

Nov. 30, 1965

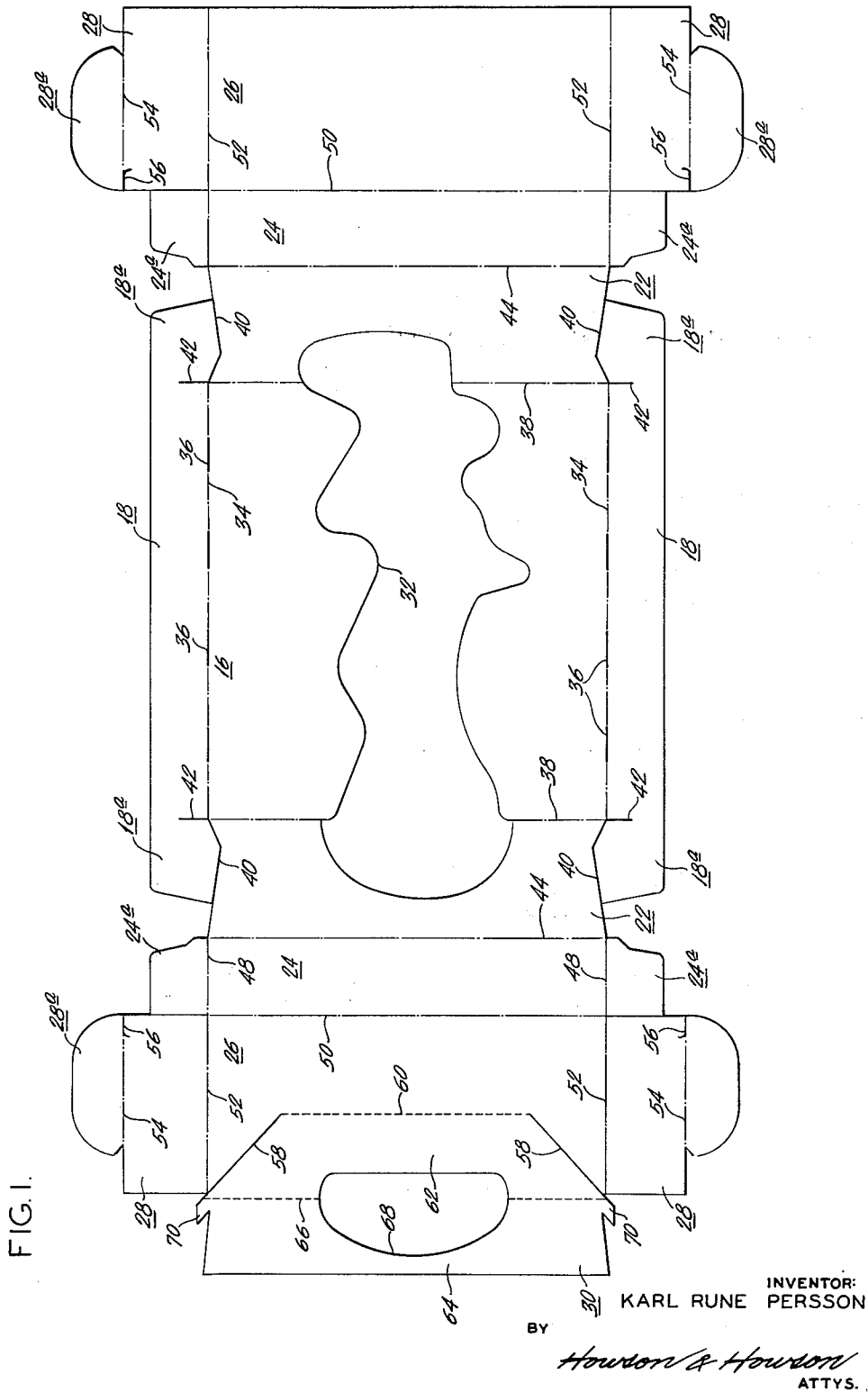
K. R. PERSSON

3,220,632

PAPERBOARD PLATFORM FOR PACKAGING FRAGILE ITEMS

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3 Sheets-Sheet 1



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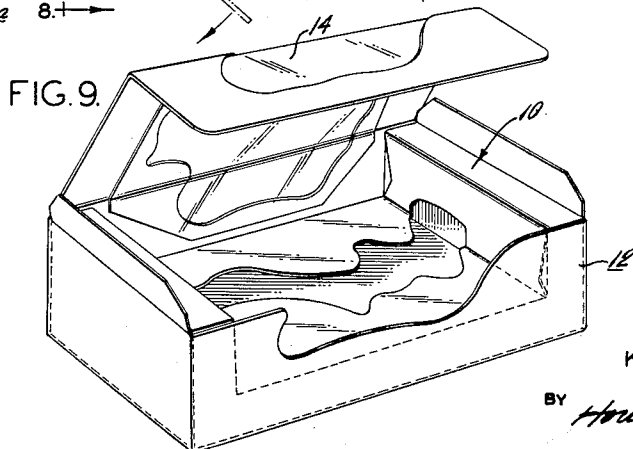
