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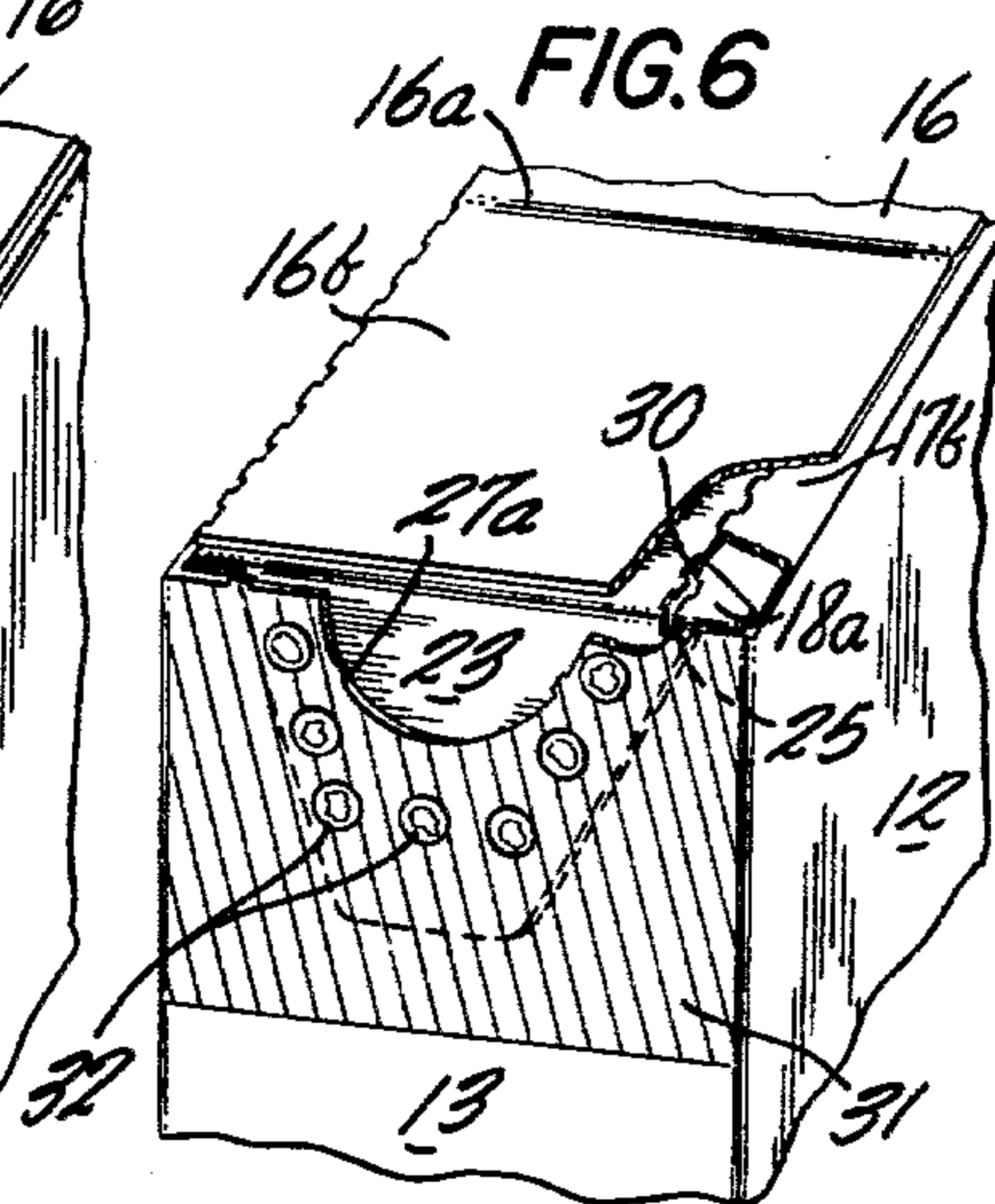
