

April 27, 1965

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3,180,556

RECLOSABLE CARTON

Filed Dec. 7, 1962

2 Sheets-Sheet 1

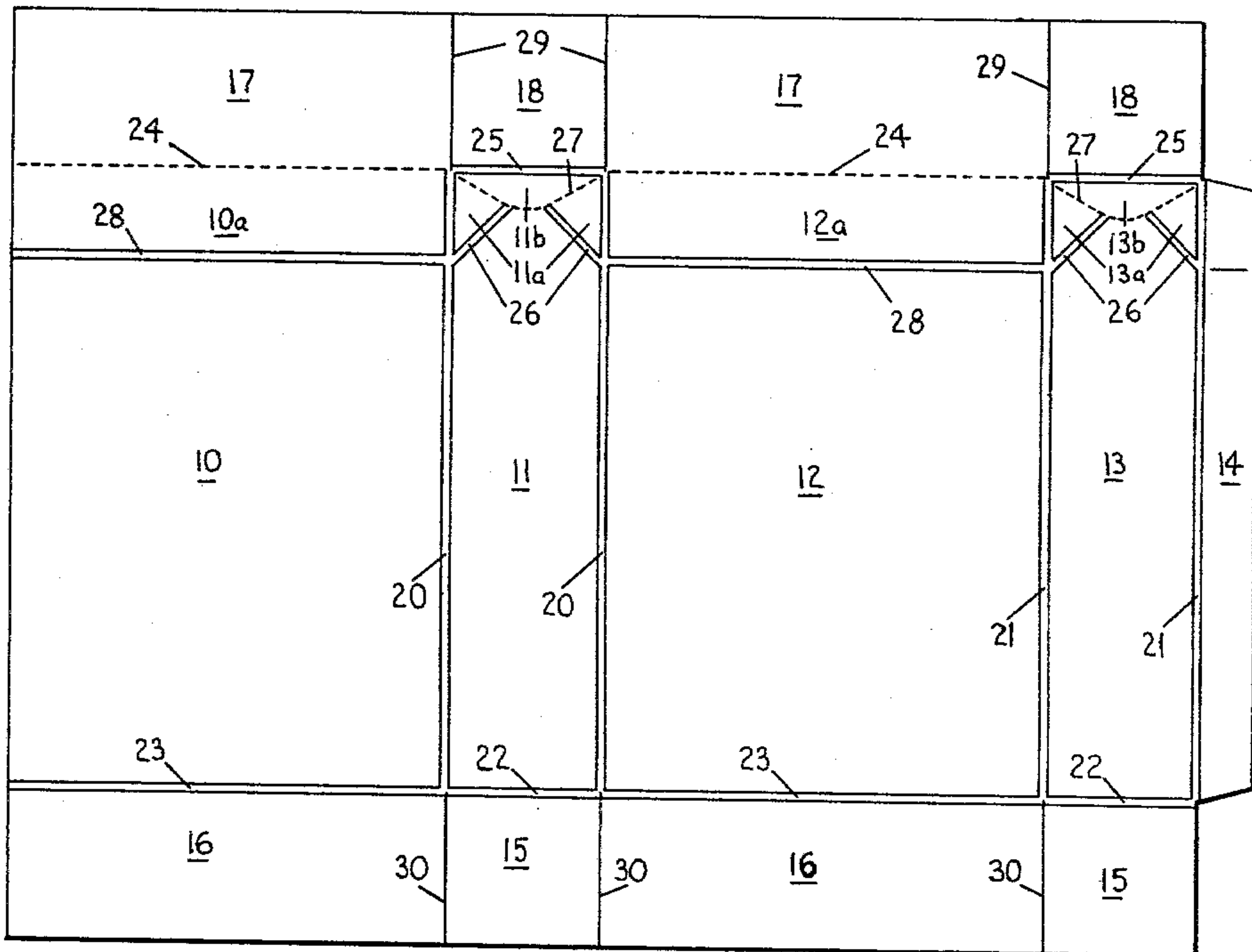


Fig. 1

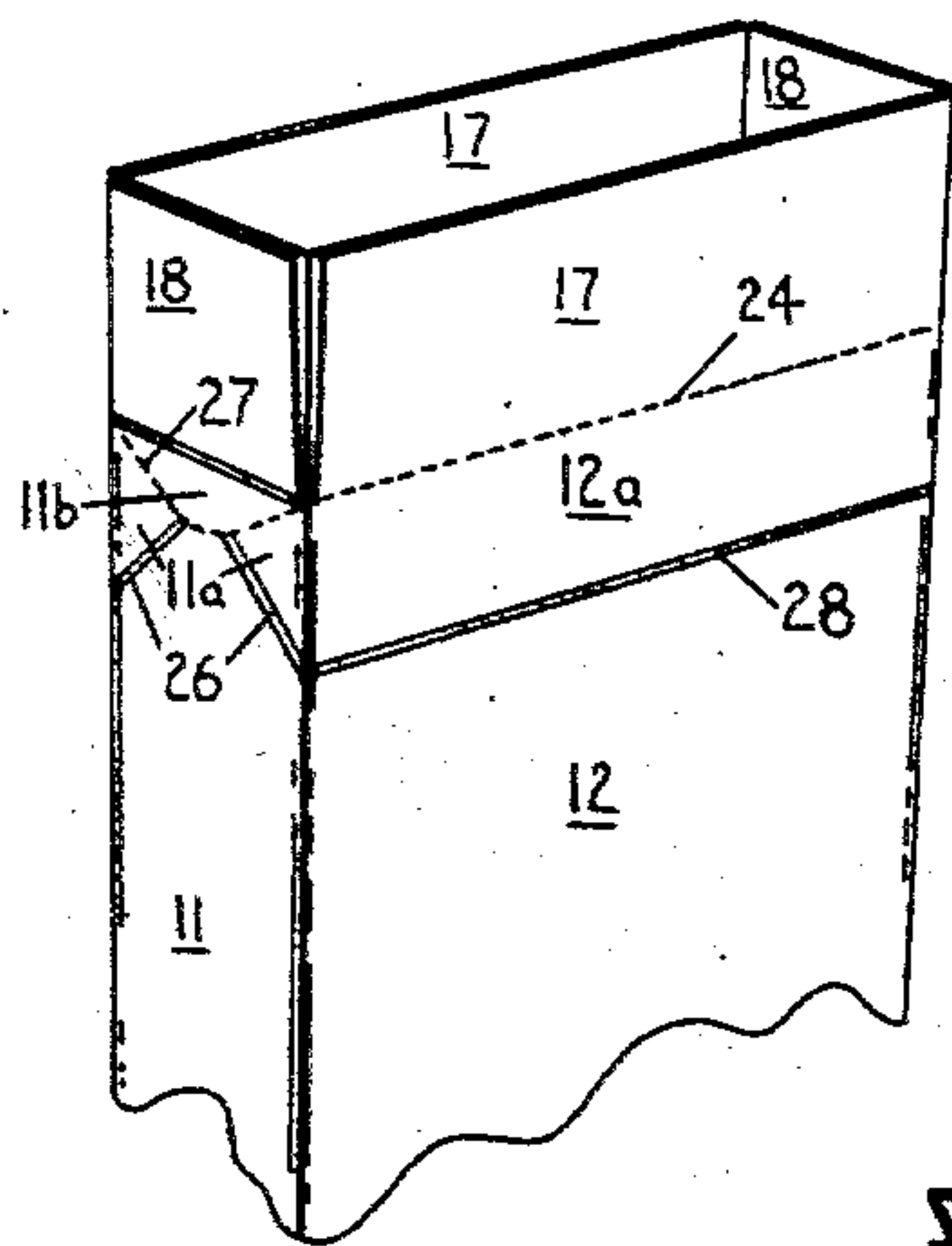


Fig. 2

