March 14, 1939. R. SANDELL 2,150,461

COLLAPSIBLE EGG CARTON

Filed Aug. 4, 1936

Fig. 1.

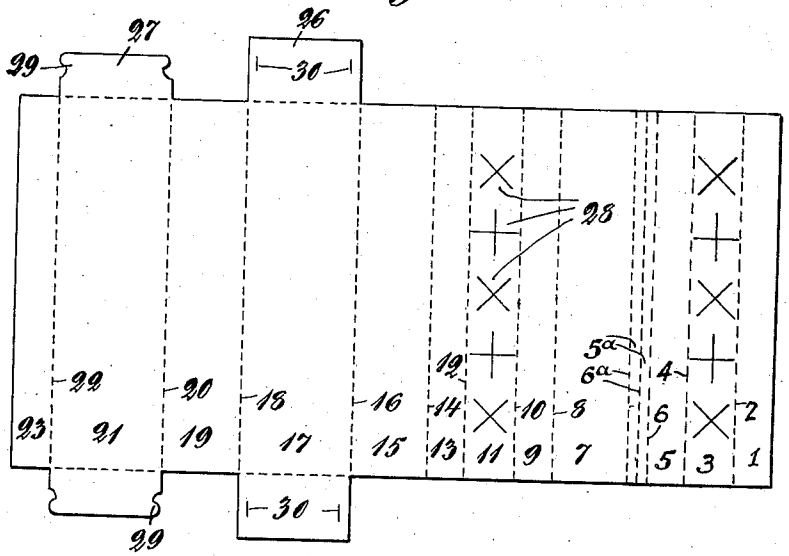


Fig. 2.

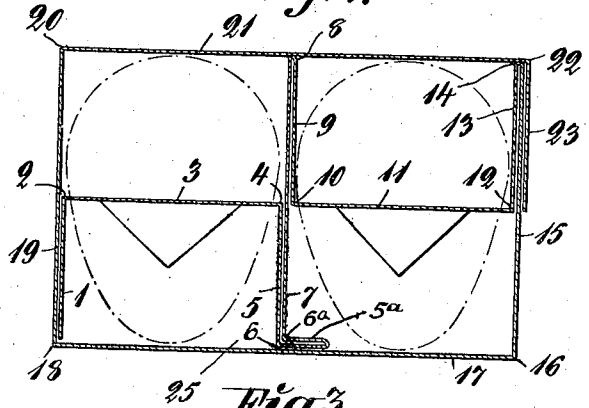
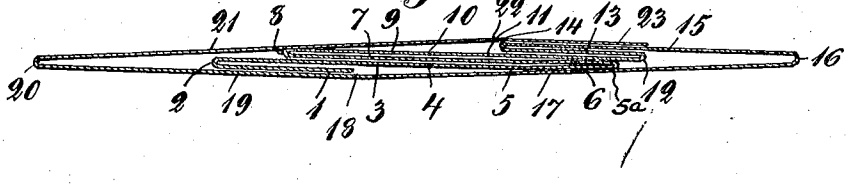


Fig. 3.



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Patented Mar. 14, 1939 2,150,461

UNITED STATES PATENT OFFICE

2,150,461

COLLAPSIBLE EGG CARTON

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Application August 4, 1936, Serial No. 94,125
In Sweden December 18, 1935

1 Claim. (Cl. 229—29)

The present invention relates to improvements in collapsible egg cartons of the kind being composed of a collapsible outer rectangular shell including bottom, longitudinal side walls and top of the carton, and an interior member adapted to hold the eggs in position.

The object of the invention is to develop an egg carton of simple design which, being collapsible in its entity, may be forwarded to the egg producer in a plane collapsed state, and which without any trouble may be erected from the collapsed state in a single grip, and at the same time be of sufficient stiffness to protect the eggs during transport and handling of the cartons.

An embodiment of the invention made from a single sheet of cardboard is illustrated by way of example on the accompanying drawing.

Fig. 1 shows a plan view of the sheet of cardboard from which the carton is made.

Fig. 2 shows a cross section through the carton in the erected state.

Fig. 3 indicates the same carton in a collapsed state, for the sake of clearness, however, not completely collapsed.

The numerals 2, 4, 6, 6*a*, 8, 10, 12, 14, 16, 18, 20, 22 designate parallel scoring lines, which divide the sheet into sections 1, 3, 5, 5*a*, 5*a*, 7, 9, 11, 13, 15, 17, 19, 21, 23. Along said lines the sheet has to be folded when making the carton. The way in which said folding operation has to be performed is easily understood by studying Fig. 2, as compared with Fig. 1.