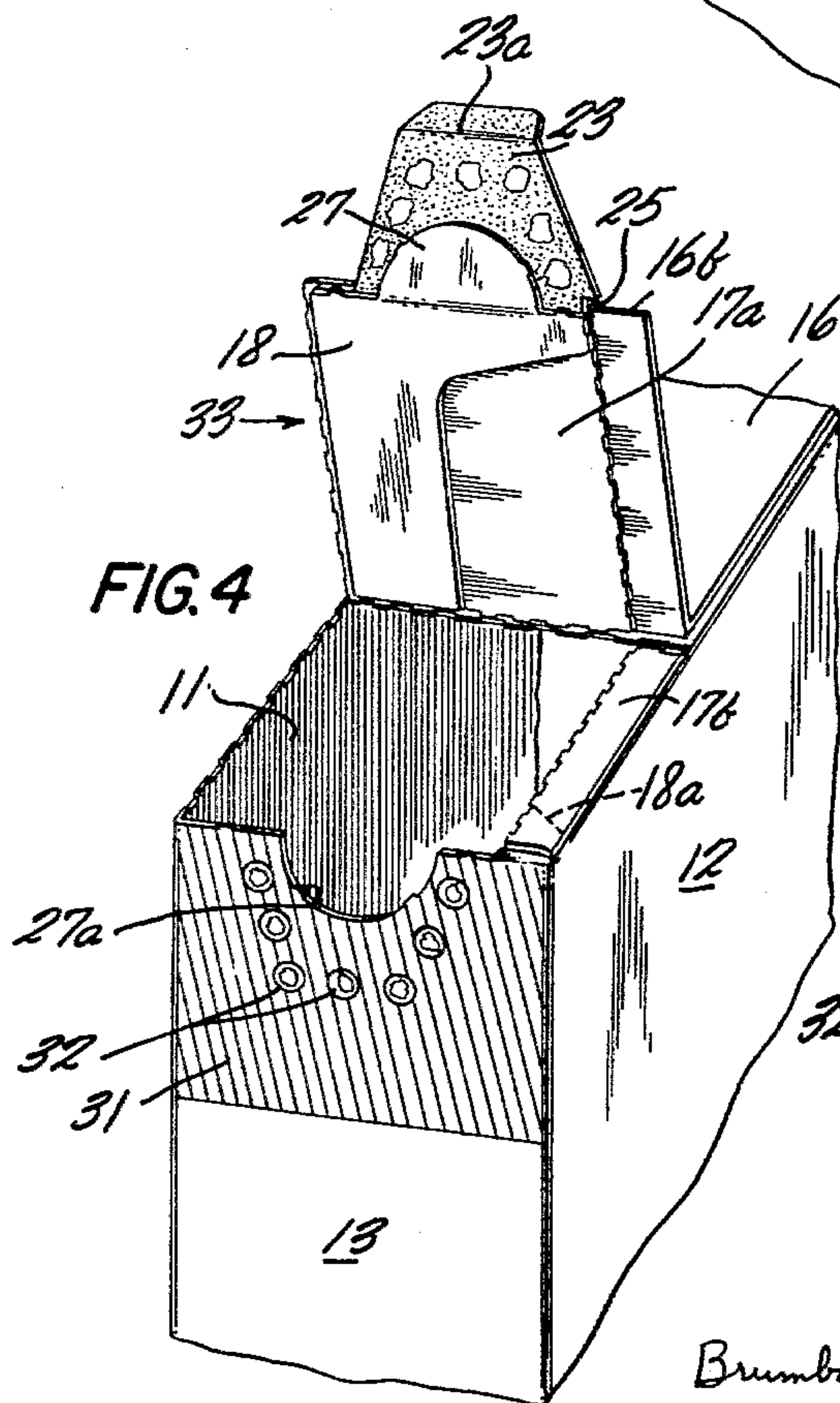
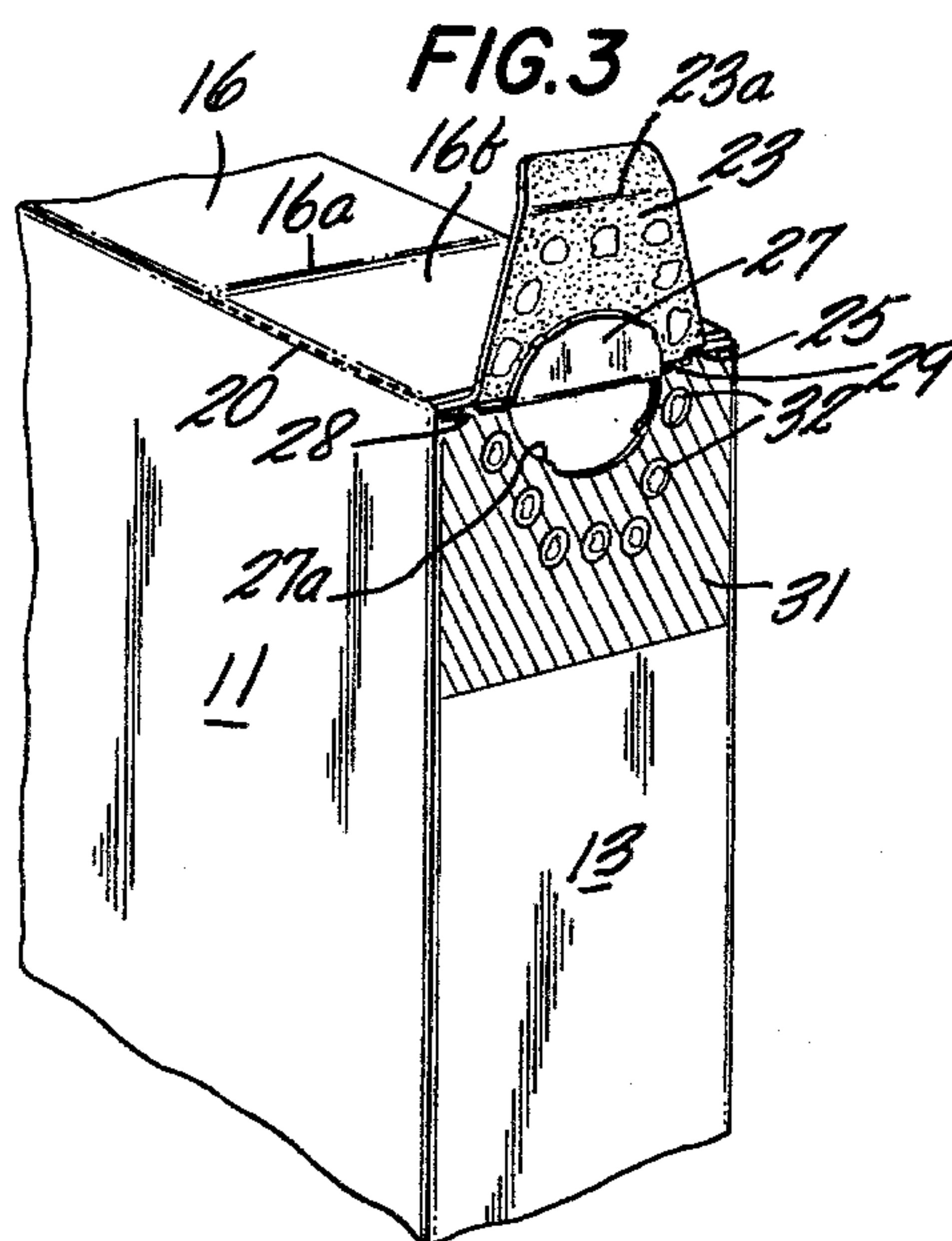