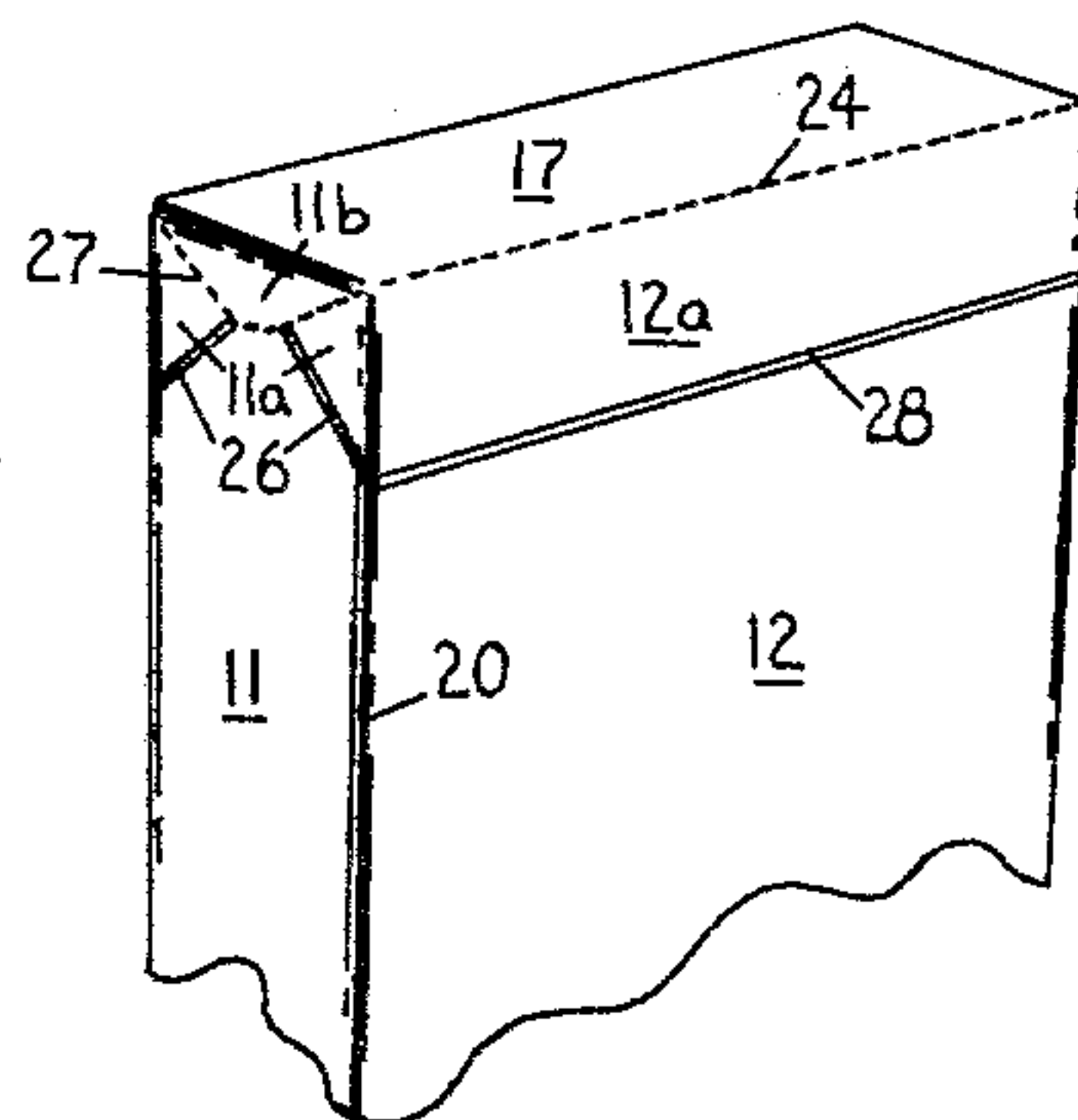


Fig. 3

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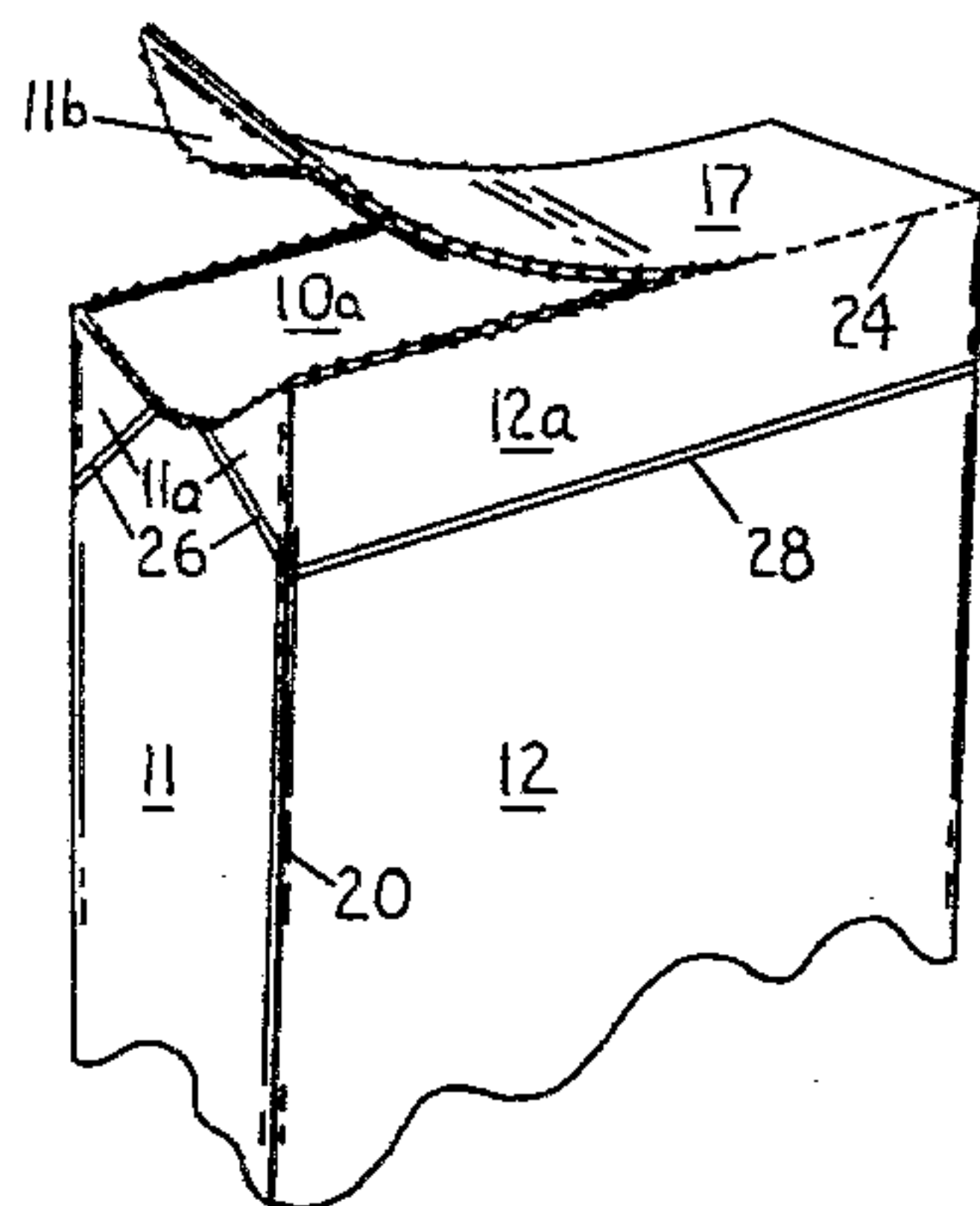


