July 28, 1936. H. W. BLAIR 2,049,349

COMBINATION FILLER AND SEPARATOR FOR SHIPPING CASES

Filed Sept. 23, 1935 2 Sheets-Sheet 1

Fig. 1.

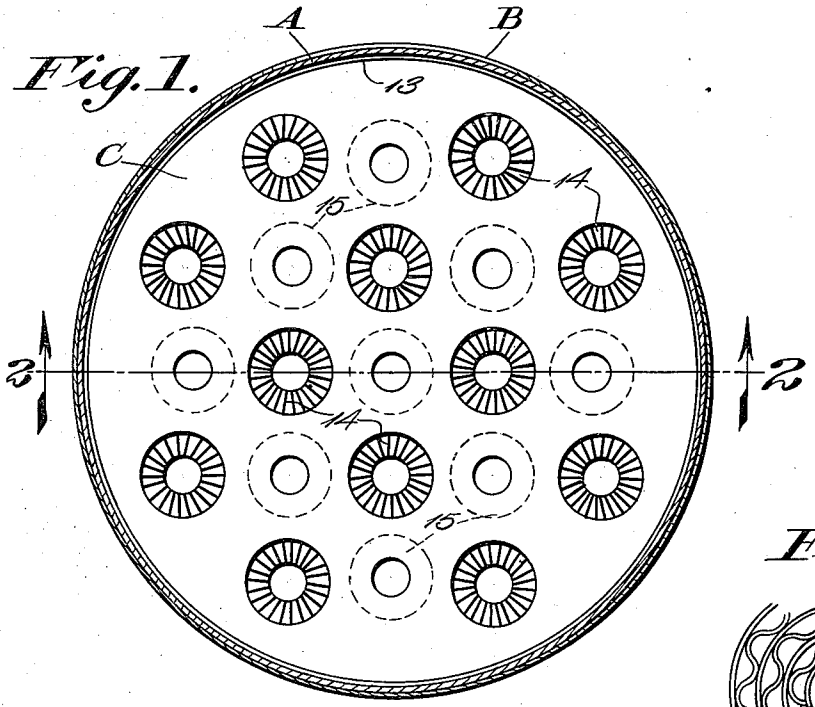


Fig. 3.

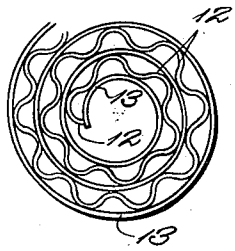


Fig. 2.

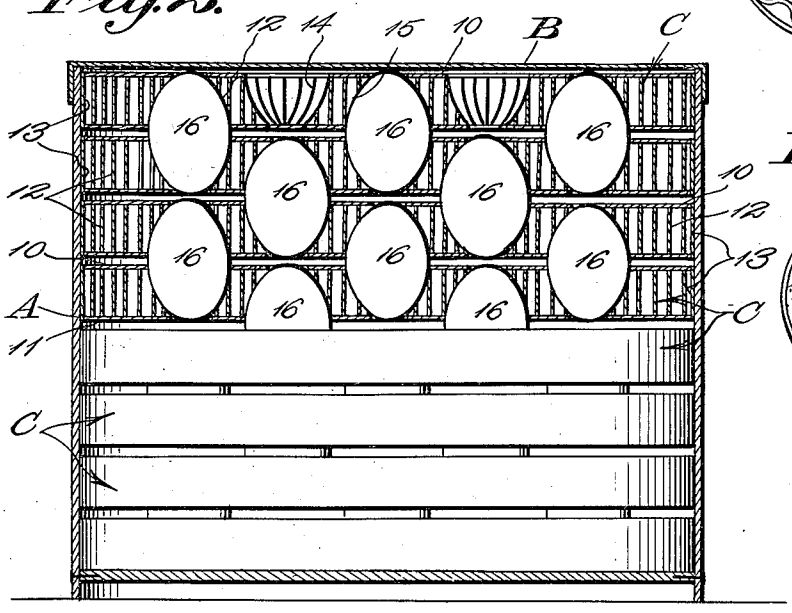
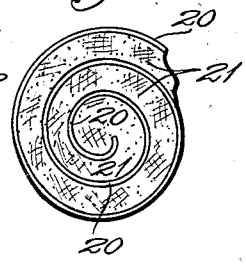


Fig. 7.



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Filed Sept. 23, 1935 2 Sheets-Sheet 2

Fig. 4.