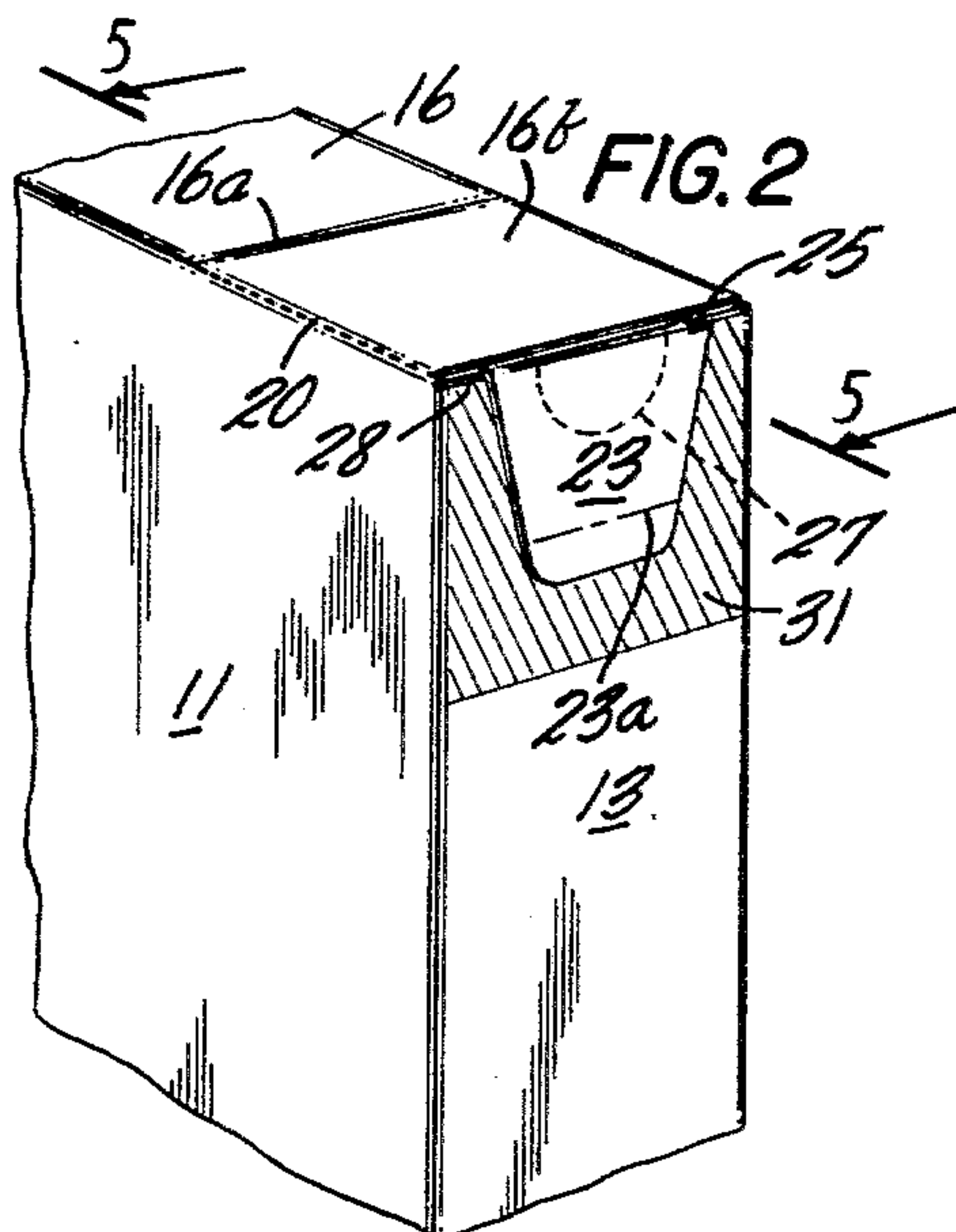
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CARTON

