April 27, 1954 R. A. KELLOGG ET AL 2,676,746

FEEDER CARTON

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Fig. 1.

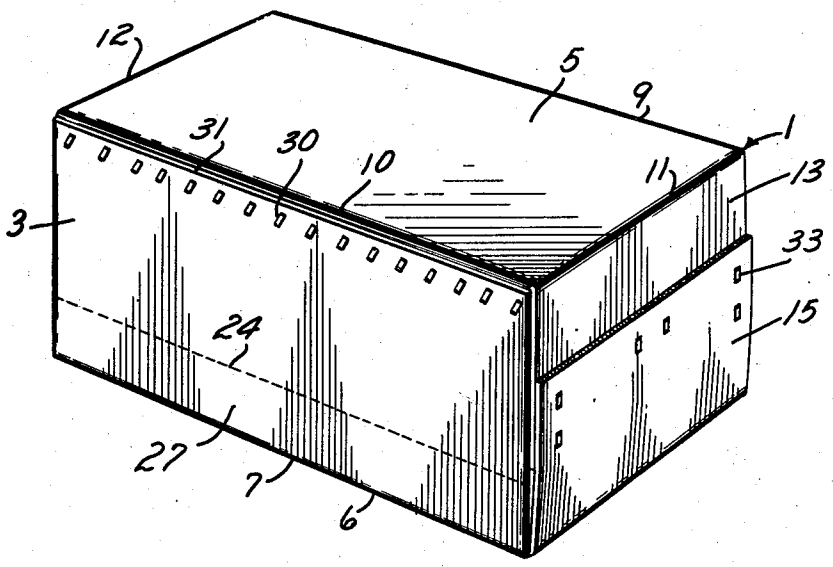
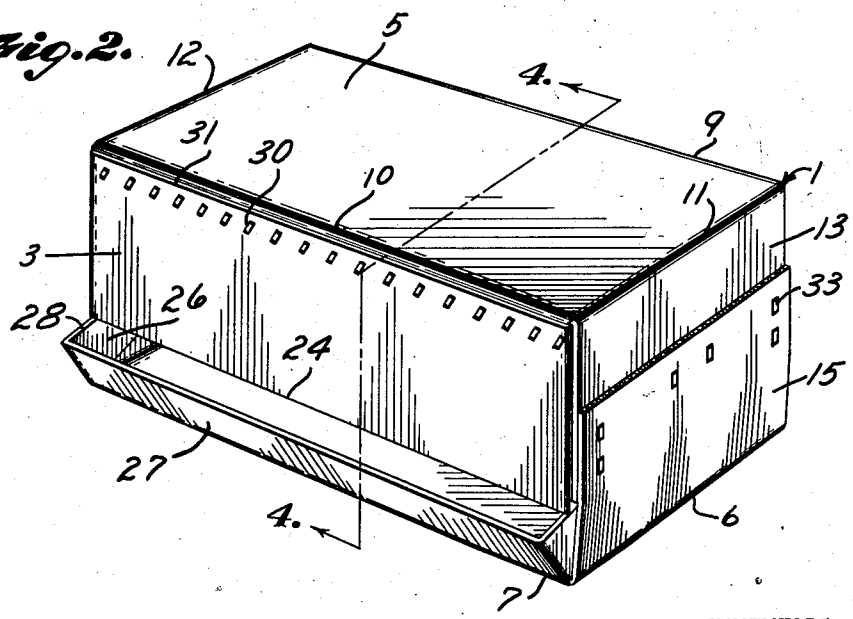


Fig. 2.



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Fig. 3.

