Jan. 15, 1935. A. L. BUESCHEL 1,987,771

CARTON

Filed Oct. 27, 1932 2 Sheets-Sheet 1

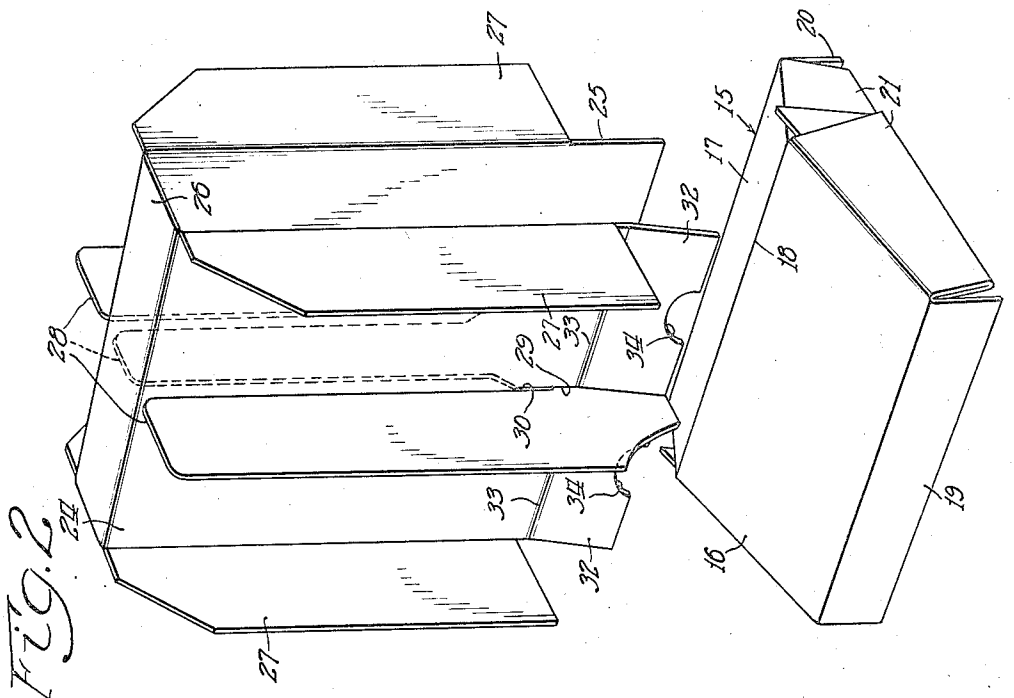

Fig. 2.

