

Nov. 13, 1956

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2,770,408

CONTAINER-FEEDER

Filed Aug. 23, 1952

2 Sheets-Sheet 1

Fig. 1

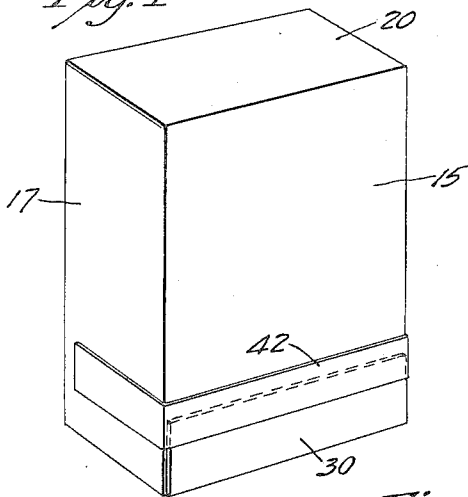


Fig. 2

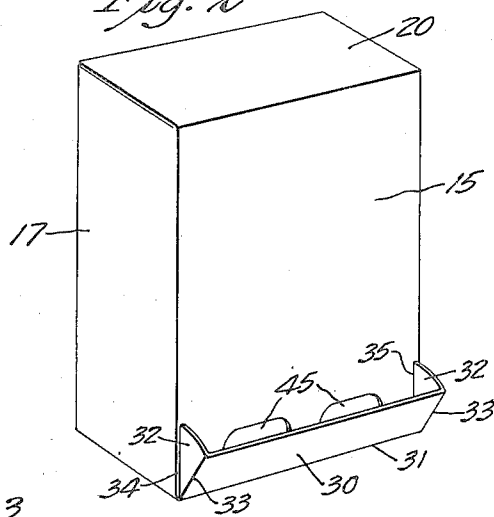


Fig. 3

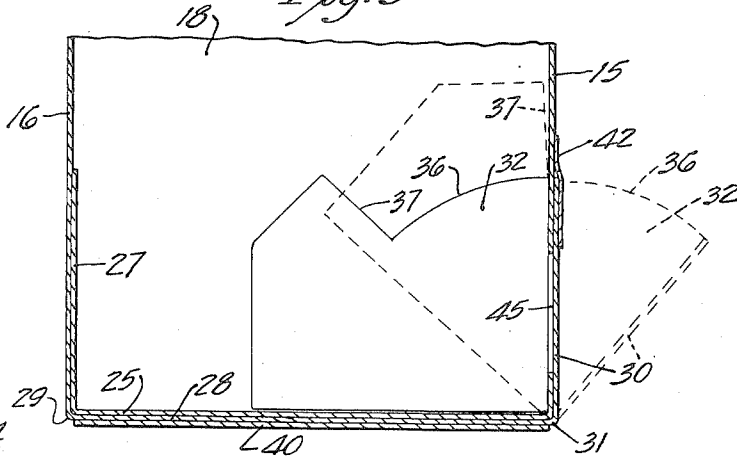


Fig. 4

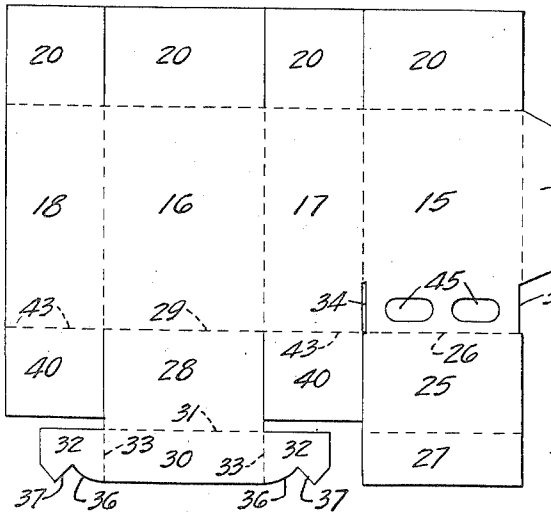
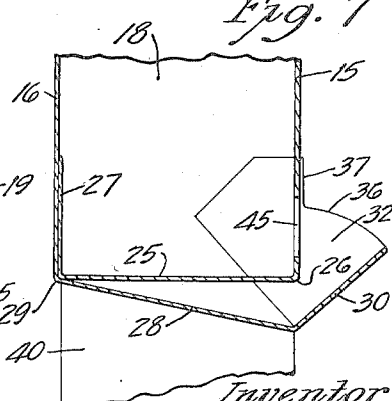