Fig. 4

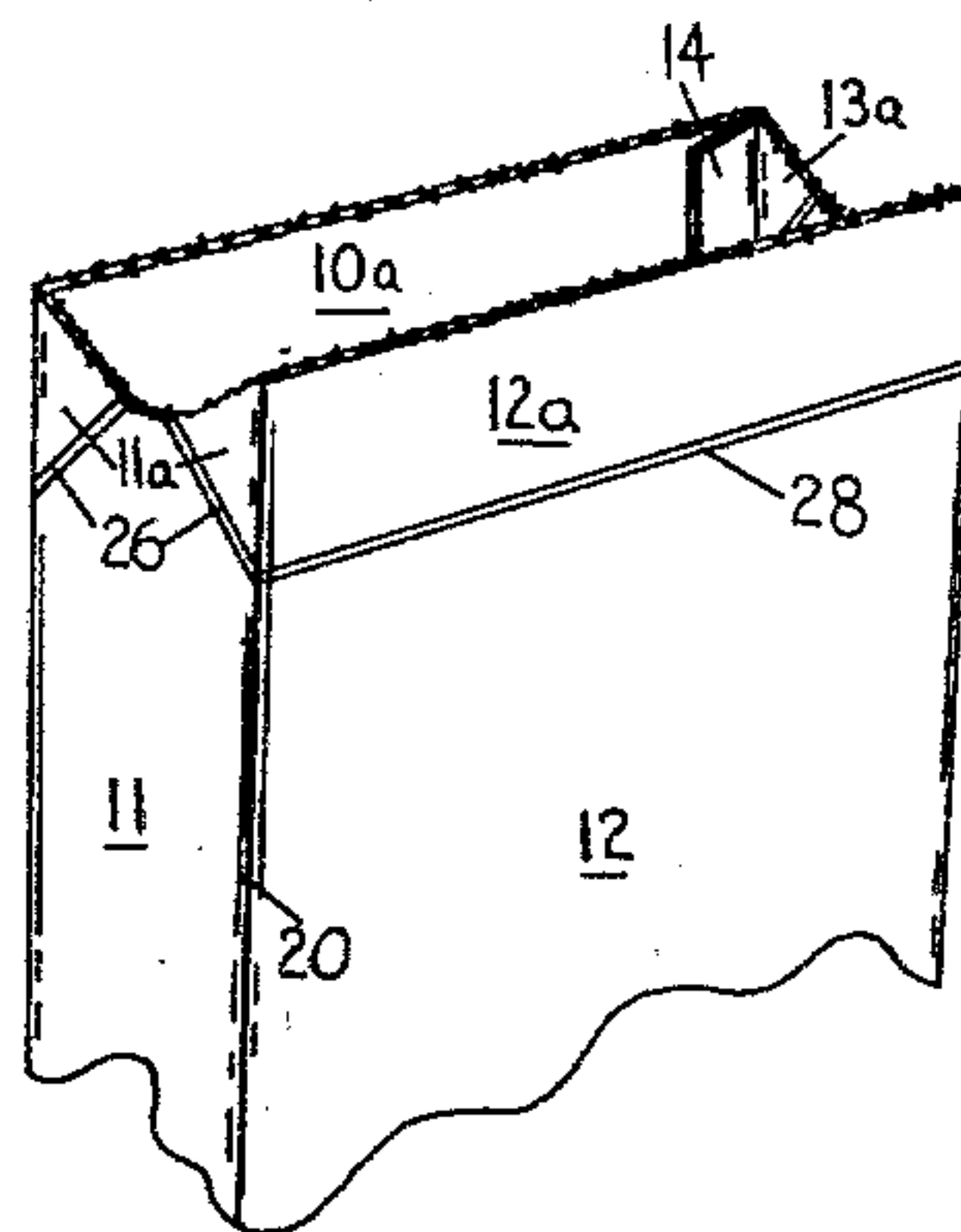


