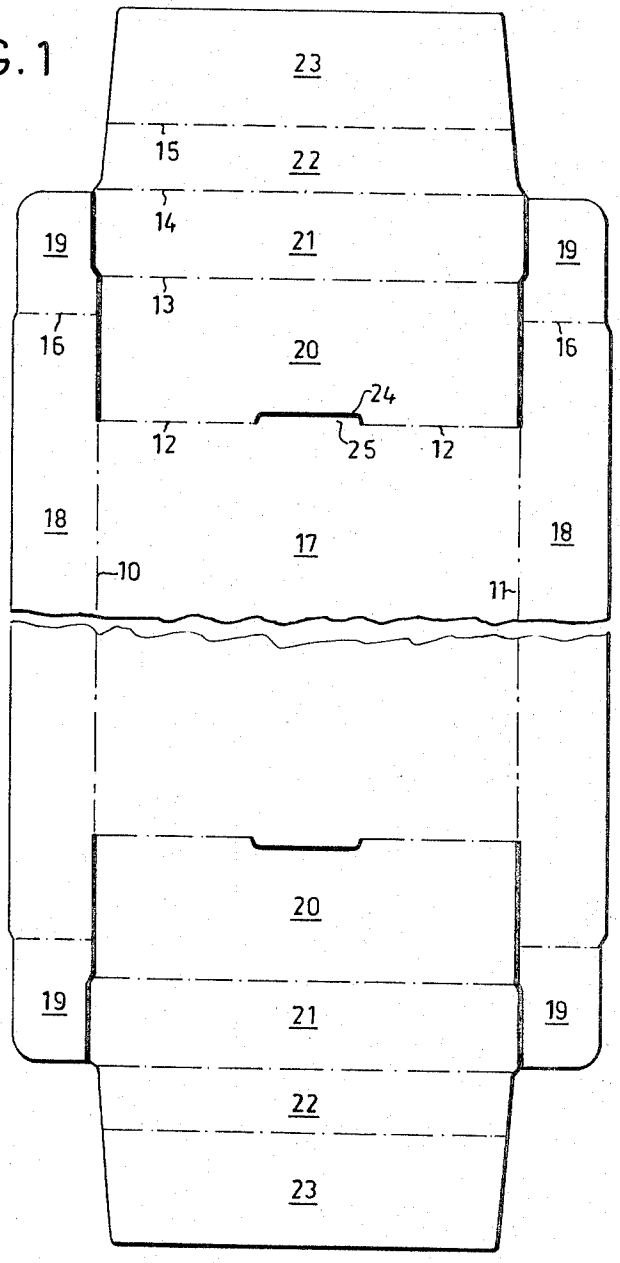
June 13, 1967 K. R. PERSSON 3,325,080

CARDBOARD BOX AND BLANK FOR MAKING SUCH BOX

Filed Aug. 4, 1965 2 Sheets-Sheet 1

FIG. 1



INVENTOR.
Karl Rune Persson
BY
Pierce, Scheffler & Parker
attorneys

June 13, 1967 K. R. PERSSON 3,325,080

CARDBOARD BOX AND BLANK FOR MAKING SUCH BOX

Filed Aug. 4, 1965 2 Sheets-Sheet 2

FIG. 2

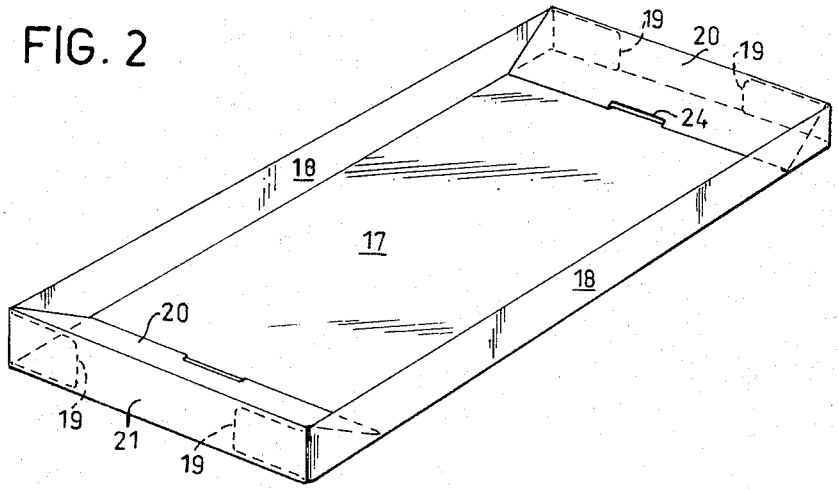
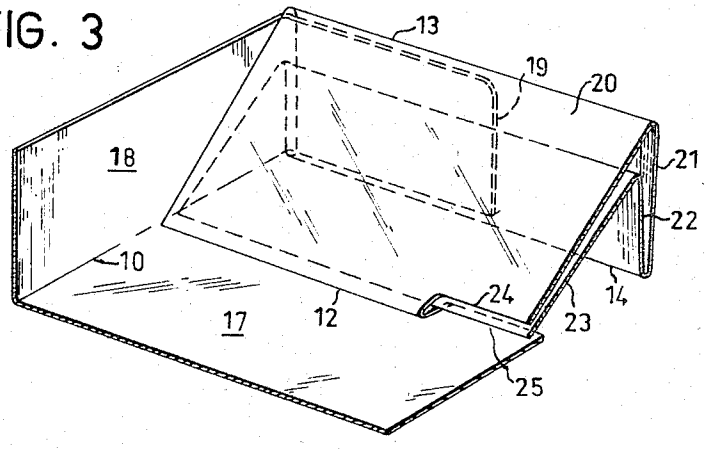


FIG. 3



INVENTOR.
Karl Rune Persson
BY
Pierce, Scheffler & Parker
attorneys

United States Patent Office 3,325,080 Patented June 13, 1967

3,325,080

CARDBOARD BOX AND BLANK FOR MAKING SUCH BOX

Karl Rune Persson, Halmstad, Sweden, assignor to Sprinter-Pack AB, a corporation of Sweden

Filed Aug. 4, 1965, Ser. No. 477,107
Claims priority, application Sweden, Nov. 20, 1964, 14,056/64
2 Claims. (Cl. 229—34)

ABSTRACT OF THE DISCLOSURE

The invention resides in an integral cardboard box blank and in a box made therefrom without fastening means, said blank having a bottom part, side walls and end walls, the side walls being adapted to be held in erect position by end flaps thereon inserted between two portions of said end walls and the end walls being adapted to be folded so as to provide a space for receiving the end flaps of the side walls, upwardly inclined inner end surfaces and a vertical outer end surface.

This invention relates to a cardboard box having a rectangular bottom, side walls and end walls. The side walls have inwardly turned end extensions in the form of lock flaps which gluelessly are maintained in position inside the folded end walls so as to retain the side walls in their erected positions. The