

April 24, 1945.

R. E. RUTLEDGE

2,374,382

CELLULAR CARTON

Filed June 15, 1942

3 Sheets-Sheet 1

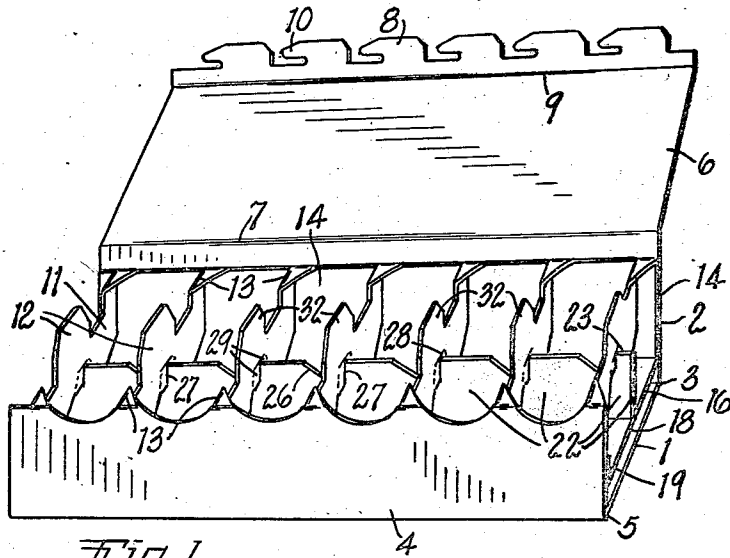


Fig. 1

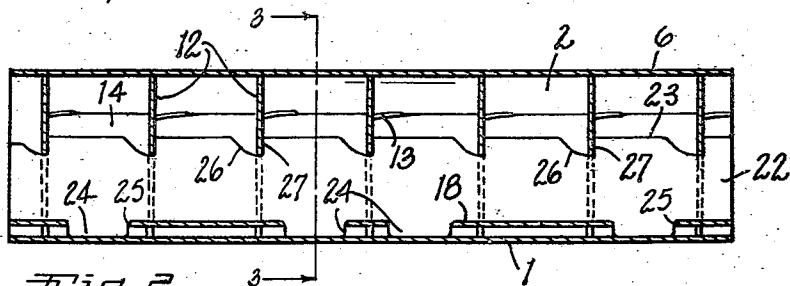


Fig. 2

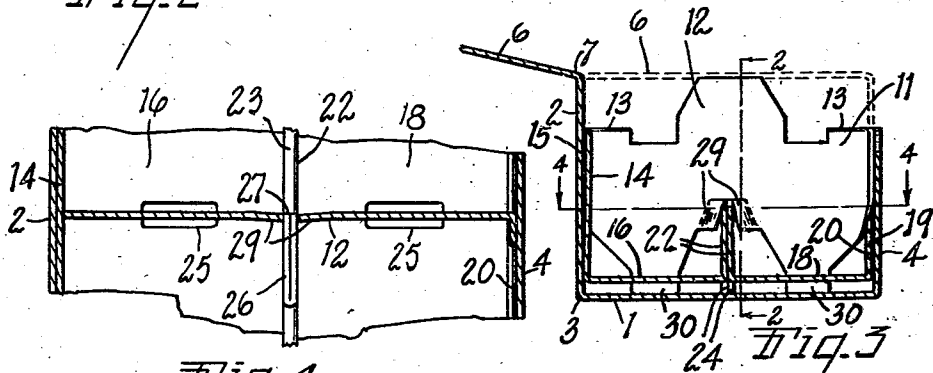


Fig. 4