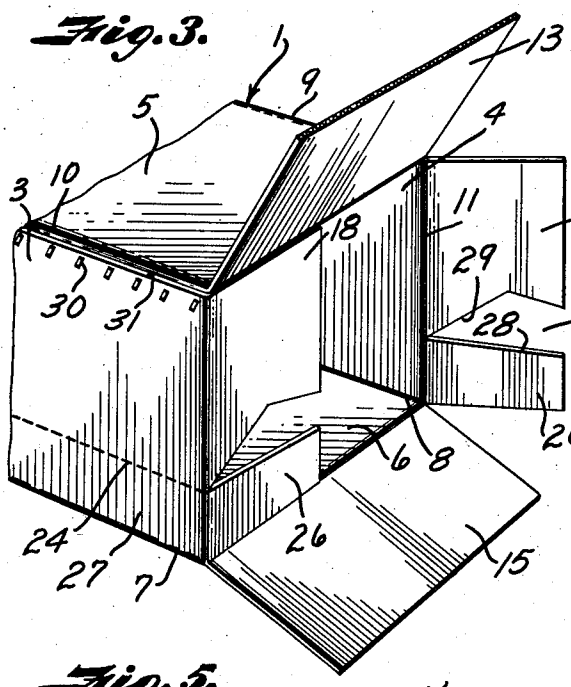


Fig. 4.

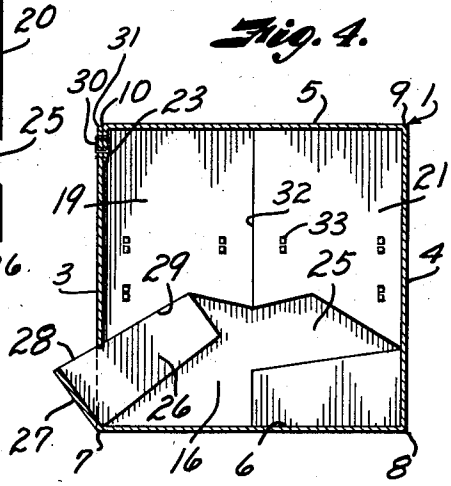
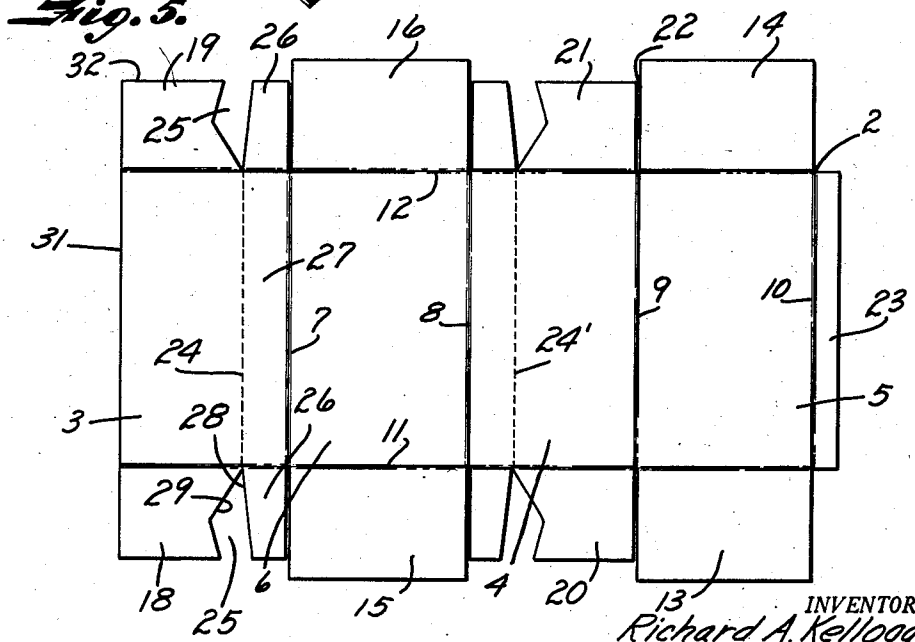


Fig. 5.



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UNITED STATES PATENT OFFICE

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FEEDER CARTON

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Application February 16, 1951, Serial No. 211,288

1 Claim. (Cl. 229—17)

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This invention relates to boxes or cartons and more particularly to a carton constructed of fibre or like board for containing feed or the like, and has for its principal object to provide a carton of this nature having provision for opening and hinging outwardly portions of the walls to form a feeder in which the feed in the carton is accessible to poultry and the like.