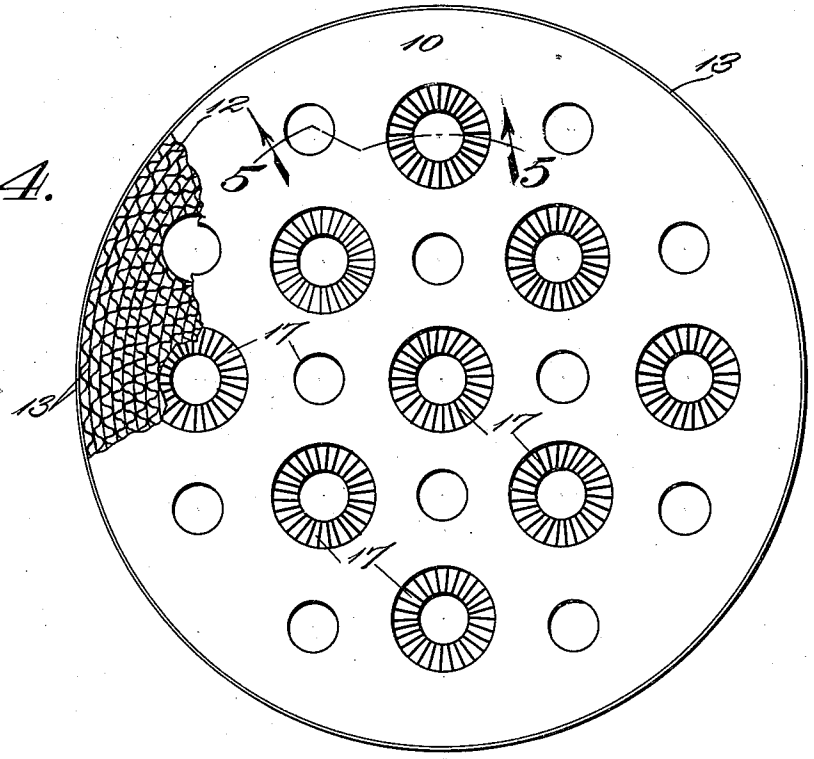


Fig. 6.

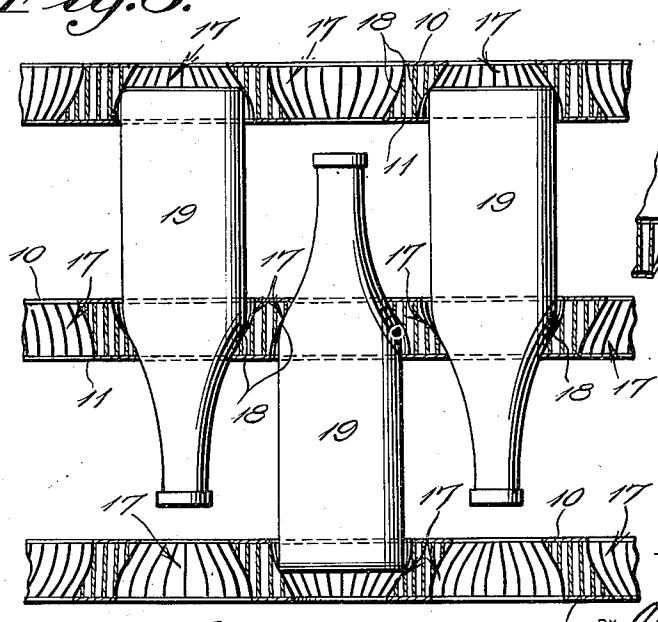
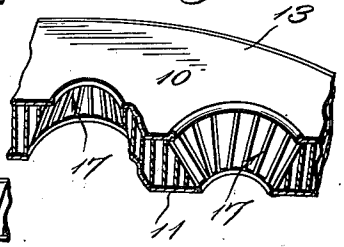


Fig. 5.



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Patented July 28, 1936 2,049,349

UNITED STATES PATENT OFFICE

2,049,349

COMBINATION FILLER AND SEPARATOR FOR SHIPPING CASES

Hollis W. Blair, North Troy, Vt., assignor to Vermont Container Corporation, North Troy, Vt., a corporation of Vermont

Application September 23, 1935, Serial No. 41,805

2 Claims. (Cl. 217—27)

The invention relates to a combined filler and separator for shipping cases and more especially to a structure of this kind for bottle or egg cases.

