the latch projection **35** carried thereon which is outset from the plane of front wall **12**, strikes against the guide ramps **43, 44** on the receptacle. As the user continues to force cover **10** downwardly, the latch projection **35** due to its resilient character flexes inwardly following the incline of the guide ramps until it registers with latching recess **37**. When the latter occurs, the latch projection springs forwardly into the latching recess and is securely held therein. Any straight upwardly directed force applied thereafter to the latch projection or the cover, will not spring the latch free or cause the cover to open. As the flap member is swung from the horizontal to vertical position described above, filament wall **34** thereon deforms against boss **33** and stores up, so to speak, a source of potential energy to swing the cover open when the latch means is released. When the user thereafter wishes to open the box, he inserts a finger, preferably the thumb, through opening **39'** at the front of the receptacle and presses against push button **40** causing it to swing inwardly and upwardly about its hinge filament **41**. The push button in swinging dislodges or releases latch projection **35** from the latching recess **37**. With the latch projection free of the latching recess, the cover will start to swing upwardly under the combination of forces generated by filament wall **34** expanding against boss **33**, and lift applied by the push button **40** and the action of filament **23** all of which cooperate to return flap member **22** to a horizontal position and thus swing the cover to its fully opened position shown in FIGURE 16.

From the foregoing it should be apparent that the plastic box of the present invention has a number of advantages over prior art constructions. It is easily molded according to current molding techniques. It incorporates spring-like opening features for opening the cover which are integral with the cover and receptacle, and thus eliminate separate spring blades etc. with resultant savings in box cost. The latching means is positive in operation and holds the cover closed securely at all times and lastly the latching means is easily released by the user exerting slight finger pressure on a push button.

While there is above disclosed but one embodiment of the plastic box of the present invention, it is possible to produce still other embodiments without departing from the scope of the invention concept herein disclosed.

We claim:

1. In a box comprising a receptacle and a cover therefor, the receptacle and cover each having front and rear wall portions arranged in planar alignment with the cover in a closed position, a flap swingably connected with the rear of said receptacle and having at least one prismatic recess therein, a prismatic projection carried by the rear wall of said cover and removably engaged in each prismatic recess, a prismatic latch projection carried by the front wall of said cover, the front wall of said receptacle having a prismatic latching recess for releasably receiving said latch projection when said cover is closed, and means carried by said receptacle for releasing said latch projection from said latching recess.

2. In a box comprising receptacle and cover members, the receptacle and cover members each having complemental front and rear wall portions arranged in planar alignment with the cover in a closed position, a flap swingably connected with the rear of one of said members and having at least two prismatic recesses therein, prismatic projections carried at the rear of the other of said members and removably engaged in said prismatic recesses, a prismatic latch projection carried by one of said front walls, the other of said front walls having a prismatic latching recess for releasably receiving said latch projection when said cover is closed, and means supported on said other front wall for releasing said latch projection from said latching recess.

3. In a box comprising a receptacle and a cover therefor, the receptacle and cover each having front and rear wall portions arranged in planar alignment with the cover in a closed position, a flap swingably connected with the rear of said receptacle and having at least two prismatic recesses therein, prismatic projections carried by the rear wall of said cover and removably engaged in said prismatic rececesses, a prismatic latch projection carried by the front wall of said cover, the front wall of said receptacle having a prismatic latching recess for releasably receiving said latch projection when said cover is closed, means carried by said receptacle for releasing said latch projection from said latching recess, and means cooperating with the last-mentioned means for swinging said cover in a direction away from said receptacle to an open position when said latch projection is released from said latching recess.

4. In a box comprising a receptacle and a cover therefor, the receptacle and cover each having front and rear wall portions arranged in planar alignment with the cover in a closed position, a flap swingably connected with the rear of said receptacle and having at least two dovetailed recesses therein, dovetail projections carried by the rear wall of said cover and removably engaged in said dovetailed recesses, a dovetail latch projection carried by the front wall of said cover, the front wall of said receptacle having a dovetail latching recess for releasably receiving said latch projection when said cover is closed, means carried by said receptacle for releasing said latch projection from said latching recess, and means cooperating with the last-mentioned means for swinging said cover in a direction away from said receptacle to an open position when said latch projection is released from said latching recess.

5. A box in accordance with claim **3** wherein the rear wall portion of said receptacle is provided with a longitudinal slot, said flap locating in said slot when the cover is in a closed position, said flap swinging outwardly horizontally of said rear wall when the cover is swung to an open position.