Other objects of the invention are to provide flaps and/or tabs arranged for cooperation with the pull-out portion of the walls to limit the opening thereof; to provide closure flaps which are secured in closing position at points spaced from the opening limiting flaps or tabs on the pull-out portion; to provide a feeder carton from a single blank of sheet material; to provide a feeder carton which is free of interior partitions, walls or other obstructions to free flow of feed to the feeder opening; and to provide a feeder carton which is capable of containing feed during shipment and is easily formed into a feeder for use of the feed contained therein, and that is economical to manufacture and of such low cost that when empty it may be discarded or destroyed.

In accomplishing these and other objects of the present invention, we have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a feeder carton embodying the features of the present invention and illustrating the carton in closed conditions for containing feed therein.

Fig. 2 is a perspective view of the feeder carton, similar to Fig. 1, with a portion of the wall opened and pulled out to form a feeder.

Fig. 3 is a partial perspective view with the end flaps in open position to illustrate the structure thereof.

Fig. 4 is a transverse sectional view through the feeder carton on the line 4—4, Fig. 2, illustrating the flaps in engagement for limiting opening movement of the pull-out portion forming the feeder.

Fig. 5 is a plan view of a blank from which the feeder carton is formed.

Referring more in detail to the drawings:

1 designates a box or carton constructed of fibre or like board from a single blank 2, shaped to form opposed side walls 3 and 4, top wall 5 and bottom wall 6 which are defined on the blank by parallel score lines 7, 8, 9 and 10 and transverse score lines 11 and 12. Extending longitudinally from the top and bottom walls, along the score lines 11 and 12 of the blank, are sets of flaps

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13—14, 15—16 respectively. The flaps extend coextensively with their corresponding top and bottom walls and are each of such length relative to the height of the side walls 3 and 4 as to provide a substantial overlap of the mid portions of the flaps 13 and 15 and 14 and 16 respectively to aid in forming closures for the ends of the box, as later described.

Extending longitudinally from the side walls 3 and 4, along the score lines 11 and 12, are sets of flaps 18—19, 20—21 respectively, which extend coextensively with their corresponding side walls and are separated from the flaps 13—14, 15—16 by slits 22, which align with the respective longitudinal score lines 7, 8 and 9, as shown in Fig. 5. The length of the flaps 18—19, 20—21 is preferably approximately one-half the width of the top wall, whereby the free edges thereof substantially abut in the carton when closed. Also formed on the side of the blank, preferably coextensive with the score line 10, is a flange 23 to connect with the side wall 3. Severing lines 24 and 24' are applied to the side walls 3 and 4 in a suitable manner, as by printing, scoring or the like, said lines being parallel and equally spaced from the score lines 7 and 8 respectively. It is preferable that the severing lines 24 and 24' be so arranged that the portion defined by the severing lines and the respective score lines 7 and 8 be approximately one-fourth the height of the side walls 3 and 4.

The flaps 18, 19, 20 and 21 are each die cut or otherwise provided with cut out portions as at 25, the cuts extending from the free edges of the flaps to the score lines 11 and 12 at the point of intersection thereof by the severing lines 23 and 24. The die cuts 25 form tabs 26 which correspond in height with the portion 27 of the side walls defined by the score lines 7 and 8 and lines 23 and 24 respectively. The upper edge 28 of each of the tabs 26 is defined by the die cut 25 and preferably slopes downwardly from the score lines 11 and 12. The opposite sides of the die cut are such that the edges 29 slope upwardly sufficiently to cooperate with the edges 28 of the tabs 26 to limit the feeder opening as later described.