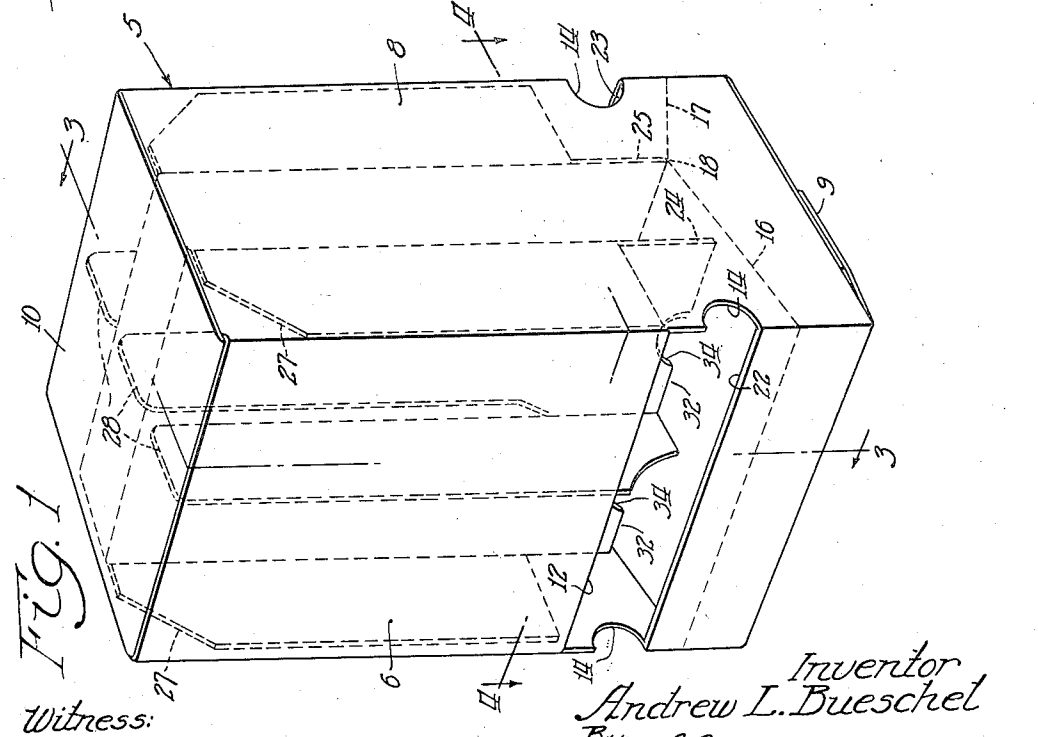

Fig. 1.

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Filed Oct. 27, 1932 2 Sheets-Sheet 2

Fig. 3

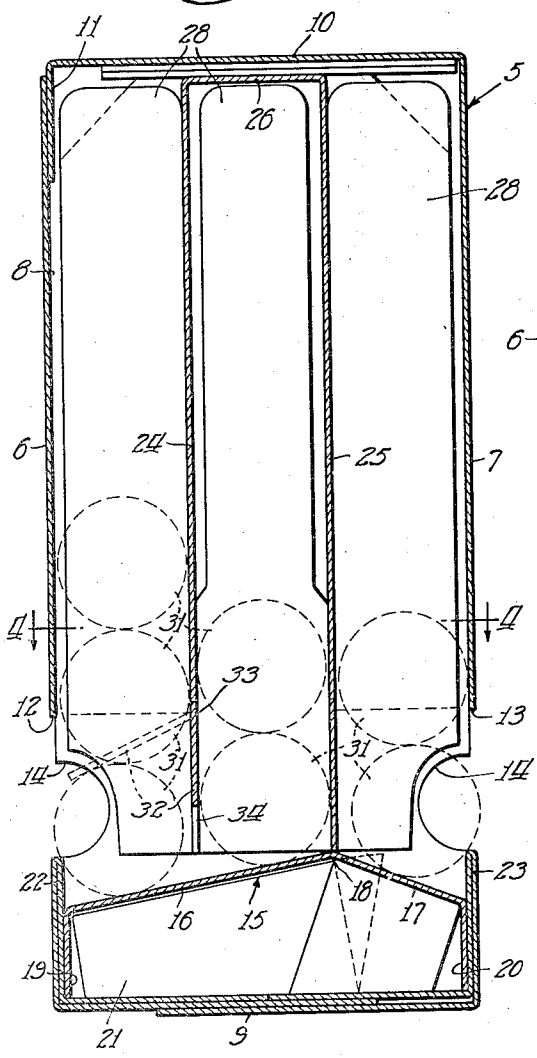
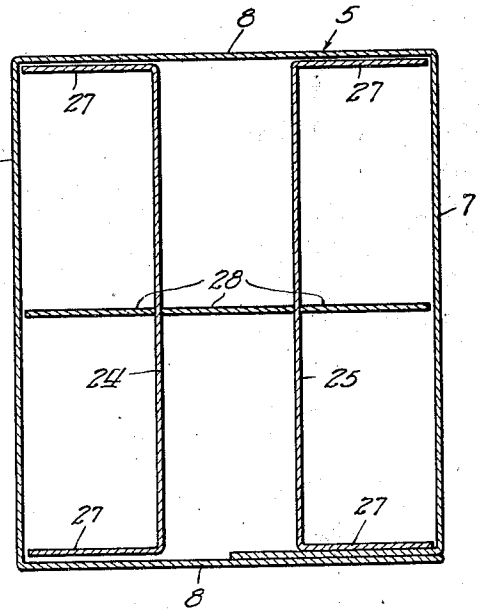


Fig. 4



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Patented Jan. 15, 1935 1,987,771

UNITED STATES PATENT OFFICE

1,987,771

CARTON

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Application October 27, 1932, Serial No. 639,801

6 Claims. (Cl. 229—7)

This invention relates to cartons, and particularly to a carton adapted to facilitate the dispensing or removal of its contents therefrom.