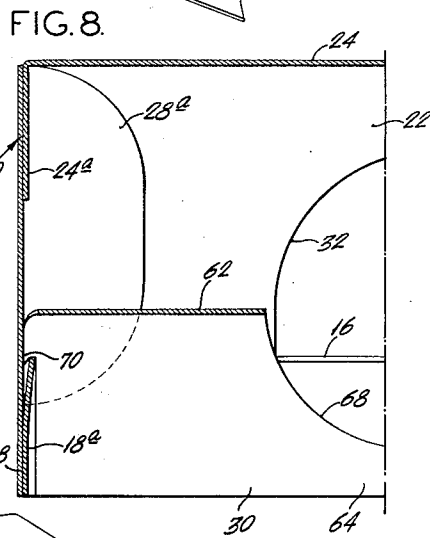
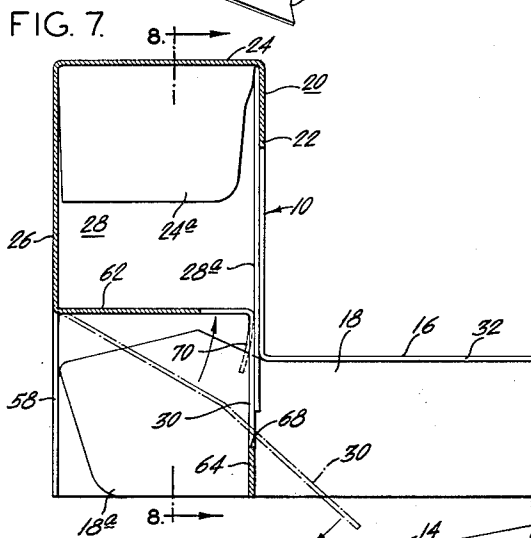
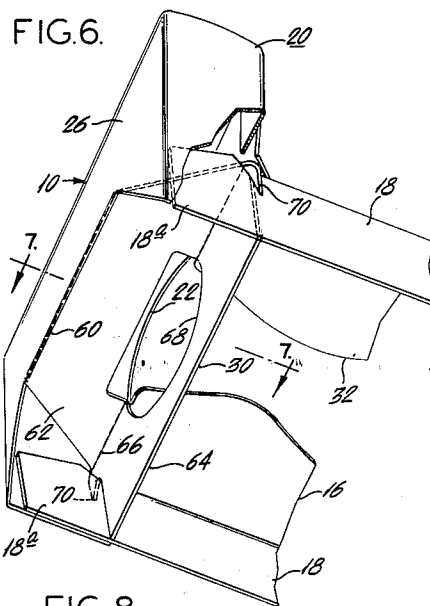
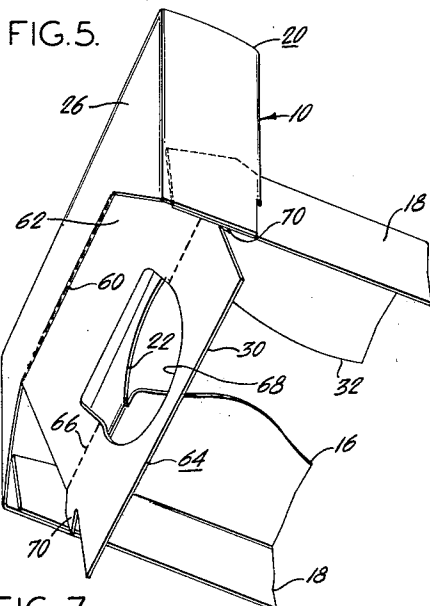
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PAPERBOARD PLATFORM FOR PACKAGING FRAGILE ITEMS