In folding the box or carton blank, the top, bottom and side walls are folded on the score lines 7, 8, 9 and 10 to form a rectangular body, after which the flange 23 is stitched by staples 30 or otherwise secured to the overlying edge 31 of the side wall 3. The flaps 19 and 21 and the tab portions 26 thereof are folded inwardly on the score line 12, said flaps being of such length that the free edges 32 of the flaps 19 and 21 abut as

illustrated in Fig. 4, midway of the width of the carton. The flaps 14 and 16 are then folded on the score line 12 and overlap midway of the side walls 3 and 4 and said overlapped portions stitched by staples 33 or otherwise secured together and to the underlying portion of the flaps 19 and 21 to form a closure of one end of the carton. It is to be particularly noted that the fastening means, such as the staples 33, do not extend through the tabs 26 or the cutout portions 25. The carton is then ready for filling with chicken feed or the like and closure of the other end of the carton by folding the flaps 18 and 20 upwardly on the score line 11 and folding the flaps 13 and 15 to form an overlap of same midway of the side walls 3 and 4 of the carton and stitching the overlapped portion by staples 33 or otherwise securing the flaps 13 and 15 together and to the underlying portion of the flaps 18 and 20.

After filling and closing, the carton of feed may be sent to distributors for sale of the feed in the carton to farmers and other persons raising poultry. When the poultryman desires to use the feed in the carton, he cuts the carton along one or both of the severing lines 24 and 24' and pulls out on the portion 27 causing same to hinge outwardly on the score lines along the bottom edge of the carton. This hinging movement swings the tabs 26 upwardly to effect engagement of the edge 28 thereof with the edge 29 formed by the die cut 25 as illustrated in Fig. 4. Then by supporting the carton on the bottom wall 6 the feed contained in the carton will be accessible to chickens and the like.

The edges 28 and 29 formed by the die cut 25 cooperate to limit the feeder opening formed when the portion 27 is pulled outwardly and also the arrangement is such that the portion 27 may be swung back into alignment with the respective side walls to close the feeder opening to facilitate removal of the feeder carton or regulating periods of access to the feed therein.

It is believed obvious that we have provided a simple, inexpensive carton structure for shipment and storage of feed, that is quickly and easily formed into a feeder carton structure without the use of partitions or the like therein, said structure forming a positive limit to the feeder opening for access by poultry for feeding same directly from the carton.

What we claim and desire to secure by Letters Patent is:

A convertible shipping and feeder carton formed from a single sheet of material comprising, four integrally connected walls, one of the walls forming the bottom of said carton when in

feeding position with walls extending upwardly from the opposite side edges of the bottom and forming side walls and with the other of said walls connecting the upper edges of the side walls and forming the top wall of the carton, inturned end flaps on each end of each of said walls, said end flaps on the top and bottom walls overlying the end flaps on the side walls, said end flaps on the top and bottom walls having overlapping mid portions, means securing the overlapping mid portions of the end flaps on the top and bottom walls together and to the portions of the end flaps on the side walls under said overlapping mid portions, said end flaps on the side walls each having cutout portions between the bottom wall and the overlapping mid portions of the end flaps on the top and bottom walls, said cutout portions defining angularly related edges diverging from the side walls toward the inner edges of the end flaps on the side walls and providing tabs in said end flaps connected to the side walls and adjacent the bottom wall, the edges defined by the opposite sides of the cutout portions being abutment edges on the tabs and end flaps, said abutment edges being in angular relation when the carton is in shipping condition, and a severing line longitudinally of at least one side wall spaced from and parallel to the bottom wall, said severing line intersecting the cutout portions of the end flaps on the respective side wall whereby when the side wall is cut along said severing line the portion between the severing line and the bottom wall is arranged to be swung outwardly from the plane of the respective side wall to an upwardly and outwardly inclined angle to the respective side wall and form the outer side wall of a feeder trough and provide an opening in said side wall communicating the interior of the carton with said feeder trough, the tabs on said side wall being connected to the portion of the side wall forming the outer side wall of the feeder trough extending through the opening in said side wall and forming ends of said feeder trough, said tabs remaining in the planes of the remainder of the respective end flaps, the abutment edges of the tabs and respective end flaps being engageable upon predetermined outward swinging movement of said feeder trough side wall for limiting said outward swinging movement

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