One object of the present invention is to provide a carton having a plurality of partitions therein adapted to form a plurality of compartments, and a bottom portion adapted to facilitate the removal of the contents from said compartments.

Another object of the invention is to provide a structure of the character described wherein portions of certain of the partitions cooperating with the contents of certain compartments serves to retain the contents in other compartments.

A further object of the invention is to provide a carton having partitions adapted to form compartments, and wherein certain of the partitions are so constructed as to facilitate the removal of the contents from certain compartments after the contents of other compartments have been removed.

A still further object of the invention is to improve devices of the character described in sundry details hereinafter referred to and particularly pointed out in the appended claims.

One embodiment of the present invention is shown for illustrative purposes in the accompanying drawings, in which

Fig. 1 is a perspective view of a carton or container embodying features of the present invention;

Fig. 2 is a perspective view of the partition and bottom members, slightly separated, forming a part of the present invention and illustrating their relationship with respect to each other;

Fig. 3 is a vertical longitudinal sectional elevation of the structure shown in Fig. 1, and taken substantially as indicated by the line 3—3 thereof; and

Fig. 4 is a transverse sectional plan view taken substantially as indicated by the line 4—4 of Figs. 1 and 3.

The illustrative embodiment of the present invention comprises a housing 5 of suitable material, preferably heavy cardboard, or the like, and having front and rear walls 6 and 7, respectively, side walls 8, a lower portion 9 formed preferably of interlocking flaps, and a top portion 10 hingedly connected to the back wall 7 and having a flap or tongue 11 adapted to be tucked in behind the front wall 6 as clearly illustrated in Figs. 1 and 3.

Formed, preferably, in the front wall 6 and rear wall 7 are discharge openings 12 and 13, respectively, extending transversely across the front and rear walls adjacent the lower ends thereof, and formed in the side walls 8 adjacent the ends of the discharge openings 12 and 13 are recesses 14.

Positioned on the lower portion 9 within the housing 5 is a bottom member indicated as a whole by the numeral 15 and comprising an inclined portion 16 extending toward the discharge opening 12 formed in the front wall 6 of the housing 5, and having an inclined portion 17, preferably of somewhat shorter dimension than the portion 16, extending in the opposite direction toward the discharge opening 13 formed in the rear wall 7 of the housing 5, the structure and formation of the bottom member 15 providing a ridge 18 shown in the present instance as spaced at different distances from the discharge openings 12 and 13 formed in the front and rear walls 6 and 7, respectively.

The bottom member 15 is also provided with front and rear spacing or supporting flaps 19 and 20, respectively, and with side supporting flaps 21 adapted to be positioned on the lower portion 9 in a manner to space the bottom member 15 with respect thereto.

It will be observed from the foregoing description and by reference to Fig. 3 that the lower front and rear edges, respectively, of the inclined portions 16 and 17 are positioned a substantial distance below the lower side of the discharge openings 12 and 13 in a manner to form stops or retaining lips 22 and 23 in the front and rear walls 6 and 7, respectively, of the housing 5.

Positioned within the housing 5 above the bottom member 15 are a plurality of partitions 24 and 25 shown, in the present instance, as formed integrally with each other and connected together adjacent their upper ends by a connector 26, the partitions 24 and 25 in the present instance being adapted to extend between the side walls 8 in a manner to provide a plurality of compartments between the discharge openings 12 and 13. The partitions 24 and 25 are provided adjacent their opposite vertical edge portions with spacing flaps 27 for maintaining the partitions 24 and 25 in spaced relation with respect to the front and rear walls 6 and 7, respectively.