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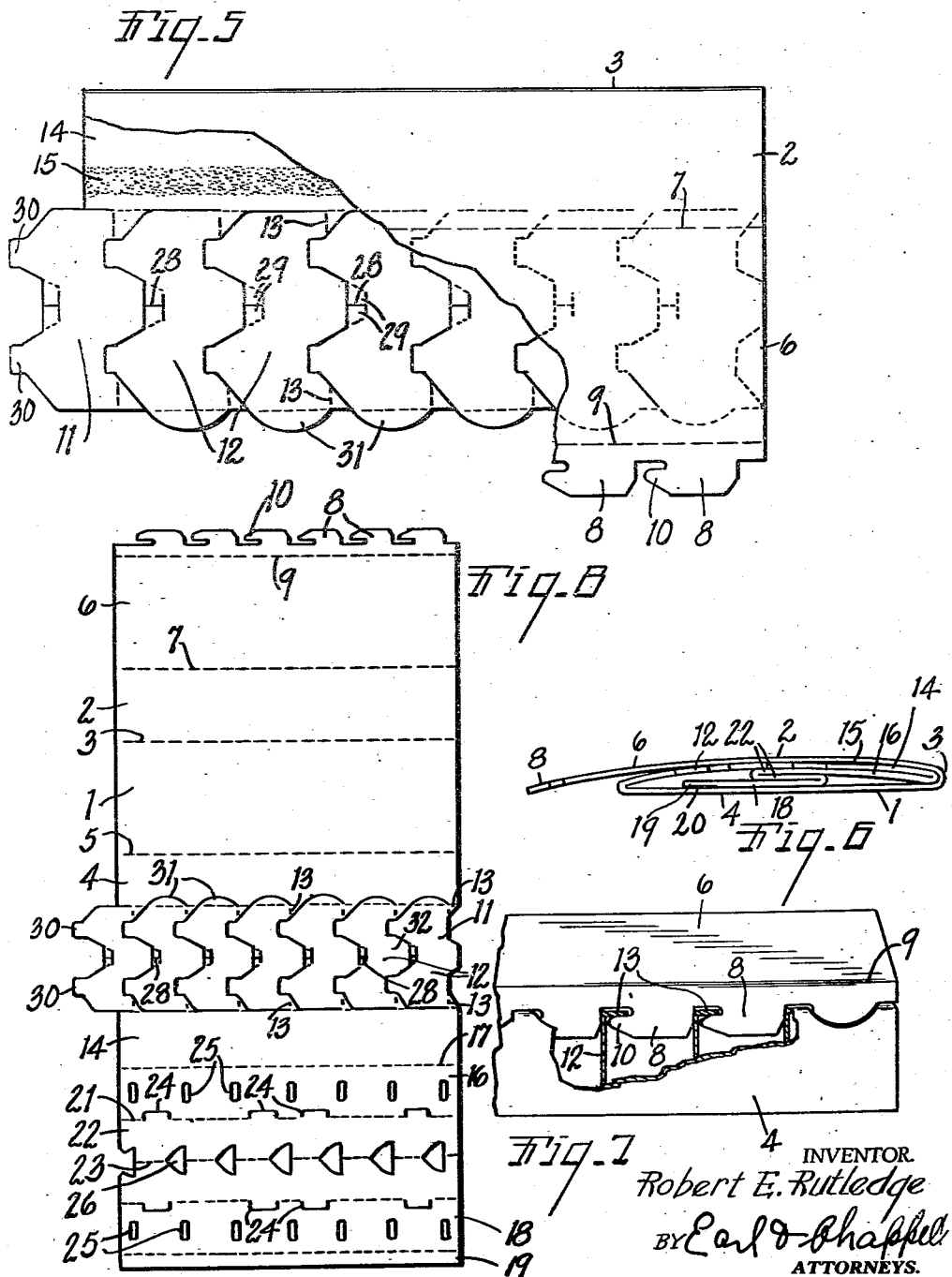
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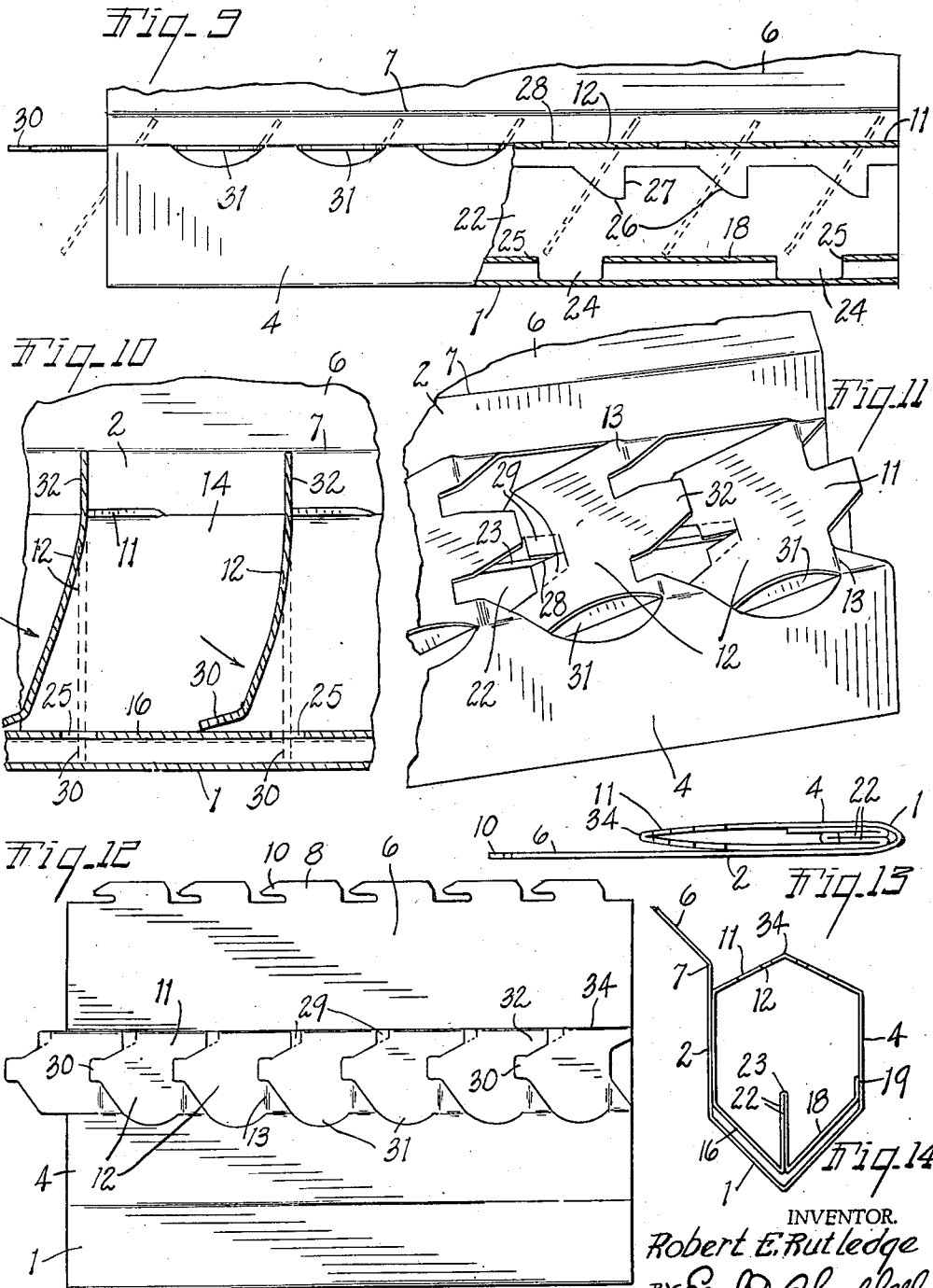
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3 Sheets-Sheet 3