Fig. 5

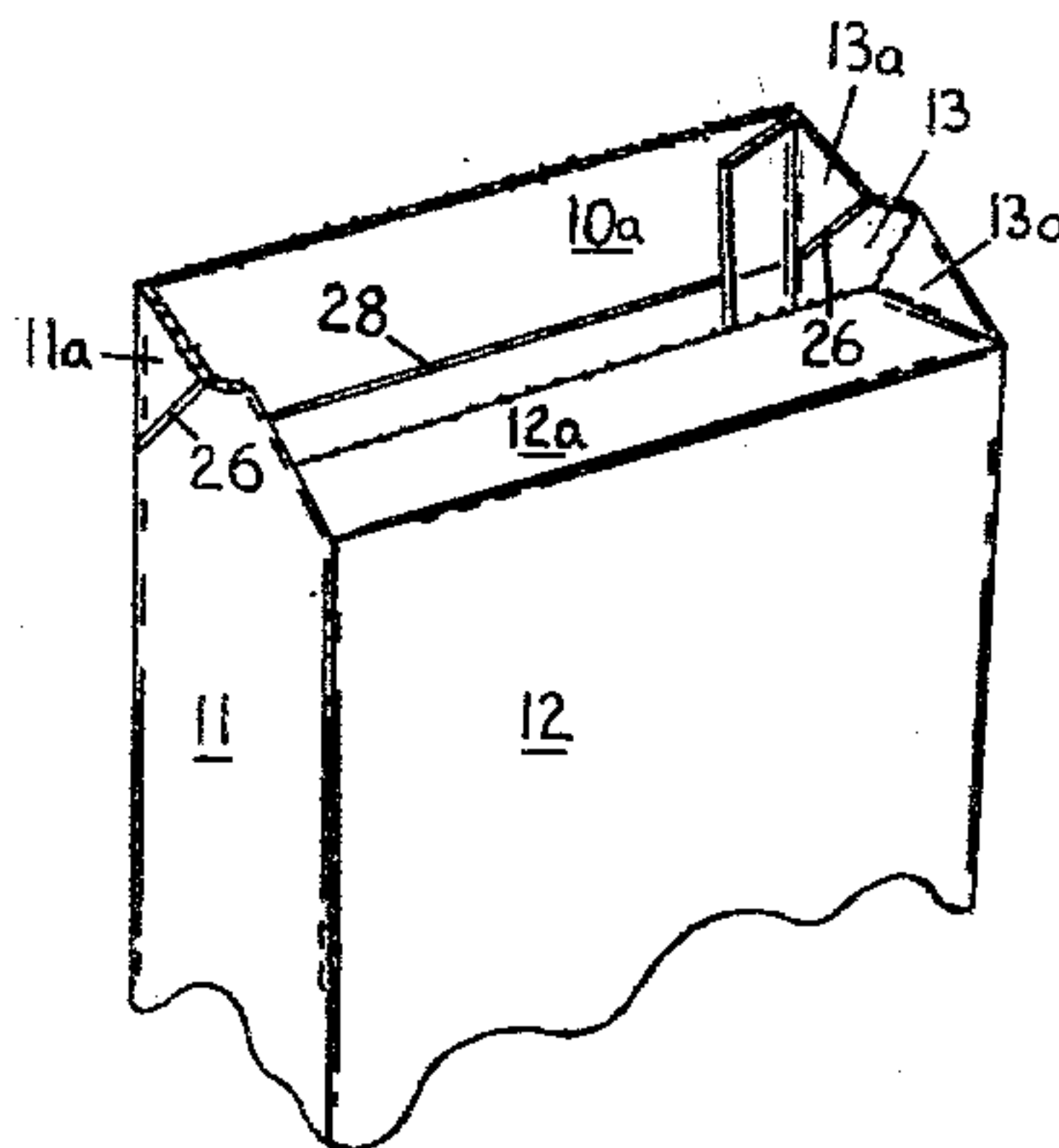