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3 Sheets-Sheet 3



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3,220,632 PAPERBOARD PLATFORM FOR PACKAGING FRAGILE ITEMS

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4 Claims. (Cl. 229-14)

The present invention relates generally to packaging arrangements for fragile items and more particularly to a paperboard platform adapted to secure chocolate novelties and similar fragile articles within a conventional paperboard box.

Although the invention as indicated may be adapted to other uses, it has primarily been developed for the packaging of chocolate novelties such as a chocolate Easter rabbit. Chocolate figures of this type are extremely fragile and subject to damage not only in transit but also during handling and packing operations.

A primary object of the present invention is to provide a paperboard platform to be utilized as a box insert for fragile items which provides maximum protection against breakage by supporting and holding the items in a position spaced from the exterior walls of the containing box.

A further object of the invention is to provide a paperboard platform as described which may be economically formed from a single flat blank and which is adapted for erection or set-up by automatic equipment.

An additional object of the invention is to provide a paperboard platform as described which in combination with an enclosing box provides an attractive and convenient display package for retail sale of fragile articles.

Additional objects and advantages of the invention will be more readily apparent from the following detailed description of an embodiment thereof when taken together with the accompanying drawings in which:

FIG. 1 is a plan view of a blank embodying the present invention shown prior to erection;

FIG. 2 is a perspective view showing the initial step in the erection of the blank;

FIG. 3 is a perspective view showing a further stage of the erection of the blank;

FIG. 4 is a perspective view showing the blank in its erected form except for the folding and locking of the article-securing flap;

FIG. 5 is a partial perspective view looking beneath an end of the platform showing the manner in which the article-securing flap is folded into position;

FIG. 6 is a view as in FIG. 5 showing the article-securing flap in the locked position;

FIG. 7 is a view taken along line 7-7 of FIG. 6;

FIG. 8 is a view taken long line 8-8 of FIG. 7; and

FIG. 9 is a perspective view showing the erected platform positioned in an opened display box.

Referring to the drawings, FIG. 9 shows a paperboard platform 10 embodying the present invention inserted within a paperboard box 12 to provide a protective support for a fragile item. In this instance the box 12 is characterized by a window 14 in the top and side panels thereof for identification and display of the article enclosed, although it is obvious that the box may be of other constructions.

The paperboard platform 10 as shown in substantially erected form in FIG. 4 essentially comprises a floor portion 16 having depending opposite side panels 18 and upstanding box-like structures 20 at its opposite ends. Each end structure 20 includes an inner end wall 22, a top wall 24, outer end wall 26, and opposite end closures 28. An article-securing flap 30 extends from the outer end wall 26 of one of the end structures, and in the view

of FIG. 4 is shown prior to folding and locking into position. Aperture 32 in the floor portion and inner end walls is shaped to snugly receive the particular article for which the platform is intended.

The platform is erected from the flap paperboard blank shown in FIG. 1. The blank is symmetrical about the central floor portion 16 which adjoins the side panels 18 along the parallel fold lines 34. The fold lines 34 may include the spaced slits 36 to facilitate erection of the platform.

