



## UNITED STATES PATENT OFFICE.

WALTER H. CARVER AND WILLIAM H. YUTZ, OF TRENTON, NEW JERSEY.

## CHICK BOX.

Application filed July 25, 1927. Serial No. 208,180

Our invention relates to paper receptacles, of the collapsible type, especially adapted for transportation of newly hatched chickens.

It is the usual practice to ship such chicks by parcels post and in boxes of rectangular configuration and including eight flaps hingedly united, in pairs, with the respective four sides and folded inwardly so that four flaps form the bottom and the other four flaps the top of the box. Such boxes are objectionable in that the chicks may be smothered therein, because rectangular boxes are not only adapted to pack in a mail car in lateral contact with each other, but if put in the car with spaces between them are likely to be jolted and slid into such close relation as to prevent access of air to the inner boxes. Moreover, the weight of superimposed boxes is likely to inwardly and downwardly press the overlapped flaps of the subjacent boxes so as to crush the chicks in the latter. Even if the tops of such boxes are not thus crushed, the chicks therein may be crowded into the right angular corners thereof and crushed or smothered. Furthermore, if the box flaps are left unsealed, the chicks may be thus permitted to escape and, if sealed, the contents of the boxes can not be inspected in accordance with the postal regulations.

Therefore, the object and effect of our invention is to provide a primarily flat sheet formed of paper and preferably of laminated paper known as corrugated pasteboard, which may be folded to form a box of hexagonal configuration with two series of six triangular flaps respectively forming the bottom and top thereof; one of the top flaps being detachably fastened at the center of the box so that it may be opened to permit postal inspection. The box is reinforced at its center by a column, so that the flaps cannot be crushed inwardly; such column being conveniently a piece of wood, to which all of the bottom flaps are secured and to which five of the top flaps are secured, preferably by a nail having a knob top adapted to engage a snap fastener on the sixth top flap, so that the latter may be opened for postal inspection. Moreover, as the side corners of our improved box are at an angle of 120°, the chicks cannot be crowded and crushed therein as in boxes having side corners at 90°. Furthermore, we prefer to provide each of our boxes with a corrugated or otherwise embossed floor pad conveniently formed of

paper or other material affording a secure foothold to the chicks so that they can support themselves against the stresses, incident to movement of such boxes, tending to slide the chicks into close relation with each other.

Our invention includes the various novel features of construction and arrangement hereinafter more definitely specified.

In the drawings; Fig. I is a perspective view of a box constructed and arranged in accordance with our invention and in condition for transportation.

Fig. II is a vertical sectional view of said box, taken on the line II, II, in Fig. I, but on a larger scale.

Fig. III is a plan view of the primarily flat sheet of fabric from which said box is made.

Fig. IV is a perspective view of a bottom floor pad.

In said figures; the primarily flat sheet of fabric 1, conveniently corrugated pasteboard comprising a central corrugated sheet 2 with plane sheets 3 and 4 respectively secured upon opposite faces thereof, may be fifty-four inches long and approximately twenty-four inches wide, to form a box adapted to hold fifty newly hatched chicks. Said sheet 1 is indented along longitudinal lines 6 and 7 and transverse lines 8, forming six side walls 10, each six inches high and nine inches long; six bottom flaps 11, and six top flaps, of which five are indicated at 12 and the sixth at 13; the latter being provided with the snap fastener 14 which may be of any convenient form. All of said flaps are of such extent as to overlap the center of the box, as indicated in Figs. I and II.

Said sheet 1 may be folded as above contemplated to form the box 15 indicated in Figs. I and II. The central column 16 is conveniently formed of a piece of wood, say, three-fourths of an inch square and about five inches long. All of the bottom flaps 11 are rigidly connected to said column by a single nail 17 preferably of the broad head type used for roofing and extending through the registered perforations 18 in the respective flaps 11. The five top flaps 12 are similarly rigidly connected with the top of said column 16, by means of the single nail 20 extending through the perforations 21 in those flaps. However, said nail 20 may have a knob top 23 or be otherwise adapted to detachably engage said snap fastener 14 to thus secure the top flap 13 so that said flap

may be opened for postal inspection. For instance, the flap 12, diametrically opposite to the flap 13 in Fig. I, may have a fastening member independent of the nail by which the other top flaps are secured and capable of cooperating with the fastener 14.