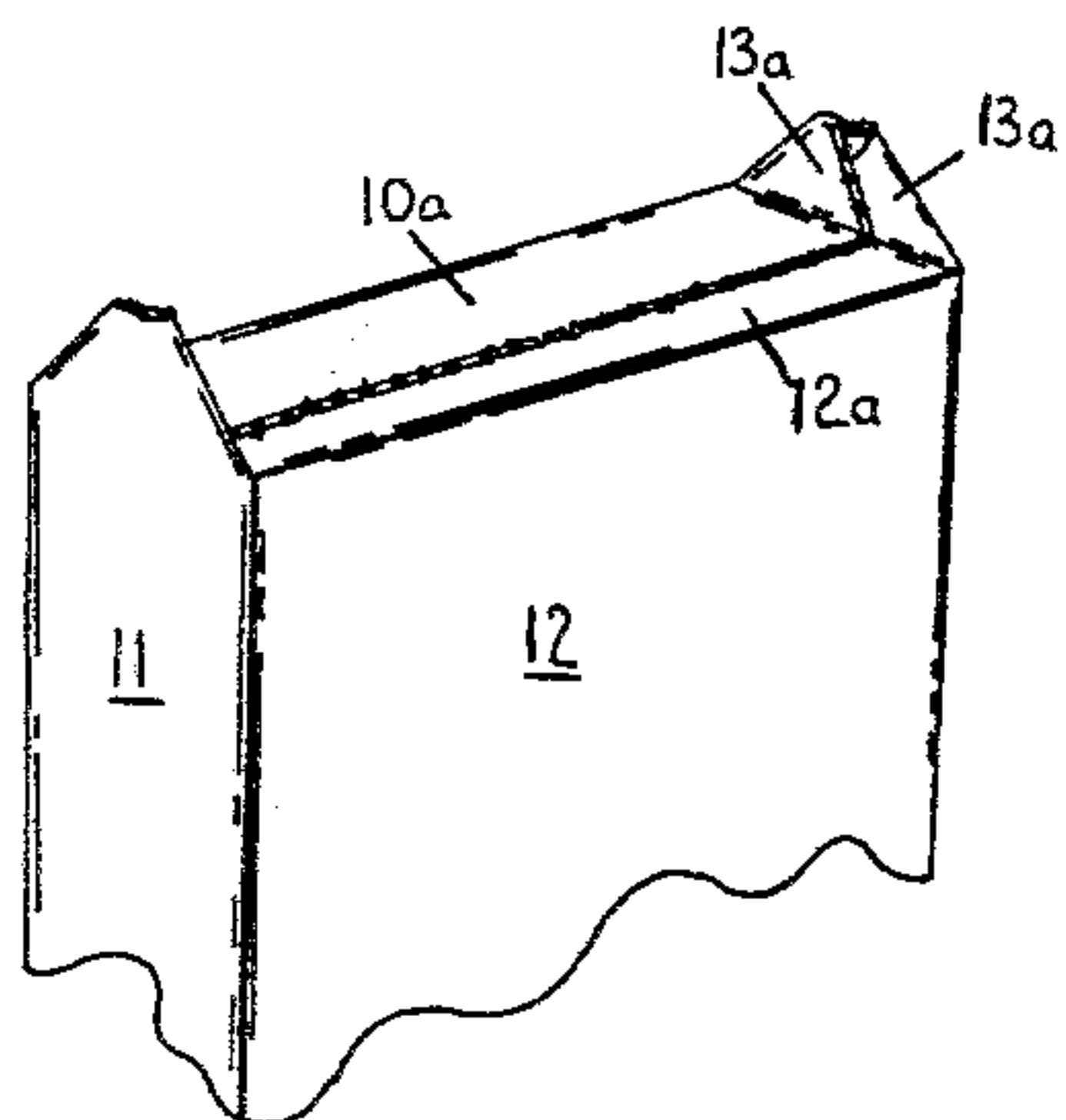