6. A box in accordance with claim **3** wherein said receptacle is made of a resilient material, and said flap is made integral with the rear of said receptacle at the bottom being joined thereto by a thin filament of said material.

7. A box in accordance with claim **3** wherein the prismatic recesses in said flap are open at one side of said flap and said flap is provided at an opposite side with a plurality of wells, and cam-like locks carried by the rear wall of said cover and extending over said wells, said cam-like locks and said prismatic projections cooperating to prevent uncoupling of said cover from said flap.

8. In a box comprising a receptacle and a cover therefor, the receptacle and cover each having front and rear wall portions arranged in vertical alignment with the cover in a closed position, the rear wall portion of said receptacle having a longitudinal slot therein, a flap swingably connected with the rear of said receptacle and locating in said slot when the cover is in a closed position, said flap having at least two dovetailed recesses therein, dovetail projections carried by the rear wall of said cover and removably engaged in said dovetailed recesses, a dovetail latch projection carried by the front wall of said cover, the front wall of said receptacle having a dovetail latching recess for releasably receiving said latch projection when said cover is closed, means carried

by said receptacle for releasing said latch projection from said latching recess, and means cooperating with the last-mentioned means for swinging said cover in a direction away from said receptacle to an open position when said latch projection is released from said latching recess, said flap swinging outwardly substantially horizontally of the rear wall portion of said receptacle when the cover is swung to said open position.

9. A box in accordance with claim **8** wherein the means for swinging said cover to an open position comprises a boss-like projection carried by said receptacle inwardly adjacent of said flap, said flap having a yieldable spring filament portion deforming against said boss when said cover is in a closed position, said spring filament portion expanding against said boss when said latch projection is released from said latching recess for swinging said flap outwardly of the rear wall of said receptacle.

10. In a box comprising a receptacle and a cover therefor, the receptacle and cover each having front and rear wall portions arranged in vertical alignment with the cover in a closed position, the rear wall portion of said receptacle having a longitudinal slot therein, a flap swingably connected with the rear of said receptacle and locating in said slot when the cover is in a closed position, said flap having at least two dovetailed recesses therein, dovetail projections carried by the rear wall of said cover and removably engaged in said dovetailed recesses, a dovetail latch projection carried by the front wall of said cover, the front wall of said receptacle having an opening therein including opposed surfaces defining a dovetail latching recess for releasably receiving said latch projection when said cover is closed, a push button carried by said receptacle for swinging movement in said opening for urging said latch projection out of said latching recess, and means engaging said flap when the cover is in a closed position and acting to swing said flap outwardly substantially horizontally of the rear wall portion of said receptacle for swinging said cover to an open position when said latch projection is released from said latching recess.

11. A box in accordance with claim **10** wherein the front wall of said receptacle is provided with downwardly inclined ramps adjacent the surfaces of said latching recess for guiding said latching projection into said latching recess when said cover is moved to a closed position.

12. A box in accordance with claim **11** wherein said latch projection has a curved lower edge surface to facilitate movement of said latch projection against said ramps.

13. A box in accordance with claim **10** wherein said receptacle is provided with stops located inwardly of said opening for limiting the swinging movement of said push button.

14. A box in accordance with claim **10** wherein said receptacle is made of a resilient material and said push button is made integral with the front wall of said receptacle being joined thereto by a thin filament of said material.

15. A box in accordance with claim **10** wherein said push button is provided with a serrated front surface.

16. In a plastic box comprising a receptacle and a cover therefor, the receptacle and cover each having front and rear wall portions arranged in vertical alignment with the cover in a closed position, the rear wall portion of said receptacle having a longitudinal slot therein, a flap integral with the rear of said receptacle and joined thereto by a thin resilient filament, said flap locating in said slot when the cover is in a closed position, and being swingable to a position extending outwardly horizontally of the rear wall portion of said receptacle when said cover is in an open position, said flap having at least two dovetailed recesses therein, dovetail projections carried by the rear wall of said cover and removably engaged in said dovetailed recesses, a dovetail latch projection carried by the front wall of said cover, said latch projection having a

curved lower edge surface, the front wall of said receptacle having an opening therein including opposed surfaces defining a dovetail latching recess for releasably receiving said latch projection when said cover is closed, downwardly inclined ramps located adjacent said opposed surfaces for guiding said latch projection into said latching recess when said cover is moved to a closed position, a push button integral with the front wall of said receptacle and joined thereto by a thin resilient filament whereby said push button may be swung through said opening and against said latch projection for urging said latch projection out of said latching recess, a boss-like projection carried by said receptacle inwardly adjacent of said flap, said flap having a central yieldable spring filament portion deforming against said boss when said cover is closed, said spring filament portion expanding against said boss when said latch projection is released from said latching recess for swinging said flap outwardly of the rear wall of said receptacle and swinging said cover to an open position.