end walls themselves are formed by an extension of the bottom at each end thereof that extends obliquely up to the top edges of the lock flaps and over these edges and then downwardly forming the end wall proper and then upwardly again forming the inner layer of the end wall and then obliquely in the form of a lock tongue which extends to the box bottom and is locked, e.g. in a slot in the bottom.

The object of this invention is to provide a box of the kind referred to which can be erected in a simple manner and comparatively reliably locked in erected position.

To this end the box according to the invention is characterized by the features indicated in the appending claims.

A suitable embodiment of the invention is described hereinbelow with reference to the annexed drawings.

FIG. 1 illustrates the blank for making the box according to the invention, FIG. 2 is a diagrammatic perspective view of the erected box, and FIG. 3 is an enlarged sectional fragmentary view of one half of one end of the box shown in FIG. 2.

The blank illustrated in FIG. 1 is subdivided by longitudinal fold lines **10**, **11** and transverse fold lines **12**, **13**, **14**, **15** and **16** into a bottom part **17**, two side walls **18**, two bottom extensions **20**, two external end walls **21**, two internal end walls **22** and two lock tongues **23**. Further, a U-shaped slot **24** is provided alongside the fold lines **12** so as to form a projection **25**. For the sake of simplicity merely one end portion of the box will be described hereinbelow because the other end portion of the box according to the present embodiment is constructed in exactly the same manner.