The floor portion 16 is connected to the inner end walls 22 by parallel fold lines 38 across which the aperture 32 extends into the inner end walls as shown. The side edges of the inner end walls 22 are formed in part by slits 40 which also define tab portions 18a of the side panels 18 extending endwise beyond the floor portion 16 and laterally adjacent opposite sides of the said end walls 22. Locking slits 42 extend from the intersections of the fold lines 34 and 38 in alignment with the fold lines 38 a short distance into the side panels 18.

The top walls 24 of the end structures 20 are connected to the inner end walls 22 by fold lines 44 and these walls include transversely extending flaps 24a connected thereto by fold lines 48. Similarly, the outer end walls 26 are connected to the top walls 24 by fold lines 50 and these outer end walls include end closures 28 connected to opposite side edge thereof by fold lines 52. These end closures 28 each have a laterally projecting locking tab 28a connected thereto by a fold line 54. Locking slits 56 provided along the fold lines 54 are adapted to coact with the flaps 24a of the top panels to secure the opposite end structures of the platform in the erected position as discussed further below.

One of the end structures 20 includes the article-securing flap 30 which is partly formed from an outer end wall 26 by diagonal slots 58 terminating at the fold line 60. Depending from the fold line 60 is the shelf panel 62 from which in turn extends the locking flap 64, the locking flap adjoining the shelf panel along fold line 66. Aperture 68 in the shelf panel 62 and locking flap 64 is shaped to receive elements of the packaged article in conjunction with the aperture 32 of the floor portion 16 and inner end walls 22. Locking ears 70 extending from the side edges of the locking flap are adapted for coaction with the side panel tab portions 18a in a manner to be presently described.

For erection, the blank is sequentially folded as indicated in FIG. 2-8. Referring to FIG. 2, the first stage of erection consists of the downward folding of the side panels 18 while at the same time end structures 20 are folded along the fold lines 38, 44 and 50 as illustrated, the inner end walls 22 being folded upwardly from the floor portion 16 and the outer end walls 26 being folded downwardly from the top walls 24.

As shown in FIG. 3, the side panels 18 are folded so as to be perpendicular to the floor portion 16. The inner end walls 22 are similarly folded so as to be perpendicularly disposed to the floor portion, with the top walls 24 parallel with the floor portion 16 and the outer end walls 26 folded parallel with the inner end walls 22. The flaps 24a of the top walls 24 are bent downwardly, and the end closures 28 folded inwardly with the locking tabs 28a thereof inwardly directed to slip behind the inner end walls 22 and coact with the locking slits 42 of the side panels 18 while engaging the locking slits 56 with the flaps 24a. The folding of the end closures 28 to secure the locking tabs in this manner locks the end structures 20 in the box-like configuration shown in FIG. 4.

The article-securing flap 30 is secured in position in the manner shown in FIGS. 5-8. Referring to FIG. 5, the shelf panel 62 is folded upwardly along the fold line 60

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while the locking flap 64 is maintained in a downwardly directed disposition by bending along fold line 66. The shelf panel 62 is pivoted into a horizontal position, at which time the locking ears 70 coact with the tab portions 18a of the side panels 18, thus locking the article-securing flap in position and completing the erection of the platform.

The extending of the article-receiving aperture into the inner end walls 22 of the end structures permits the insertion of the articles to be secured into the end structures of the platform such that movement of the articles in any direction is prevented. The article-securing flap 30 may be utilized to support fragile protruding elements of the secured article, for example, the ears of a chocolate rabbit. The platform effectively prevents contact of the secured article with the exterior box walls and thus minimizes the damaging effect of jolts and shocks to which the outer box may be subjected during handling and shipping.

Loading of the fragile articles onto the platform is most effectively accomplished prior to the insertion of the platform into the enclosing box. The end structures of the erected platform may be readily pivoted outwardly to facilitate the insertion of the articles into the article-receiving apertures. Upon insertion of the platform into the enclosing box, the end structures are maintained in an upright, article-securing position by the ends of the box.

Similarly, removal of the articles can most easily be accomplished by removal of the article and the platform from the enclosing box and the outward pivoting of the end structures away from the article to permit disengagement of the extending portions thereof from the portion of the aperture 30 extending into the inner end walls.