Positioned also within the housing 5 and adapted to extend into the compartments formed within the housing by the partitions 24 and 25

are a plurality of partitions 23 formed preferably of a single sheet of material and connected together adjacent their lower ends by a portion adapted to be positioned in notches 29 formed in the partitions 24 and 25 in a manner to space the partitions 28 between the side walls 8 of the housing 5, the said connecting portion of the partitions 28 having notches 30 formed therein adapted to receive the partitions 24 and 25 in a manner to maintain the partitions 24 and 25 in spaced relation with respect to each other and the partitions 28 in transverse position with respect to the partitions 24 and 25, thereby forming additional compartments within the housing.

It will be observed by reference to Figs. 1, 2 and 3 that the ridge 18 formed by the inclined portions 16 and 17 of the bottom member 15 is positioned beneath and adapted to extend longitudinally of and substantially parallel with the lower edge of the partition 25, and that by such an arrangement, the contents of the compartments formed between the partition 25 and rear wall 7 will be directed toward the discharge opening 13, and that the contents of the compartments formed between the partitions 24 and 25 and between the front wall 6 and partition 24 will be directed toward the discharge opening 12 formed in the front wall 6.

The contents shown in the present instance are indicated by the dotted circles 31 shown in Fig. 1 and are intended to illustrate an article of cylindrical form adapted to be positioned in the compartments formed within the housing 5 by the various partitions 24, 25 and 28 in a manner to rest on the bottom member 15 in the manner shown, the lowermost article in the front and rear compartments being retained therein by the stops or lip portions 22 and 23 formed in the front and rear walls 6 and 7, respectively.

It being understood that the articles will be fed downwardly in the compartments by gravity, it will be observed that as the lowermost articles in the front and rear compartments are removed through the openings 12 and 13, respectively, their place will be taken by other articles fed downwardly in the compartments.

For removing articles from the compartments formed between the partitions 24 and 25, the partition 24 is provided adjacent its lower end with yieldable retaining means or gates 32, shown in the present instance as formed integrally with and hingedly connected to the body of the partition 24 by a scored or weakened portion 33 which are adapted to yield under the weight of articles in the central compartments after all the articles in the front compartments have been removed, thereby permitting the inclined portion 16 of the bottom member 15 to direct the contents of the central compartments toward the discharge opening 12 as articles are removed therefrom. It will be understood that although the retaining means or gates 32 are free to yield when the front compartment is empty, as shown by dotted lines in Fig. 3, the cooperation of the retaining means with the contents of the front compartments will retain the articles in the central compartments against discharge therefrom, as clearly shown by full lines in Fig. 3, and that owing to the greater vertical force exerted by the contents of the front compartments, will retain the gates 32 in retaining position against the action of the lesser, substantially horizontal force exerted by the contents of the central compartments until such time as all of the articles have been removed from the front compartments.

If, after the contents of the front compartment have been removed, the retaining means or gates 32 should fail to yield under the weight of the contents of the compartments between the partitions 24 and 25, the gates 32 are provided with recesses 34 formed in their lower edge and into which one's finger may be inserted for initially bending the flaps along the weakened or scored portions 33 to permit the contents of the central compartments to move outwardly toward the discharge opening 12.

It will be observed from the foregoing description that the present invention provides a carton structure having a housing and discharge openings formed therein, and having a plurality of compartments formed in the housing, some of which are adjacent, and some positioned in spaced relation to said openings, and wherein certain features embodied in the present invention serve to retain the contents of certain compartments therein while the contents of other compartments is being removed, and to facilitate the removal of the contents of said certain compartments from the housing.

Obviously, the present invention is not limited to the precise construction and arrangement shown and described as the same may be variously modified. Moreover, all the features of the invention need not be used conjointly as the same may be used to advantage in variously different combinations and sub-combinations.