The floor pad 25, having the central opening 26, is of such size and configuration as to fit easily in the box 15 around the column 16. Said pad may be corrugated or otherwise embossed as indicated at 28, to afford a foothold for the chicks, and is loosely fitted in the box as above described so that it may be readily removed with the drop-pings from the chicks and be replaced by a fresh pad, if desired.

In order to afford access of air to said boxes, one or more perforations 29 may be made through each of the top flaps 12 and 13 and one or more perforations 30 in each of the side walls 10. It being noted that it is desirable to have more air inlets and outlets in the boxes in warm weather than in cold weather; it is preferable to provide the sheets 1 with the minimum amount of perforations; any additional perforations deemed necessary or desirable in accordance with the condition of the weather, being made by the shipper at the time of shipment.

As far as we are aware it is novel and original with us to provide a chick box with a central column strut to prevent accidental collapse thereof. It is also novel to provide a chick box with side walls in obtuse angular relation, to thus obviate crushing of chicks in right angled corners. It is also novel to provide a chick box which may be formed by the shipper from a primarily flat sheet of material so as to be securely fastened to prevent the escape of chicks but readily opened for postal inspection. Therefore, we do not desire to limit ourselves to the precise details of construction and arrangement herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of our invention as defined in the appended claims.

We claim:

1. A chick box of hexagonal configuration having side, top, and bottom walls formed of a single piece of plane material, and comprising a single series of rectangular side walls, and two series of triangular flaps in unitary relation therewith, said flaps being constructed and arranged to overlap to form top and bottom walls; a column support arranged to prevent vertical collapsing of said box intermediate of its side walls, and rigidly connected with the bottom wall, and arranged to be rigidly connected with the top wall; and fastening means on one of said flaps adapted to be detachably engaged in closed position; whereby the flap

provided with such fastening means may be opened for inspection.

2. A chick box as in claim 1, having an embossed floor pad to afford a foothold for chicks.

3. An article of manufacture adapted to form a receptacle, having side, top, and bottom walls formed of a single piece of plane material, and comprising a single series of rectangular side walls in obtuse angular relation with each other, and two series of triangular flaps in unitary relation therewith, said flaps being constructed and arranged to overlap to form top and bottom walls; a column support arranged to prevent vertical collapsing of said box intermediate of its side walls, and rigidly connected with the bottom wall, and arranged to be rigidly connected with the top wall; and fastening means on one of said flaps adapted to be detachably engaged in closed position; whereby the flap provided with such fastening means may be opened for inspection.

4. An article of manufacture as in claim 3, having an embossed floor pad to afford a foothold.

5. An article of manufacture adapted to form a receptacle, having side, top, and bottom walls, and comprising a single series of rectangular side walls in obtuse angular relation with each other, and two series of triangular flaps in unitary relation therewith, said flaps being constructed and arranged to overlap to form top and bottom walls; a column support arranged to prevent vertical collapsing of said box intermediate of its side walls, and rigidly connected with the bottom wall, and arranged to be rigidly connected with the top wall; and fastening means on one of said flaps adapted to be detachably engaged in closed position; whereby the flap provided with such fastening means may be opened for inspection.

6. A chick box having side, top, and bottom walls, and comprising a single series of rectangular side walls in obtuse angular relation with each other, and two series of triangular flaps in unitary relation therewith, said flaps being constructed and arranged to overlap to form top and bottom walls; a column support arranged to prevent vertical collapsing of said box intermediate of its side walls, and rigidly connected with the bottom wall, and arranged to be rigidly connected with the top wall; and detachable fastening means on a portion of said top wall; whereby said portion of the top wall may be opened for inspection.

In testimony whereof, we have hereunto signed our names at Trenton, New Jersey, this 20th day of July, 1927.

WALTER H. CARVER.  
WILLIAM H. YUTZ.