March 15, 1966 A. BURROWS 3,240,375

SHIPPING AND DISPLAY CONTAINER

Filed Nov. 20, 1963

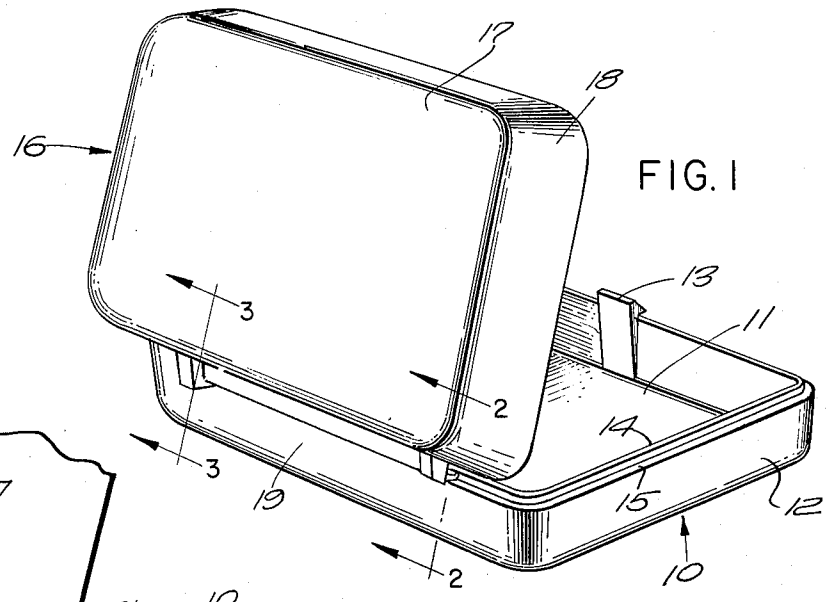

FIG. 1

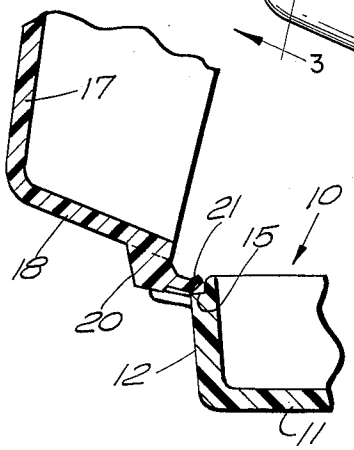

FIG. 2

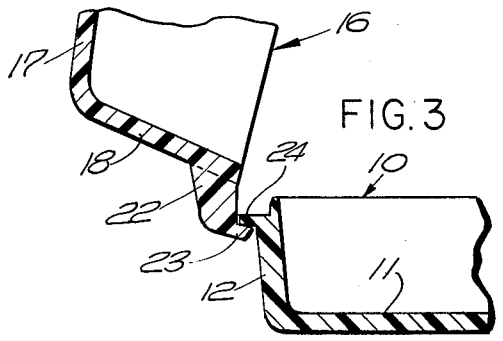

FIG. 3

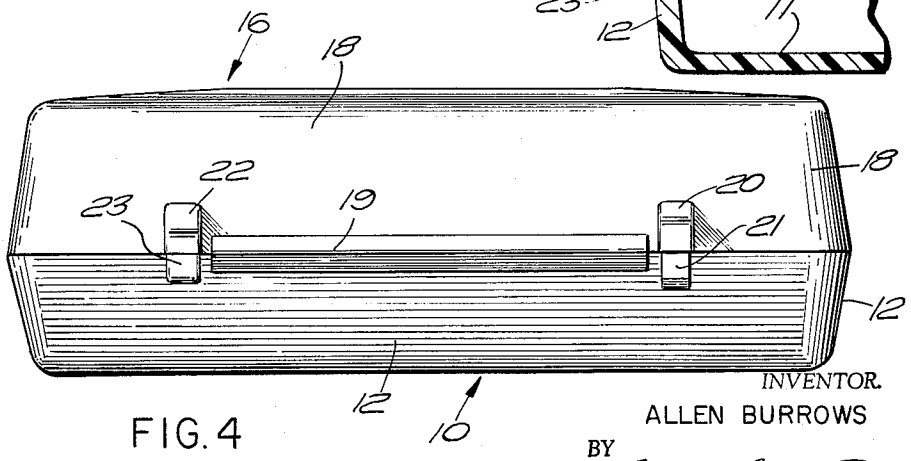

FIG. 4

INVENTOR.
ALLEN BURROWS
BY
Max Schwartz
ATTORNEY

United States Patent Office 3,240,375 Patented Mar. 15, 1966

3,240,375

SHIPPING AND DISPLAY CONTAINER

Allen Burrows, Providence, R.I.
(38 James St., East Providence, R.I.)

Filed Nov. 20, 1963, Ser. No. 325,087
5 Claims. (Cl. 217—60)

My present invention relates to the container art and more particularly to a novel construction of a shipping and display container.

The principal object of the present invention is to provide a shipping and display container which can be molded integrally in a single piece.

Another object of the present invention is to provide a shipping and display container, in a single unitary construction, which is designed to retain its cover in display position.

Another object of the present invention is to provide a shipping and display container having a novel hinge and stop construction integral with the container.

A further object of the present invention is to provide a novel shipping and display container which is simple in construction and easy and economical to manufacture and assemble.

With the above and other objects and advantageous features in view my invention consists of a novel arrangement of parts more fully disclosed in the detailed description following in conjunction with the accompanying drawings and more particularly defined in the appended claims.

In the drawings,

FIG. 1 is a perspective view of a shipping and display container embodying the present invention in display position.

FIG. 2 is an enlarged section taken on line 2—2 on FIG. 1.

FIG. 3 is an enlarged section taken on line 3—3 on FIG. 1.

FIG. 4 is an enlarged rear elevation of the container in closed or shipping position.

The jewelry industry has long provided decorative boxes in which rings, tie clips, cuff links, and similar small items of jewelry could be shipped and displayed. It was merely necessary to place the box on the jewelry counter with the cover in open position for display purposes. These boxes were usually made of metal with spring hinges to hold the covers in open position, and with special catches and linings. In view of the considerable cost of each of the boxes, it is obvious that they were only used on better merchandise. However, with the advent of plastics, and newer technics in producing plastics parts including the improvement of the material itself, it is now possible to produce boxes cheap enough so that they can be used on items of jewelry or similar articles selling for less.