In order to erect the box, the side walls **18** are turned upwards to a position at right angles to the bottom part **17**. At the same time the portion **20**, **21**, **22**, **23** of the

blank located outside the fold line **12** is turned obliquely upwardly to such a height that the lock flaps **19** can be turned inwards to a position at right angles to the side walls. Thereupon the portion **21**, **22**, **23** is folded down about the fold line **13** such that the external end wall **21** will be located outside the lock flaps **19**. In the next step the portion **22**, **23** is turned inwards below the bottom part and at the same time the lock tongue **23** and the internal end wall **22** are turned one relative to the other such that the internal end wall **22** can be raised into contact with the lock flaps **19**. The forward end of the lock tongue **23** is snapped over the projection **25** and is locked thereby in the position shown in FIG. 3.

Thus, in the erected box there is obtained an inclined plane **20** that extends obliquely upwardly from the end of the bottom part **17** to the top edge of the external end wall **21**. This is advantageous among other things in packages for cakes and similar articles which have to be protected against shocks. If the cakes slide along the bottom of the box they will be braked by the inclined planes instead of being stopped by striking against an end wall extending at right angles to the bottom which would involve greater risks of damages. The box is usually wrapped in a transparent foil which retains the articles in the box. The articles extend only partly up to the inclined planes. Consequently there is a comparatively great length between the articles on the inclined planes and the adjacent external end wall. This length serves as an effective shock absorber when the ends of the box are subjected to shocks, e.g. if the box is carelessly handled during transportation.

Referring to the locking of the box in the erected condition, the lock flaps **19** are retained between the internal and external end walls **22**, **21** due to the fact that the height of the lock flaps is substantially equal to the distance between the folds at the fold lines **13** and **14**, that is the lock flaps are of substantially the same height as the external end walls **21**. As a result the lock flaps are prevented from being unfolded which in turn results in that the side walls are retained in their erected positions. The lock flaps **19** in turn prevent the external and internal end walls **21**, **22** from being unfolded about the fold line **14**, and the lock tongue **23** retains the external and internal end walls in clutching condition with respect to the lock flaps.

What I claim is:

1. A cardboard box comprising an integral bottom part, side walls and end walls, said bottom part being plane and rectangular, said end walls each consisting of an extension of said bottom part and having a first portion extending obliquely upwardly from an end of said bottom part to the level of the top edges of said side walls, a second portion extending vertically downwardly from the upper edge of said first portion to the level of said bottom part, a third portion extending substantially vertically upwardly from the lower edge of said second portion on the side thereof adjacent said bottom part a distance substantially less than the height of said second portion and a fourth portion extending obliquely from the upper edge of said third portion downwardly to said end of said bottom part and into a slot adjacent to the fold line between said end of said bottom part and the adjacent edge of said first portion, said side walls having lock flaps at the ends thereof folded inwardly and extending between said second and third portions of said end walls.

2. An integral cardboard blank comprising a plane, rectangular bottom part connected to side walls and end walls by straight fold lines, said side walls each having integral end portions at both ends thereof that extend substantial distances beyond the fold lines between said bottom part and said end walls, said end portions of said side walls being disconnected from said end walls and each having a transverse fold line intermediate the ends thereof, said end walls each consisting of a first portion of greater width than the width of said side walls, a second portion of substantially the same width as the width of said side walls, a third portion of less width than the width of said second portion and a fourth portion of less width than the width of said first portion, and a slot adjacent to each fold line between said bottom part and said end walls adapted to engage the free edges of said fourth portions of said end walls when said blank is folded to form a box.

References Cited

UNITED STATES PATENTS

2,373,730	4/1945	Williamson et al.	229—34
2,495,807	1/1950	Buttery	229—34

JOSEPH R. LECLAIR, *Primary Examiner.*

R. PESHOCK, *Assistant Examiner.*