March 22, 1932. C. W. GAYLORD 1,850,714

CARTON

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Fig. 1.

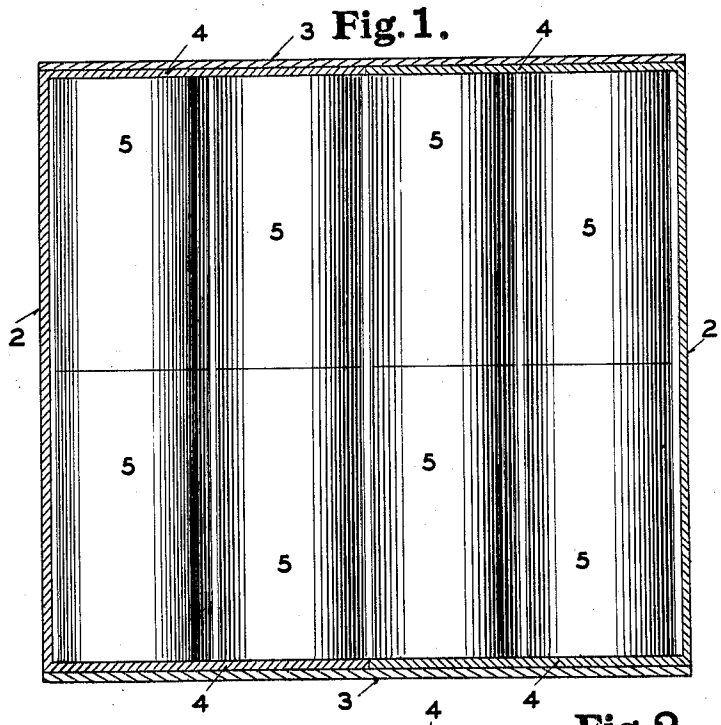
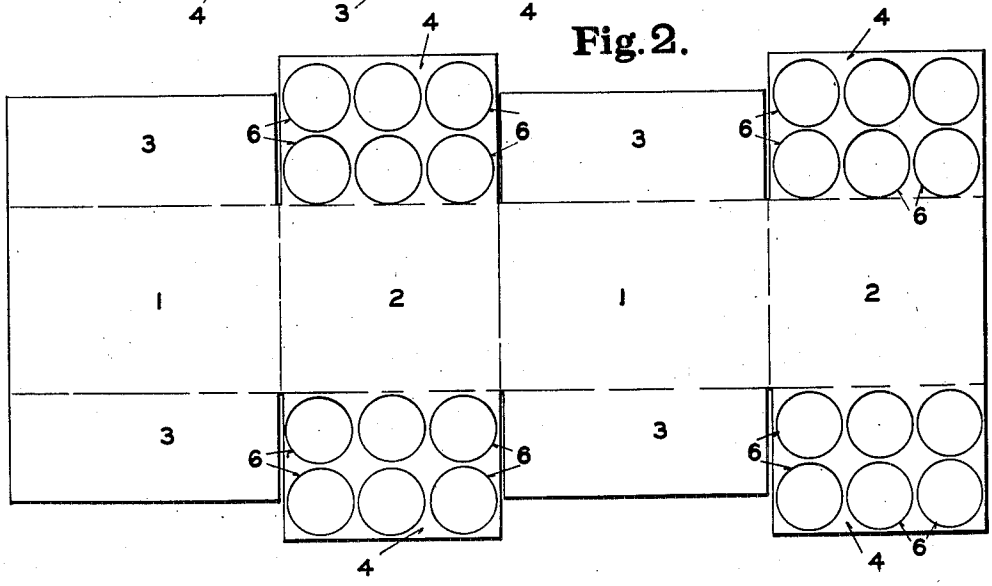


Fig. 2.



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Fig.3.

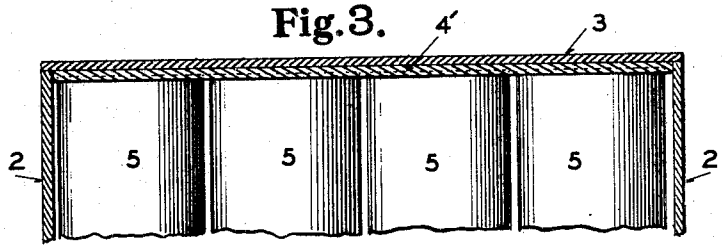


Fig.4.

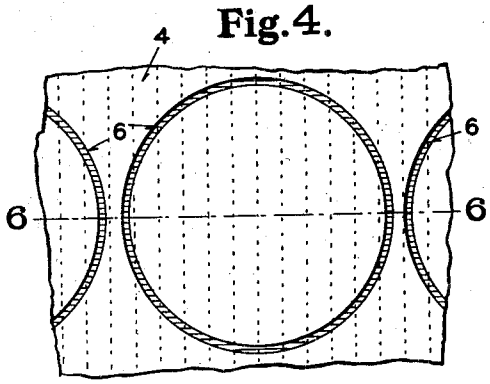


Fig.5.