Recently a technique was developed in which the bottom and top portions of the box can be molded simultaneously and connected in the mold by a thin web of integral plastic material which affords enough resiliency to act as a hinge. This eliminates all assembly costs. However, such constructions have been found to have one inherent defect. In view of the fact that they have been molded flat, the plastic material in the hinge develops a memory and has a tendency in open position to pull the cover of the box rearwardly into flat open position especially in the heat in a room or in the sun. When a row or plurality of these boxes are on the counter for display purposes in open position the covers on the various boxes will vary in position. Attempts have been made to provide a stop member so that the stop member forms a limit for the rearward movement of the cover. However, such attempts have been unsuccessful, because they add considerably to the cost of the box and in many instances ruin the appearance thereof.

The present invention is designed to provide a plastic box construction in which the box is provided with integral portions which retain the cover in open position at the exact required angle so that each box is held at the identical angle. The construction of the present invention in effect releasably locks the cover in a fixed position and prevents movement either towards an opening or a closing position unless forced into closed position by the user. The construction of the present invention adds little or nothing to the cost of the original box and is therefore simple and easy in manufacture and requires no separate assembly operations.

Referring more in detail to the drawings illustrating my invention, FIG. 1 shows a plastic box of the type of the present invention in display position. While the box may be lined with felt or similar material, the basic box comprises a base **10** of generally rectangular form having a bottom portion **11** with an upstanding integral flange portion **12**. The front edge of the bottom **10** is provided with a usual closure member **13**. The top edge of the sides or flanges **12** is provided with an internal upstanding flange **14** forming an outer ledge **15** on which the cover rests in closed position.