17. In a box comprising a receptacle and a cover swingably connected therewith, latching means for holding the cover closed on said receptacle, said latching means comprising a dovetail latch projection carried by said cover, said receptacle having a dovetailed recess for receiving said latch projection, and means carried by said receptacle and engageable with said latch projection for releasing said latch projection from said latching recess.

18. In a box comprising a receptacle and a cover swingably connected therewith, latching means for holding the cover closed on said receptacle, said latching means comprising a dovetail latch projection carried by said cover and depending downwardly therefrom, said receptacle having a vertical dovetailed recess for receiving said latch projection, and means carried by said receptacle and engageable with said latch projection for releasing said latch projection from said latching recess.

19. In a plastic box comprising a receptacle and a cover swingably connected therewith, the receptacle and cover each having complemental walls arranged in vertical alignment with the cover in a closed position, latching means for holding the cover in said closed position, said latching means comprising a dovetail latch projection carried by one wall of said cover, the complemental wall of said receptacle having a dovetailed recess for receiving said latch projection, and means carried by said receptacle for releasing said latch projection from said latching recess.

20. In a box comprising a receptacle and a cover swingably connected therewith, latching means for holding the cover closed on said receptacle, said latching means comprising a dovetail latch projection carried by said cover and depending downwardly a distance therefrom, said receptacle having a vertical dovetailed recess for receiving said latch projection, and a push button mounted on said receptacle for swinging movement through said latching recess for releasing said latch projection from said latching recess.

21. In a plastic box comprising a receptacle and a cover swingably connected therewith, the receptacle and cover each having complemental walls arranged in vertical alignment with the cover in a closed position, latching means for holding the cover in said closed position, said latching means comprising a dovetail latch projection carried by one wall of said cover and extending downwardly therefrom, said latch projection being outset from the plane of said one wall, the complemental wall of said receptacle having an inner surface containing a dovetailed recess for receiving said latch projection, said inner surface having downwardly inclined ramps adjacent said recess for deflecting said latch projection inwardly of the complemental wall of said receptacle during closing of the cover and until said latch projection is aligned with said latching recess, and means carried by said receptacle and engageable with said latch projection for releasing said latch projection from said latching recess.

22. In a box comprising a receptacle and a cover therefor, hinging means for connecting the cover with the receptacle, said hinging means comprising a flap member swingably connected with one side of said receptacle, said flap member having at least one dovetailed recess therein, and a dovetail projection carried by said cover and removably engaged in said recess.

23. In a box comprising a receptacle and a cover therefor, hinging means for connecting the cover with the receptacle, said hinging means comprising a flap member swingably connected with one side of said receptacle for movement between horizontal and substantially vertical upright position, said flap member having at least two dovetailed recesses therein, the recesses extending in the plane of said flap member, and dovetail projections carried by said cover and removably engaged in said recesses.

24. In a box comprising a receptacle and a cover therefor, the receptacle and cover having coextensive side walls arranged in vertical alignment with the cover in closed position, one of the side walls of said receptacle having a longitudinally slotted portion therein, hinging means for connecting the cover with the receptacle, said hinging means comprising a substantially flat flap member swingably connected with said receptacle for movement between a horizontal position and a substantially vertical upright position extending in the slot in said slotted side wall, said flap member having at least two dovetailed recesses therein, the recesses extending in the plane of said flap member, and dovetail projections carried by the corresponding side wall on said cover and extending downwardly therefrom and removably engaged in said recesses.

25. In a plastic box comprising a receptacle and a cover therefor, the receptacle and cover each having complemental walls arranged in vertical alignment with the cover in closed position, one wall of said receptacle having a longitudinal slot therein, hinging means for connecting the cover with the receptacle, said hinging means comprising an elongated flap swingably connected with said one wall of said receptacle and locating in said slot when said cover is in a closed position, said flap having at least two dovetailed recesses therein, dovetail projections carried by the complemental wall of said cover and extending downwardly therefrom and engaging in the dovetailed recesses in said flap, said flap extending outwardly substantially horizontally of said one wall of said receptacle when said cover is in an open position.

No references cited.

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