The primary object of the invention is the provision of a structure of this kind, wherein the articles as contained within a case will be held separated from each other and will be subjected to a cushioning action particularly when subjected to shocks or jars so that in this manner the contents will be prevented from breaking and particularly with respect to eggs, these or the like being held firmly in the case or other container.

Another object of the invention is the provision of a structure of this kind, wherein the contents of a case or the like will be held in staggered relation from each other and are separated one from the other and in this condition will be held yet will be prevented from breaking as the shocks and jars incident to the transit or the handling of the case or the like will be absorbed and thus relieved from the contents and in the shipping of eggs ventilation is assured therebetween to maintain the eggs fresh.

A further object of the invention is the provision of a structure of this kind, which is simple in its make-up, thoroughly reliable and efficient in its purpose, strong, light in weight, convenient for handling and assuring nesting of the contents of a container, case or the like and also inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a plan view of the structure in accordance with the invention showing the same within a shipping case, the latter being in section.

Figure 2 is a sectional view on the line 2—2 of Figure 1 looking in the direction of the arrows.

Figure 3 is a fragmentary horizontal sectional view through one of the combined fillers and separators.

Figure 4 is a plan view partly broken away showing a slight modification.

Figure 5 is a vertical sectional view in perspective taken on the line 5—5 of Figure 4 looking in the direction of the arrows.

Figure 6 is an enlarged fragmentary vertical sectional view showing the nesting of bottles.

Figure 7 is a fragmentary horizontal sectional view through one of the modified forms of combination filler and separator.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, particularly Figures 1 to 3, A designates generally a portion of a container or case which in this instance is of cylindrical form and is equipped with a removable cover or lid B while located within the container or case is the combination filler and separator constituting the present invention and hereinafter fully described.

The combination filler and separator comprises a series of disk-like flat units C, each comprising a top and bottom section 10 and 11, respectively, these being made from stiff fibrous material, such as cheap paper, while between these sections is coiled a corrugated padding in strip form as at 12, the coil being of a diameter corresponding to the diameter of the top and bottom sections 10 and 11 and marginally of this coil is a binder strip 13, this with the top and bottom sections 10 and 11 being adhesively joined with a coil to effect a unitary body portion.

Provided in each unit C and formed in the coil 12 for opening through opposite sections 10 and 11 are reversely tapered alternately arranged spaced series of pockets or sockets 14 and 15, respectively, the walls of these being slightly outwardly curved and are adapted to accommodate eggs 16 which are set up perpendicularly and fit within registering pockets or sockets 14 in units adjacent to each other as is clearly shown in Figure 2 of the drawings. In this manner the eggs 16 will be protected against shocks and jars as the same are cushioned by the coils 12 in the units C and also such eggs will be held firm and secure within the container or case A for shipment thereof. The eggs 16 when seated in the pockets or sockets 14 and 15 will sustain the units C spaced from each other within the container or case A and thus allowing ventilation therein.

In Figures 4, 5 and 6 of the drawings there is shown a further modification, wherein the pockets or sockets 17 are devoid of curved walls, in that the walls 18 thereof are formed to fit the shape of the bottle neck and base and within these pockets or sockets 17 are received bottled goods 19.

In Figure 7 of the drawings there is shown a still further modification, wherein a coiled strip 20 has associated therewith a fibrous cushioning

medium 21 adapted for substitution for the coil 12 of each unit C.

The bottled goods will be equally well and safe in either perpendicular or horizontal positions when contained in the proposed shipping container as these will be seated in sockets or pockets 17 and thus relieved from shocks and jars and will be firmly held in staggered relation to each other. This is also true with respect to the eggs 16 when held by the combined fillers and separators and it has been noted from experiments that the cases when filled on the dropping thereof a considerable distance or rolled along and bumped around or subjected to hard and severe treatment there is no damage to the contents when the latter are held horizontally or perpendicularly located.

The coils within the units C constitute cushioning cores therefor.

What is claimed is:

1. A structure of the kind described, comprising upper and lower sheet-like sections, a yieldable coil superimposed between the sections and effecting a cushioning medium and having alternately arranged spaced reversely tapered pockets opening through said sections and means marginally of the sections and said coil and uniting the same to effect a unit.

2. A structure of the kind described, comprising upper and lower sheet-like sections, a yieldable coil superimposed between the sections and effecting a cushioning medium and having alternately arranged spaced reversely tapered pockets opening through said sections and means marginally of the sections and said coil and uniting the same to effect a unit, the pockets of adjacent sections being in register with each other.

HOLLIS W. BLAIR.