Fig. 6

Fig. 7



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RECLOSABLE CARTON

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4 Claims. (Cl. 229-51)

This invention relates to a reclosable dispensing carton, suitable for a variety of uses such as the packaging of granular, flaked and powdered products. More specifically, the invention may with particular advantage be used as a carton for packaging soap flakes or breakfast cereals.

Further details and advantages will be apparent from the following specification and appended drawings wherein:

FIGURE 1 is a plan view of an integral blank suitably cut and scored to form a dispensing carton,

FIGURE 2 is a perspective view, partially cut away, of the blank of FIGURE 1 partially set up and glued to form a carton shell,

FIGURE 3 is a perspective view, partially cut away, of the completed carton,

FIGURE 4 is a perspective view, partially cut away, of the completed carton with the opening means partially removed for dispensing of the product,

FIGURE 5 is a perspective view, partially cut away, of the carton with the opening means completely removed,

FIGURE 6 is a perspective view, partially cut away, of the carton partially reclosed, and

FIGURE 7 is a perspective view, partially cut away, of the carton completely reclosed.

Referring first to FIGURE 1, the carton is made of a single foldable blank of flexible material such as paperboard. The blank is divided by score lines 20-23 and 25, perforation lines 24, and cut lines 29, 30 into hingedly connected panels and flaps including main panels 10, 12, side panels 11, 13, glue flap 14, closure flaps 16, 17 and dust flaps 15 and 18. Main panels 10 and 12 have score lines 28 therein which, along with the upper edges of the main panels, define folding panels 10a and 12a. Side panels 11 and 13 are divided by score lines 26 and perforation lines 27 into tuck panels 11a, 13a and punch out tabs 11b, 13b. Perforation lines 24 and 27 facilitate opening of the carton while score lines 26 and 28 provide a tight reclosure once the carton is opened. The function of the aforementioned lines will be described more fully hereinafter.

The blank, the outside of which is shown in FIGURE 1, is formed into a glued carton shell by folding glue flap 14 and side panel 13 about score line 21 to overlie the inner surface of main panel 12, applying adhesive to the exposed surface of flap 14, and then folding main panel 10 and side panel 11 about score line 20 to overlie and become adhered to the adhesive surface of flap 14. In such condition, the shell may be economically shipped to the product packages for setup, filling and closing.

FIGURE 2 depicts an initial stage in which the carton is squared and ready for filling. When the shell is squared, panels 10, 11, 12 and 13 are positioned consecutively at right angles to each other. Usually one end is closed and sealed, the carton filled and then the other end is closed and sealed. The end opposite the opening means is closed by consecutively infolding dust flaps 15, applying adhesive to the outer surface of one of the closure flaps 16, infolding the adhesive bearing closure flap about its connecting score line 23 and infolding the other closure flap 16 and adhering it to the underlying adhesive bearing closure flap. The particular order of infolding the end closure flaps 16 is immaterial.

In closing the squared carton shell shown in FIGURE

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2, dust flaps 18 are folded inwardly about score lines 25 to lie in a common plane. Next, one of the closure flaps 17 is infolded about its connecting line of perforations to overlie the dust flaps 18. Then, the exposed surface of the infolded end closure flap is coated with adhesive. The closure is completed by infolding the other end closure flap 17 and adhering it to the underlying end closure flap. FIGURE 3 shows the closed and completed carton.