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2 Sheets-Sheet 2



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3,180,553

CARTON

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This invention relates to a reclosable carton useful for packaging granulated material and the like.

To package detergents, cereals and similar substances, narrow rectangular cartons have been provided with a punch-out tab and suitable weakened lines that define a pouring outlet. Ordinarily the portion defined by the weakened lines is torn from the carton and hinged thereto. Difficulties have been encountered in opening and reclosing this type of package.

Thus, finger nails are easily broken when an attempt is made to punch and tear out the portion defined by the weakened lines. Moreover, the portion torn from the package has not been suitable for use as a closure to reseal the outlet after use, and the contents have thus been subjected to spillage if the package is tipped over. Furthermore, very finely granulated materials have had a tendency to sift through the perforations used to form the tab that must be punched out to open the carton.

To overcome the foregoing disadvantages and provide a readily reclosable carton for packaging various granulated materials and the like, the present invention provides a carton, formed from a single blank of semiflexible sheet material such as paper board, that has body panels fastened together and closed at the bottom in any conventional manner. Top flaps extending from the body panels of the carton are cut, scored and perforated to provide a hinged closure for a pouring outlet for the carton.

Weakened lines in the first and second flaps define the pouring outlet for the carton. Another weakened line in the front panel defines a tab which, when torn therefrom, provides a finger hole. A flap extending from the top of the carton overlies the tab to which it is securely fastened by a suitable adhesive. The overlying flap is lightly secured to the front panel adjacent the tab. With this arrangement, the flap may be grasped to tear the tab from the front panel and provide a finger hole, and the hinged closure ripped from the top of the carton to provide an opening through which the carton contents may be poured.