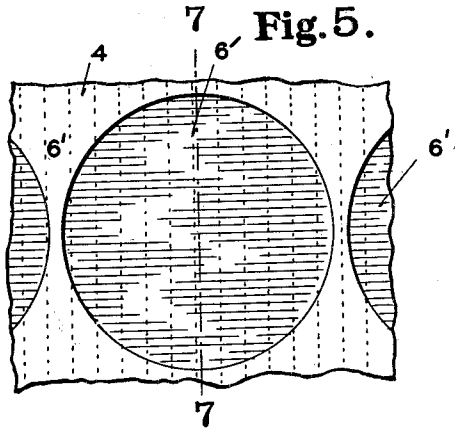


Fig.6.

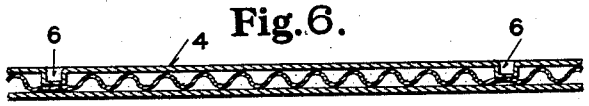
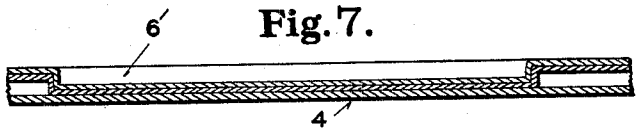


Fig.7.



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Patented Mar. 22, 1932 1,850,714

UNITED STATES PATENT OFFICE

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CARTON

Application filed December 12, 1929. Serial No. 413,519.

Corrugated fibre board cartons as heretofore constructed have the disadvantage, when used for packing heavy articles such as cans of food or other materials, that the weight of the packed articles compresses the board material with the result that the articles may move relative to the carton during shipping and handling. This condition often results in damage to both the carton and the packed articles.

It is the object of my invention to produce an improved corrugated fibre board carton not subject to the foregoing disadvantages and I achieve this object by precompressing portions of the carton. My invention has the further advantage that one dimension, and consequently the cost, of the carton is reduced.

In the accompanying drawings, which illustrate a carton made in accordance with my invention, Figure 1 is a vertical section; Figure 2 is a plan view, on a reduced scale, of a blank from which the carton is formed; Figure 3 is a sectional view showing a slight modification; Figure 4 is an enlarged plan view of a portion of one of the recessed walls; Figure 5 is a view similar to Figure 4 but showing a modification; Figure 6 is a section taken on the line 6—6 of Figure 4; and Figure 7 is a section taken on the line 7—7 of Figure 5.

The carton is formed from a corrugated fibre board blank of the shape shown in Figure 2, comprising a pair of side panels 1, a pair of end panels 2, two pairs of outer flaps 3 and two pairs of inner flaps 4. The carton as shown is adapted for packing articles such as cylindrical tin cans 5. Formed in the inner flaps 4 are depressions 6 formed by pressing the layers of the corrugated fibre board together, as best shown in Figure 6. These depressions are of the proper shape and size to engage and hold the ends of the containers 5. As shown in Figures 4 and 6 they are annular in form to receive flanges on the ends of the cans 5.

The cans or other articles may be arranged in single, double, or even triple rows or tiers. I have shown them arranged in double tiers, i. e., the entire contents of the carton consists of twenty-four cans arranged in two layers of twelve cans each, the inner ends of the cans of the two rows being in contact. It will be understood, however, that I may place a separating sheet between the two layers of cans, in which instance a corresponding variation in the height of the carton must be made. As, in order to secure the desired result, the ends of the cans project into the depressions and seat firmly against their inner faces without any end play.

In Figures 5 and 7 I have shown a modified form of depressions 6′, which are circular instead of annular for engaging cylindrical containers which have flat ends. It will be understood that the depressions may be made square, oblong, or of other shape to accommodate containers of other than cylindrical form.

The compression of the flaps 4 at their points of engagement with the containers provides rigid instead of yielding supports at these points, thus providing more effective protection against impact in the direction of the length of the containers. This compression of the flaps permits the carton to be appreciably less in height, thus not only economizing in the material of the carton but also in the space occupied by it. Further, the entrance of the containers into the depressions firmly anchors them against relative lateral movement so that they are not injured by contact with each other due to lateral jars and strains.

While I prefer to form the inner top and bottom walls containing the depressions of the integral flaps 4, I may use a separate panel 4′ instead, as shown in Figure 3, in which case the flaps 4 are preferably dispensed with.

Where I have used the term "tier" of articles I wish to be understood as including a single article as well as two or more articles placed in alignment together with any separating sheets, which may be placed between them.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

A carton for packing articles having side walls substantially perpendicular to the ends thereof, said carton being formed of a sheet

of material composed of a pair of walls separated by a corrugated filler, said sheet having integral flaps forming opposing end bearing members provided with depressions registering with the end of the articles, said depressions being formed by collapsing the filler between the walls at the points of contact with the articles, whereby incompressible seats are provided in said bearing member for the reception of the ends of the articles, and shoulders are provided engaging with the peripheries of the articles to prevent lateral movement thereof.

In testimony whereof, I hereunto affix my signature, this 9th day of December, 1929.

CLIFFORD W. GAYLORD.