The platform is particularly adaptable to erection by automatic packaging equipment especially in view of the several self-locking features thereof and is thus exceptionally well suited for high volume, assembly line packaging runs.

Manifestly, changes in details of construction can be effected by those skilled in the art without departing from the spirit and the scope of the invention as defined in and limited solely by the appended claims.

I claim:

1. A paperboard article-supporting box insert comprising a central flat floor portion, side panels depending from the opposite sides of said floor portion to support the latter in an elevated position, and an upstanding box-like structure at each end of said floor having spaced parallel inner and outer end walls connected by a top wall and closures spanning the spaces between the lateral side edges of said inner and outer end walls and interlocked with said side panels to secure the inner and outer walls in said upstanding parallel box-like relation, said floor portion and said inner end walls having openings therein to receive and support an article, an article securing flap forming a part of one of said outer end walls and extending therefrom inwardly in close proximity to the adjacent inner end wall, and means on the opposite lateral edges of the securing flap engaged with the side panels to secure the flap in predetermined position relative to the openings in the adjacent inner end wall and floor portion.

2. A paperboard article-supporting box insert comprising a central flat floor portion, side panels depending from the opposite sides of said floor portion to support the latter in an elevated position, said side panels each having tab portions projecting endwise thereof and partially severed by a slit, inner end walls connected to and extending upwardly from the opposite ends of said floor portion, said floor portion and inner end walls having openings therein to receive and support an article, top

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walls connected to and extending horizontally endwise from said inner end walls, outer end walls connected to each of said top walls and depending therefrom in spaced parallel relation to the adjacent inner end wall, a closure connected to the opposite lateral edges of each outer end wall and extending therefrom to the adjacent inner end wall, a tab at the free edge of each closure extending inwardly parallel to and behind the adjacent inner end wall and engaging said slit between the adjacent side panel and tab portion to interlock and secure the inner and outer end walls in upstanding parallel spaced relation.

3. A paperboard article-supporting box insert comprising a central flat floor portion, side panels depending from the opposite sides of said floor portion to support the latter in an elevated position, said side panels each having tab portions projecting endwise thereof and partially severed by a slit, inner end walls connected to and extending upwardly from the opposite ends of said floor, said floor portion and inner end walls having openings therein to receive and support an article, top walls connected to and extending horizontally endwise from said inner end walls, outer end walls connected to each of said top walls and depending therefrom in spaced parallel relation to the adjacent inner end wall, a closure connected to the opposite lateral edges of each outer end wall and extending therefrom to the adjacent inner end wall, means at the free edge of each closure extending inwardly parallel to and behind the adjacent inner end wall and engaging said slit between the adjacent side panel and tab portion to interlock and secure the inner and outer end walls in upstanding parallel spaced relation, an article securing flap forming a part of and projecting from one of said outer end walls inwardly therefrom toward the adjacent inner end wall, and means on the lateral side edges of said article securing flap interlockingly engaged with the projecting tabs of the side panels to retain the flap in article holding position relative to said openings in the adjacent inner end walls and floor portion.

4. A flat paperboard blank for folding into an article-supporting box insert comprising a central floor portion, side panels foldably connected to the opposite sides of said floor portion, said side panels each having tab portions projecting endwise thereof and partially severed by a slit, inner end walls foldably connected with the opposite ends of said floor portion, said floor portion and inner end walls having openings therein to receive and support an article, top walls foldably connected to and extending endwise from said inner end walls, outer end walls foldably connected to and extending endwise from said top walls, end closures foldably connected to and extending laterally from the side edges of each outer end wall, locking tabs foldably connected to the outer lateral edges of said end closures adapted to coact with the slits of said side panel tab portions upon erection of the blank, and an article securing flap foldably connected to and extending endwise from one of said outer end walls and including a shelf panel adjoining said outer end wall, a locking flap foldably extending endwise from said shelf panel, and locking ears extending from the lateral side edges of said locking flap adapted for engagement with said side panel tab portions upon erection of the blank.

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