The cover **16** is also of conventional form and is provided with a central top rectangular portion **17** having an integral depending flange or skirt **18** which rests on the ledge or shoulder **15** in closed position as shown in FIG. 4. It is customary to mold the base **10** and cover **16** in open flat position connected by a thin membrane of plastic material **19** which serves as an integral hinge to hold the parts together.

No problems are encountered when the box is in closed position as shown in FIG. 4 because in this position the snaps or closure portion **13** serves to hold the cover down on top of the base. However, when it is desired to display the contents of the box and to open the cover into the position shown in FIG. 1, it will be found that the inherent resilient memory molded into the hinge portion **19** will tend to move the cover **16** outwardly into its original flat position. To prevent such movement, the applicant has devised the stop mechanism illustrated. Referring to FIGS. 1, 2 and 4, a small lug **20** is molded on the cover **16** to the right of the hinge **19** viewing FIGS. 1 and 4. The lug **20** is molded at the bottom edge of the skirt or flange **18** and extends at an angle downwardly as shown in FIG. 2. The bottom end of the lug terminates in a resilient finger **21**. The lengfth of the lug **20** and the position of the finger **21** is such that when the cover **16** is moved into open position the finger **21** will resiliency snap by the top edge of the bottom flange **12** and slip over the ledge **51** as shown in FIG. 2. In this position the cover is prevented from accidentally dropping or moving back into closed position. However, the inherent resiliency of the finger **21** is such that if the cover is grasped manually and pushed into closed position the finger **21** will snap by the corner of the top edge of the bottom flange **12** as illustrated in FIG. 2 and allow the cover to be swung into the closed position.

Now viewing FIGS. 1, 3 and 4, a second lug **22** is molded to the left of the hinge **19** viewing FIGS. 1 and 4. The lug **22** extends outwardly from the flange **18** a greater distance than the lug **20** and terminates in a finger **23**. The rear top edge of the bottom wall **12** is provided at this point with a stop tab **24** integrally molded therewith and extending rearwardly so that it engages the finger **23** when the cover **16** is swung into open position. Now viewing FIG. 3 it will be seen that as the cover **16** is swung into open position the finger **23** swings under the tab **24** and prevents further pivotal movement of the cover to the left or open position. The length of the lugs **20** and **22** are such that the engagement of the finger **23** beneath the tab **24** is simultaneous with the

snapping of the finger 21 over the ledge 15. Thus when the cover is swung into this position it is held from further rearward movement by the engagement of the finger 23 under the tab 24 and is simultaneously held from forward position by the position of the finger 21 on top of the ledge 15. This in effect releasably locks the cover into a particular angular open position illustrated in FIGS. 1, 2 and 3. Of course, it is contemplated that the resiliency of the material will permit manual movement of the cover either into open or closed position. However, since the mold provides a fixed limit to the size and position of the various lugs, every box coming from the mold will open to the exact angular position illustrated and a pleasing appearance is formed on the counter when a plurality of the boxes are opened in a row since all the covers will be at the exact same angle. Furthermore, the stop mechanism provided herein requires no separate assembly but are molded integrally with the top and bottom of the box. Of course, the cover can be tilted at any desired angle by shortening or lengthening the lugs.

Thus the construction shown herein provides a plastic box construction requiring no assembly whatsoever. The box is completed as it leaves the mold. The box is provided with its own integral hinge and its own integral stop mechanism which hold the box cover at a predetermined angle to the base. While the box has been described as used on small articles of jewelry, it of course can be applied to other articles and in any desired size. Other advantages of the present invention will be readily apparent to a person skilled in the art.