A feature of the invention comprises the use of a section of one of the top flaps that extends from the edge of the side panel to support the hinged closure when it is reclosed.

A further feature of the inventive carton resides in the use of a slot in the flap that receives the edge of the supporting section of the top flap to lock the hinged closure in position and prevent accidental opening of the carton.

These and further advantages of the invention will be more readily understood when the following description is read in conjunction with the accompanying drawings, in which:

FIGURE 1 is a plan view of a portion of a blank of semiflexible sheet material used to form a carton embodying the present invention;

FIGURE 2 is a perspective view of a portion of the carton formed by the blank of FIGURE 1 showing the carton in its closed position;

FIGURE 3 is a perspective view similar to FIGURE 2 showing the first stage of opening the inventive carton;

FIGURE 4 is a view in perspective of an opened carton;

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FIGURE 5 is a longitudinal section taken along the view lines 5-5 of FIGURE 2 looking in the direction of the arrows; and

FIGURE 6 is a view of perspective showing a portion of the carton, partially broken away, after reclosure.

Referring to a typical embodiment of the invention as illustrated in the drawings, a blank 10 of semiflexible sheet material, for example paper board such as used in making detergent cartons, comprises first and second side panels 11 and 12 joined by a front panel 13. A back panel 14 is located on the other side of the panel 12 and a glue flap 15 disposed on the other side of the panel 11. First and second flaps 16 and 17 respectively extend from the side panels 11 and 12, and front and back flaps 18 and 19 extend from the panels 13 and 14. The panels and flaps are separated in the blank 10 by score or fold lines in the usual manner to facilitate folding of the carton. Flaps (not shown), or any other suitable arrangements, are provided on the other end of the blank 10 to form a bottom for the carton.

A fold line 16a extending transversely of the flap 16 provides a hinge for a flap section 16b after it has been separated along a weakened line 20 from the top edge of the panel 11. To divide the flap 17 from sections 17a and 17b that will cooperate with the flap section 16b to form a hinged closure, a weakened line 21, formed by perforations or the like, extends transversely across the flap 17. To divide section 17a from section 17b, a further weakened line 22 extends from the weakened line 21 longitudinally along the flap 17.

A tapered flap 23 is cut to form part of the flap 17 and hinged thereto by a fold line 24, as shown in FIGURE 1. A slot 25 extends transversely of the flap 23 on the fold line 24 adjacent the weakened line 22. A transverse fold line 23a may be formed adjacent the tapered end of the flap 23 to provide an easily grasped tab to facilitate lifting of the flap.

A semicircular perforated line 26 provides a tab 27 extending into the front panel 13. Removal of the tab 27 forms a finger hole 27a (FIGURES 3 and 4) in the carton. Further weakened lines 28 and 29 extend from the sides of the tab 27 to the edge of the flap 18 and to a weakened line 30 defining a flap section 18a that underlies a portion of the flap section 17b.

The upper portion of the panel 13 has imprinted thereon an inked area 31 that resists glue. Appropriately spaced uninked spots 32 are disposed in the inked area 31 adjacent the tab 27, also uninked.

To assemble the reclosable carton, the panels 11 to 14 are folded into rectangular form and the glue panel 15 adhesively secured to the panel 14. The front and back flaps 18 and 19 are bent inwardly and the second flap 17 adhesively secured to them; see FIGURE 5. The flap 16 is then adhesively secured to the flap 17, with the exception of the flap section 17b. The adhesive (not shown) may be of any suitable type applied to appropriate surfaces of the flaps.

To complete the closure of the carton top and prevent sifting of fine material through the perforated line 26, the overlying flap 23, which carries a suitable adhesive on its underside, is folded along the score line 24 and pressed against the upper portion of the panel 13. The flap 23 will be securely fastened to the uninked tab 27 but only lightly fastened to the panel 13 by the small uninked spots 32. The carton is then filled and its bottom opening sealed.

To open the inventive reclosable carton, shown in FIGURE 2, the lower edge of the flap 23 is grasped and readily torn from the spots 32, and the flap pivoted upwardly to rip the tab 27 from the finger hole 27a, as shown in FIGURE 3. If the adhesive bond between the

flap 23 and tab 27 breaks, the tab 27 can be punched out with the finger. The user's thumb or finger is then inserted in the finger hole 27a and the flap portions 16b and 17a, together with the flap 18, torn from the carton as shown in FIGURE 4, to form a hinged closure 33. Note that the weakened line 22 is also torn at this time. A convenient outlet has now been provided to pour the packaged material.