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2,374,382

CELLULAR CARTON

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Application June 15, 1942, Serial No. 447,033

2 Claims. (Cl. 229—29)

This invention relates to improvements in cellular cartons.

The main objects of this invention are:

First, to provide a cellular carton of the double or false bottom type which is economical in the matter of material and may be produced in the knockdown form by machinery and quickly set up for use.

Second, to provide a structure having these advantages which when set up is rigid even when formed of relatively light material and very effectively protects the contents.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

Preferred embodiments of the invention are illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of a cellular carton embodying my invention with the cover open.

Fig. 2 is a longitudinal section on line 2—2 of Fig. 3.

Fig. 3 is a transverse section on line 3—3 of Fig. 2, the cover being shown partially broken away in open position and in closed position by dotted lines.

Fig. 4 is an enlarged fragmentary horizontal section on line 4—4 of Fig. 3.

Fig. 5 is a plan view of the collapsed carton partially broken away.

Fig. 6 is an end view of the collapsed carton.

Fig. 7 is a fragmentary front perspective view showing details of the cover when in closed position.

Fig. 8 is a plan view of the blank from which the embodiment of the invention shown in Figs. 1 to 7 inclusive is formed.

Fig. 9 is a fragmentary view partially in longitudinal section illustrating by full and dotted lines steps in the setting up of the carton.

Fig. 10 is an enlarged fragmentary longitudinal section illustrating by full and dotted lines further steps in the setting up of the carton.

Fig. 11 is an enlarged fragmentary perspective view showing further details of the structure and the manner of folding.

Fig. 12 is a plan view illustrating another method of collapsing the carton.

Fig. 13 is an end elevation of the collapsed carton shown in Fig. 12.

Fig. 14 is an end view of the structure when collapsed as shown in Figs. 12 and 13 partially open, the cover being partially broken away.

The cellular carton of my invention and as

illustrated in the accompanying drawings is formed of an integral blank and cut and scored as illustrated in Fig. 8. It comprises a main or outer bottom 1 having a rear wall 2 hingedly connected to the bottom at 3 and a front wall 4 hingedly connected to the bottom at 5.

The rear wall 2 has a cover 6 hingedly connected thereto at 7, the cover having a closure flap 8 hingedly connected thereto at 9. The closure 8 has a series of tongues 10 in its outer edge.

The top member designated generally by the numeral 11 is slit and scored to provide a plurality of transverse partition members 12 having hinge connections at 13 to the upper edge of the front wall 4 and to the upper edge of the rear inner wall 14 which is adhesively secured to the inner side of the rear wall at 15. This inner rear wall serves the function of a glue flap and also as a supporting member for the bottom member 16 which is hingedly connected to the lower edge of the member 14 at 17.

A second bottom member 18 is provided with a glue flap 19 which is adhesively secured to the inner side of the front wall as shown at 20. The inner edges of these inner bottom members are hingedly connected at 21 to the longitudinal partition members 22 which are hingedly connected at 23 and folded into side by side relation.