I claim:

1. A molded plastic box of resilient material comprising a rectangular top having an integral depending skirt portion, a rectangular bottom having an integral upstanding skirt portion adapted to nest edge to edge with said top skirt portion, an integral flexible membrane forming a hinge at the rear edges of said top and bottom skirt portions, the inside edge of said bottom skirt portion having an upstanding flange, said top skirt fitting over said flange in closed position, means for releasably holding said top from moving rearwardly at a predetermined open position, and means for releasably holding said top from moving forwardly into closed position at said predetermined open position, said rearward holding means comprising a tab extending integrally from said bottom skirt portion and a finger extending integrally from said top skirt portion, said finger engaging said tab in a predetermined open position of said top, said forward holding means being integral with said top.

2. A molded plastic box of resilient material comprising a rectangular top having an integral depending skirt portion, a rectangular bottom having an integral upstanding skirt portion adapted to nest edge to edge with said top skirt portion, an integral flexible membrane forming a hinge at the rear edges of said top and bottom skirt portions, the inside edge of said bottom skirt portion having an upstanding flange, said top skirt fitting over said flange in closed position, means for releasably holding said top from moving rearwardly at a predetermined open position, and means for releasably holding said top from moving forwardly into closed position at said predetermined open position, said forward holding means comprising a finger extending integrally from said top skirt portion and adapted to snap over the top edge of said bottom skirt portion in said predetermined open position of said top.

3. A molded plastic box of resilient material comprising a rectangular top having an integral depending skirt portion, a rectangular bottom having an integral upstanding skirt portion adapted to nest edge to edge with said top skirt portion, an integral flexible membrane forming a hinge at the rear edges of said top and bottom skirt portions, the inside edge of said bottom skirt portion having an upstanding flange, said top skirt fitting over said flange in closed position, means for releasably holding said top from moving rearwardly at a predetermined open position, and means for releasably holding said top from moving forwardly into closed position at said predetermined open position, said rearward holding means being integral with said box, said forward holding means comprising a finger extending integrally from said top skirt portion and adapted to snap over the top edge of said bottom skirt portion in said predetermined open position of said top.

4. A molded plastic box of resilient material comprising a rectangular top having an integral depending skirt portion, a rectangular bottom having an integral upstanding skirt portion adapted to nest edge to edge with said top skirt portion, an integral flexible membrane forming a hinge at the rear edges of said top and bottom skirt portions, the inside edge of said bottom skirt portion having an upstanding flange, said top skirt fitting over said flange in closed position, means for releasably holding said top from moving rearwardly at a predetermined open position, and means for releasably holding said top from moving forwardly into closed position at said predetermined open position, said rearward holding means comprising a tab extending integrally from said bottom skirt portion and a finger extending integrally from said top skirt portion, said finger engaging said tab in a predetermined open position of said top, said forward holding means comprising a finger extending integrally from said top skirt portion and adapted to snap over the top edge of said bottom skirt portion in said predetermined open position of said top.

5. A molded plastic box of resilient material comprising a rectangular top having an integral depending skirt portion, a rectangular bottom having an integral upstanding skirt portion adapted to nest edge to edge with said top skirt portion, an integral flexible membrane forming a hinge at the rear edges of said top and bottom skirt portions, the inside edge of said bottom skirt portion having an upstanding flange, said top skirt fitting over said flange in closed position, means for releasably holding said top from moving rearwardly at a predetermined open position, and means for releasably holding said top from moving forwardly into closed position at said predetermined open position, said rearward holding means comprising a tab extending integrally from said bottom skirt portion and a finger extending integrally from said top skirt portion, said finger engaging said tab in a predetermined open position of said top, said forward holding means comprising a finger extending integrally from said top skirt portion and adapted to snap over the top edge of said bottom skirt portion in said predetermined open positon of said top, said fingers and tab comprising a resilient plastic material molded integrally with said box.

References Cited by the Examiner

UNITED STATES PATENTS

2,842,178	7/1958	Solomon	220—31
3,120,879	2/1964	Warner	220—31

THERON E. CONDON, *Primary Examiner.*