What I claim as new and desire to cover by Letters Patent is:

1. A carton comprising a housing having oppositely disposed discharge openings formed therein adjacent the lower end thereof, a plurality of spaced partitions positioned in said housing substantially parallel to said openings and forming a plurality of compartments between the openings, yieldable retaining means adjacent the lower end of certain of said partitions, and a bottom member adjacent the lower ends of said compartments and having surfaces inclined in opposite directions for directing the contents of said compartments toward the respective openings, the adjacent edges of said inclined surfaces being positioned adjacent the lower edge of one of said partitions.

2. A carton comprising a housing having oppositely disposed discharge openings formed therein adjacent the lower end thereof, a plurality of spaced partitions positioned in said housing and forming a plurality of compartments between said openings, a plurality of additional partitions extending transversely to said first-mentioned partitions for forming additional compartments in said housing, yieldable retaining means adjacent the lower end of certain of said first-mentioned partitions, and a bottom member adjacent the lower ends of said compartments and having surfaces inclined in opposite directions for directing the contents of said compartments toward the respective openings, the adjacent edges of said inclined surfaces being positioned adjacent the lower edge of certain other of said first-mentioned partitions.

3. A carton comprising a housing having front, rear and side walls, said front and rear walls having discharge openings formed therein, respectively, a plurality of connected partitions extending between said side walls and in spaced

relation with respect to said front and rear walls for forming a plurality of compartments between said openings, a bottom member having surfaces inclined in two directions to form a ridge, said ridge being positioned adjacent the lower edge of one of said partitions, the lower edge of said surfaces terminating adjacent and below said openings, a plurality of connected partitions positioned in said compartments and extending transversely thereto, and yieldable retaining means adjacent the lower ends of certain of said first-mentioned partitions.

4. A carton comprising a housing having front, rear and side walls, said front and rear walls having discharge openings formed therein, respectively, adjacent the lower ends thereof, said side walls having recesses formed in their edges adjacent the ends of said openings, a plurality of partitions connected together adjacent their upper ends extending between said side walls and in spaced relation with respect to said front and rear walls for forming a plurality of compartments between said openings, a bottom member having surfaces inclined in two directions to form a ridge, said ridge being positioned adjacent the lower edge of one of said partitions, the lower edges of said surfaces terminating adjacent and below the lower side of said openings, a plurality of connected partitions positioned in said compartments and extending transversely thereto, and yieldable retaining means adjacent the lower ends of certain of said first-mentioned partitions.

5. A carton comprising a housing having front, rear and side walls, said front and rear walls having discharge openings formed therein, respectively, adjacent the lower ends thereof, a plurality of partitions connected together adjacent their upper ends extending between said side walls and in spaced relation with respect to said front and rear walls for forming a plurality of compartments between said openings, spacing flaps formed on said partitions adjacent the vertical edges thereof, a bottom member having surfaces inclined in two directions to form a ridge, said ridge being positioned adjacent the lower edge of one of said partitions, the lower edges of said surfaces terminating adjacent and below the lower side of said openings, a plurality of partitions connected together adjacent their lower ends and extending upwardly into said compartments and transversely thereto, and yieldable retaining means formed integrally with certain of said first-mentioned partitions.

6. A carton comprising a housing having front, rear and side walls and upper and lower end portions hingedly connected to said walls, said front and rear walls having discharge openings formed therein, respectively, a plurality of removable connected partitions extending between said side walls and in spaced relation with respect to said front and rear walls for forming a plurality of compartments between said openings, a removable bottom member mounted on and spaced from said lower end portion and having surfaces inclined in two directions to form a ridge, said ridge being positioned adjacent and extending substantially parallel with the lower edge of one of said partitions, the lower edges of said surfaces terminating adjacent and below said openings, a plurality of connected partitions positioned in said compartments and extending transversely thereto, and yieldable retaining means adjacent the lower end of certain of said first-mentioned partitions.

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