To reclose the carton, the flap 23 is inserted in underlying relationship with the panel 13 and the hinged closure 33 urged downwardly. The inner edge of the flap supporting section 17b, and the flap portion 18a, against which the closure 33 now rests, engages and enters the slot 25 in the flap 23 (FIGURE 6) to lock the hinged closure securely in position and prevent spillage of the carton contents.

It is apparent that the present invention provides a readily fabricated carton that is simple to open and then reclose securely. It will be understood that the above-described embodiment of the invention is illustrative only and modifications thereof will occur to those skilled in the art. Therefore, the invention is not limited to the specific apparatus disclosed herein but is to be defined by the appended claims.

We claim:

1. A reclosable carton formed from a blank of sheet material comprising first and second side panels and front and back panels fastened together, means forming a bottom for the carton, first, second, front and back flaps respectively extending from the top edges of the first, second, front and back panels, the front and back flaps being folded inwardly, the second flap being folded inwardly and adhered to the front and back flaps, the first flap being folded inwardly and adhered to the second flap, a weakened line in the front panel defining a tab connected to the front flap, weakened lines extending from both sides of the tab along the top edge of the front panel, the tab upon removal from the front panel providing a finger hole therein, a fold line extending transversely of the first flap, two weakened lines partially defining an outlet respectively extending along the first and second flaps from the fold line to the front panel, the outlet defining weakened line in the second flap being spaced from the top edge of the second side panel by a section of the second flap, the portion of the first flap overlying said second flap section not being adhered thereto, an overlying flap hinged by a fold line to the second flap and extending over the front panel beyond the tab, a slot extending along a portion of the fold line located between the overlying flap and the second flap, said slot extending along said fold line from said outlet defining weakened line in the second flap, adhesive means securing the overlying flap to the tab and lightly adhering the overlying flap to the front panel adjacent the tab to permit the overlying flap to be grasped and torn from the front panel to remove the tab from the finger hole, the finger hole to be used to tear the carton along the weakened lines that define the outlet and at the same time form a closure for the outlet hinged at the transverse fold line in the first flap, the flap to be inserted into the car-

ton in coplanar relationship with and underlying the front panel, and the hinged closure to be urged downwardly to reclose the carton with the hinged closure engaging and supported by said second flap section and said second flap section entering said slot to lock the hinged closure in its closed position.

2. A reclosable carton formed from a blank of sheet material comprising first and second side panels and front and back panels fastened together, means forming a bottom for the carton, first, second, front and back flaps respectively extending from the top edges of the first, second, front and back panels, adhesive means fastening the flaps together with the first flap on top and overlying the second flap to form a top for the carton, an outlet in the carton partially defined by first and second weakened lines in the carton top extending from the top edge of the front panel towards the back panel, a closure formed by portions of the first, second and front flaps to seal the outlet, a fold line in the first flap adjacent the ends of the first and second weakened lines to hinge the closure, the second weakened line being spaced from the top edge of the second side panel by a section of the second flap, the portion of the first flap overlying said second flap section not being adhered thereto, a third weakened line in the front panel defining a tab connected to the front flap, the tab upon removal from the front panel providing a finger hole therein, weakened lines extending from both sides of the finger hole along the top edge of the front panel to the first and second weakened lines, an overlying flap hinged by a fold line to the second flap and extending over the front panel beyond the tab, a slot extending along a portion of the fold line located between the overlying flap and the second flap, said slot extending along said fold line from the second weakened line, adhesive means securing the overlying flap to the tab, and further adhesive means lightly adhering the overlying flap to the front panel adjacent the tab, to permit the overlying flap to be grasped and torn from the front panel to remove the tab from the finger hole, the finger hole to be used to tear the carton along the weakened lines to form the hinged closure for the outlet, the flap to be inserted into the carton in coplanar relationship with and underlying the front panel, and the hinged closure to be urged downwardly to reclose the carton with the hinged closure engaging and supported by said second flap section and said second flap section entering said slot to lock the hinged closure in its closed position.

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