Thus, the erected carton will be composed of an outer rectangular shell including the bottom 17, the longitudinal side walls 2 and 15 and the top 21 of the carton, and an interior member formed by the sections 1, 3, 5, 5*a*, 5*a*, 7, 9, 11 and 13. The top section 21 may be provided with an extension formed by the section 23 which is bent down and glued to the side 15 when the carton is filled with eggs.

The bottom, top and side walls of the carton each consist of one continuous undivided plane surface portion, and they are pivotally connected along the scoring lines 16, 18 and 20, about which the shell is collapsible in the transverse direction of the carton.

In the interior member the sections 5, 7 and 9 form a longitudinal vertical partition wall that divides the carton into two longitudinal compartments 31, 32 for the eggs and serves as a supporting wall extending in the closed erected carton between the bottom 17 and the top 21 of the carton so as to support and stiffen said bottom and top. Said interior member also includes an intermediate longitudinal bottom or panel 3, 11 within each of said compartments 31 and 32 respectively. Said intermediate bottoms or panels are provided with one row of seats 23 for the eggs. Said seats 23 are formed by flaps cut out in the intermediate bottoms or panels, which flaps are bent down into the lower part of the compartment 31, 32 when an egg is inserted into a seat. Said flaps forming the seats 23 may be formed by cross-shaped cuts as indicated in Fig. 1.

The sections 1 and 13 are connected to the side walls 19 and 15 respectively, as by glueing, and the sections 5 and 9 are fastened in a similar way to the section 7 so that the sections 5, 7 and 9 together form a reinforced supporting wall. The sections 5*a* are bent over at right angles to the supporting wall and fastened, as by glueing, to the bottom 17.

The supporting partition wall 5, 7, 9 will thus be pivotally connected to the intermediate bottoms or panels 3, 11 along the longitudinal lines 4 and 10 respectively, and it will also be pivotally connected to the bottom along the longitudinal line 6.

The intermediate bottoms 3, 11 will further be pivotally connected to the side walls 19 and 15 along the longitudinal lines 2 and 12 respectively. Said pivotal connections of the intermediate bottoms and the supporting partition walls along parallel longitudinal lines have to be permanently effected even prior to the erection of the carton to make said interior member collapsible in the transverse direction of the carton by pivoting said parts of the interior member about said parallel longitudinal lines when collapsing the outer shell. If thus the carton is forwarded to the user in a collapsed state, all the latter has to do to erect the carton is to turn the side wall 15 upwards. In doing so the side wall 15 by means of the intermediate bottom 11 turns the partition wall 5, 7, 9 upwards in pivoting the same about the line 6, and the partition wall will in its turn by means of the intermediate bottom 3 turn the side wall 19 upwards to the erected state.

The bottom and top sections 17 and 21 respectively may be provided with protruding extensions 26 and 27 which may serve as end walls after the erection of the carton. These parts may be connected with each other in any known manner, for instance by ears 29 adapted to engage slits 30.

The illustrated embodiment is provided with only one partition wall. However, the invention

may also include embodiments with more than one partition wall, each being simultaneously adapted to form a supporting wall, said partition walls dividing the carton into a corresponding number of compartments for the eggs.

Only one intermediate bottom or panel has been shown in each compartment. However, the scope of the invention also includes embodiments provided in each compartment with more than one intermediate bottom or panel arranged above each other and each provided with a row of seats for the eggs.

Manifestly variations may be resorted to as already indicated and parts and features may be used without others within the scope of the appended claim.

Having now fully described my invention, I claim:

An egg carton comprising a collapsible outer rectangular shell including bottom, longitudinal side walls and top of the carton, said bottom and said longitudinal side walls each consisting of one continuous undivided plain surface portion, and an interior member primarily composed of at least one longitudinal vertical partition wall dividing the carton into a corresponding number of longitudinal compartments for the eggs and serving as a supporting wall extending in the closed erected carton between the bottom and top of the carton so as to support and stiffen said bottom and top, and secondly, at least one intermediate longitudinal bottom or panel within each of said compartments provided with one row of seats for the eggs, each of said longitudinal partition walls being pivotally connected both to the adjacent intermediate bottoms or panels and to the bottom of the outer shell, and said intermediate bottoms or panels in the outermost compartments being pivotally connected to the longitudinal side walls of the outer shell, said pivotal connections of the partition walls and of the intermediate bottoms or panels being permanently effected even prior to the erection of the carton along parallel lines running in the longitudinal direction of the carton to make said interior member collapsible in the transverse direction of the carton by pivoting said parts of the interior member about said parallel lines when collapsing the outer shell.

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