The lower edges of the longitudinal partition members 22 have tab-like feet 24 which engage the outer bottom member, thus forming an effective support for the inner ends of the inner bottom member. These bottom members have a series of transverse slots 25 therein.

The upper edges of the longitudinal partition members have notches 26 therein conformed to provide stops 27 for the transverse partition members 12 when they are in erected position. These transverse partition members are bifurcated to straddle the longitudinal partition members and preferably have T-shaped slits 28 at the crotch to receive and frictionally engage the longitudinal partition members, the slits providing friction members 29 as shown in Fig. 3. The transverse partition members terminate in tab-like lugs 30 which engage the slots 25 when the transverse partitions are in fully erected position. As a further means for retaining the transverse partition members, friction tabs 31 are provided, at least at one end, cut out of the upper edge of the front wall, these friction or retaining tabs folding down within and frictionally engaging the inner side of the front wall when the carton is fully erected. The bifurca-

tions of the partitions are formed so as to provide the cover supporting tabs 32 which effectively support the cover when in closed position, see Figs. 2 and 3. The tongues 10 are engageable with the hinge members 13 connecting the transverse partition members with the front wall.

With this arrangement, I provide a structure which is very strong when erected and very effectively protects and cushions the contents of the carton. The structure may be formed of suitable stock by simple dieing and scoring operations and the parts completely joined by machinery, being discharged from the machine in collapsed position.

The embodiment shown in Figs. 12, 13 and 14 is essentially the same as that described with the exception that the top member 11 is longitudinally scored at 34 and it is collapsed upwardly as shown in Figs. 12, 13 and 14. This structure may also be quickly erected.

I have illustrated and described my invention in practical embodiments thereof. I have not attempted to illustrate or describe certain modifications or adaptations which I contemplate as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A cellular carton comprising a blank of suitable material cut and scored to provide a main bottom, side walls hingedly connected to the edges of said main bottom, a top member hingedly connected to the top edge of one of said side walls, an inner side wall member hingedly connected to the rear edge of the top member and adhesively secured to the inner side of the other side wall, inner bottom members, one of which is hingedly connected to the lower edge of the said inner side wall member and the other end of which is provided with a hinge glue flap adhered to the inner side of the said side wall to which the top member is hingedly connected, said inner bottom members being spaced from said main bottom member and having transverse slots therein, and longitudinal partition members hingedly connected at their lower edges to the inner edges of said bottom members and folded into side by side relation and having tabs on their lower edges constituting feet in supporting engagement with the main bottom, said inner bottom members being slit to provide said tabs, said longitudinal partition members having spaced notches in their upper edges, said top member and the upper edge of one of said side walls being slit to provide a plurality of transverse partition members hingedly connected at their upper edges to the upper edge of said wall to which said glue flap is secured and to said inner side wall, said transverse partition members

being bifurcated to form crotches and to straddle said longitudinal partition members and swing into the said notches in their upper edges, the portions cut from the upper edge of said side wall constituting retaining tabs frictionally engaging the wall from which they are cut, there being slits in the crotches of said transverse partitions receiving said longitudinal partition members and providing frictional engagement therewith when the transverse partitions are in erected position and in abutting relation with the ends of the notches in said longitudinal partition members, the lower ends of said transverse partition members being retainingly engaged in said slots in said inner bottom members.

2. A cellular carton comprising a blank of suitable material cut and scored to provide a main bottom, side walls hingedly connected to the edges of said main bottom, a top member hingedly connected to the top edge of one of said side walls, an inner side wall member hingedly connected to the rear edge of the top member and adhesively secured to the inner side of the other side wall, inner bottom members, one of which is hingedly connected to the lower edge of the said inner side wall member and the other end of which is provided with a hinge glue flap adhered to the inner side of the said side wall to which the top member is hingedly connected, said inner bottom members being spaced from said main bottom member and having transverse slots therein, and longitudinal partition members hingedly connected at their lower edges to the inner edges of said bottom members and folded into side by side relation and having spaced notches in their upper edges and having tabs on their lower edges constituting feet in supporting engagement with the main bottom, said inner bottom members being slit to provide said tabs, said top member and the upper edge of one of said side walls being slit to provide a plurality of transverse partition members hingedly connected at their upper edges to the upper edge of said wall to which said glue flap is secured and to said inner side wall, said transverse partition members being bifurcated to form crotches and to straddle said longitudinal partition members and swing into the said notches in their upper edges, the portions cut from the upper edge of said side wall constituting retaining tabs frictionally engaging the wall from which they are cut, there being slits in the crotches of said transverse partitions receiving said longitudinal partition members and providing frictional engagement therewith when the transverse partitions are in erected position and in abutting relation, the lower ends of said transverse partition members being retainingly engaged in said slots in said inner bottom members.

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