Referring to FIGURE 4, the carton is opened by applying inward pressure to the punch out tab 11b. Since the construction is identical on either side of the carton, entry could just as well be made through punch out tab 13b. The removed punch out tab is folded inwardly about score line 25 to provide a grasping portion for removal of the end closure flaps 17 and the attached punch out tab 13b, located on the opposite side of the carton. FIGURE 5 shows the carton after the tear away portion, defined by perforation lines 24 and 27, has been completely removed. It is obvious from FIGURES 4 and 5 that the dispensing of the contents may occur when the tear away portion is only partially removed or alternatively when the tear away portion is completely removed. The configurations of the upper edges of the side panels 11 and 13, after removal of the punch out tabs 11b and 13b, provide readily controlled dispensing of the contents of the carton.

The carton is reclosed by pushing inwardly on folding panel 12a which folds about score line 28 to lie perpendicular to main panels 10 and 12 as shown in FIGURE 6. Tuck panels 11a and 13a, hingedly connected to folding panel 12a, fold inwardly about score lines 26 and lie in parallel contacting relationship with the upper edges of their respective side panels 11 and 13. Next, folding panel 10a, along with the upper portion of the attached glue flap 14, is urged inwardly about its connecting score line to be in superposed relationship on folding panel 12a, completing the reclosure of the carton. Tuck panels 11a and 13a hingedly connected to the side edges of folding panel 10a contact and overlie the tuck panels 11a and 13a attached to folding panel 12a. The reclosed carton is shown in FIGURE 7.

In order to insure the formation of a tight reclosure, it is desirable to have the folding panels positioned at an angle of essentially 90° to the main panels 10 and 12 in the reclosed carton. The score lines 26 must therefore form an angle of essentially 45° with score lines 20 and 21. Although it is obvious that the position of the folding panels 10a and 12a in the reclosed carton can be varied as desired, it is essential in the reclosed carton for the adjacent edges of folding panels 10a and 12a to overlap rather than merely abut.

The opening and reclosing construction comprising the present invention can be employed in the middle rather than on the end of a carton when it is desirable to reduce the size of the carton after partial use of the contents. Utilization of the opening means would divide the carton at the location of perforation lines 24 and 27. Such an adaptation would find extension use in the area of cake mix packaging where two different packages are put in one carton. The present invention provides a carton construction incorporating a convenient dispensing means which requires a minimum of paperboard stock. The carton can be readily set up, filled with the commodity to be packaged and sealed by automatic machinery. Any conventional end closure means, such as that illustrated and described may be employed on the end of the carton opposite the reclosable end, and such means do not constitute a feature of this invention. It is to be understood that the size and shape of the carton and the material from which it is formed may be varied in numerous ways by those skilled in the art without departing from the spirit of the invention.

I claim:

1. A reclosable dispensing carton formed from a single paperboard blank suitably cut and scored to provide a pair of opposed main panels, a pair of opposed side panels hingedly connected to the side edges of said main panels, each of said main panels having a folding panel therein defined by a line of weakness and an adjacent reclosure score line, said reclosure score line being parallel to the end edges of the main panel, each of said side panels having therein a line of weakness meeting the ends of each of the lines of weakness in the main panels and having non-crossing score lines extending inwardly from the ends of each of the reclosure score lines to intersection with the line of weakness in the side panels, each of said side panels having a pair of substantially triangular tucking tabs therein defined by said non-crossing score lines and the line of weakness therein, the relationship of the height of the folding panels and the angles formed by the non-crossing score lines with the side edges of the side panels being such that the folding panels when folded inwardly after removal of the portion of the carton above the lines of weakness meet each other to reclose the carton, said folding panels having a spring-like closing action resulting from the resistance to deformation inherent in the side panels for snapping said folding panels into reclosed position as they are folded inwardly just beyond said non-

crossing score lines, the line of weakness in each of said side panels and the non-crossing score lines defining the upper edge of a substantially vertical upwardly protruding portion of each side wall which is adapted to maintain the folding panels in their inwardly folded reclosed position.

2. The carton of claim 1 wherein the height of both folding panels is the same.

3. The carton of claim 1 wherein the main panels including the folding panels are identical.

4. The carton of claim 1 wherein the score lines of the side panels form angles of 45° with the edges thereof.

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