Fig. 7



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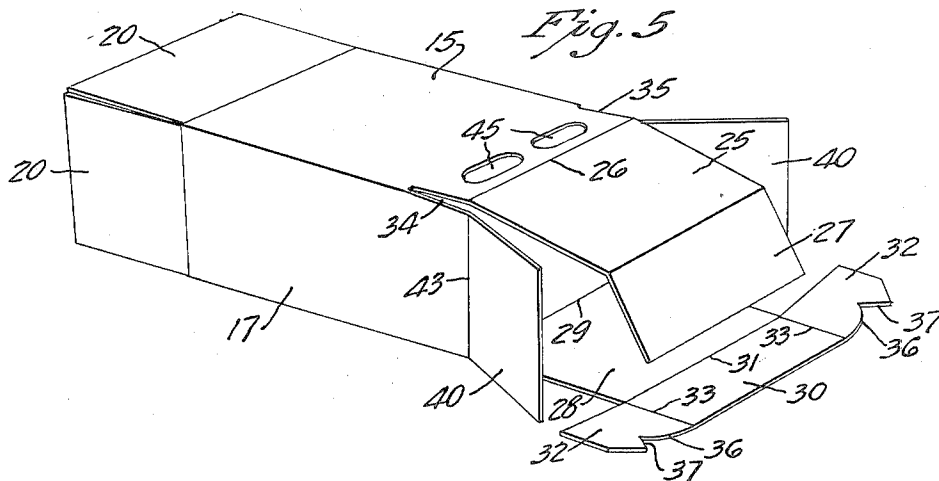
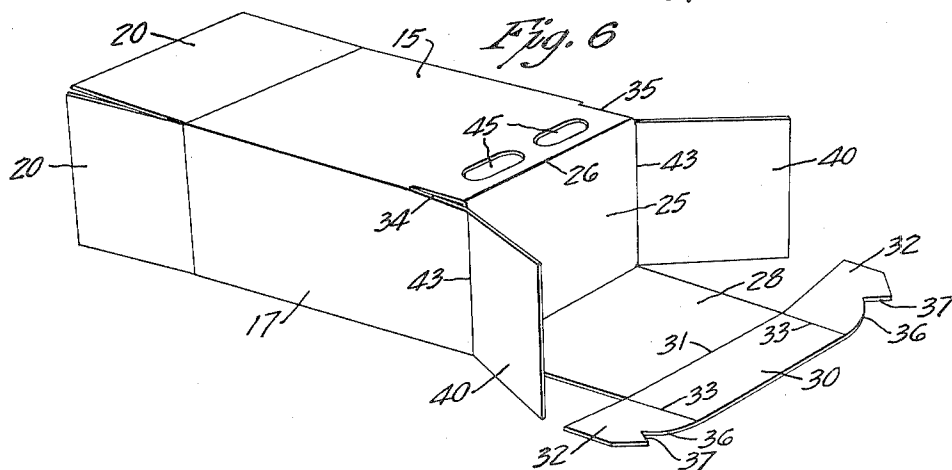
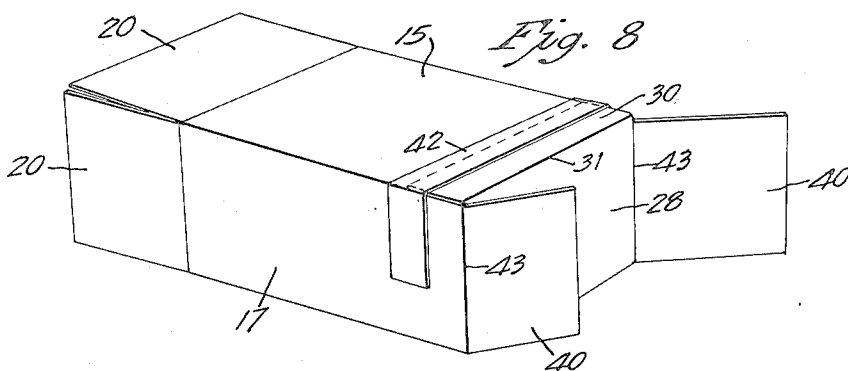
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2 Sheets-Sheet 2



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2,770,408

CONTAINER-FEEDER

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2 Claims. (Cl. 229—17)

The present invention relates to the packaging, dispensing and feeding of grit, feed, and the like for livestock, particularly for poultry.

Heretofore, such material has been dispensed by opening the carton, box, bag or other packaging means, and pouring or dipping it out. The feeding is then accomplished by placing the material on the floor or ground, or in troughs or dishes provided therefor.

An objective of the invention is to eliminate the uncleanliness and waste of floor or ground feeding, and the expense of separate feeding troughs and dishes, by providing a single container that will serve both as a packaging means and as a feeding trough.

Such combined containers and feeders have been heretofore attempted, and although those known to me have been operative, they are of such complicated construction as to be prohibitive from the point of view of cost.

A further objective, therefore is to provide a container-feeder of simple construction and low cost.

The present invention provides a combined packaging and dispensing carton and feeding trough that can be made or set up complete from a single blank stamped from a sheet of cardboard or other suitable sheet material.

When the said single blank is folded and secured, it forms a carton having four vertical walls and a bottom closure. The bottom closure comprises a first panel hinged to the bottom of the front wall and extending to the rear wall to form the inside bottom surface of the carton, a second panel hinged to the bottom of the rear wall and extending underneath the first panel to a position below the front wall, a trough-forming panel hinged to the front edge of the second panel and extending upwardly therefrom in front of the front wall, two end flaps hinged to the two ends, respectively, of the trough-forming panel, two vertical slots in the walls at the front corners of the carton to receive the two end flaps, respectively, stop members on the end flaps to engage the walls when the flaps are partially withdrawn from the carton a given distance, and two side closure flaps hinged to the bottom edges of the two side walls, respectively, each extending across the bottom of the carton underneath the second panel toward the opposite side wall to form the outside bottom surface of the carton. At least one aperture is provided in the front wall opposite the trough-forming panel to permit the contents of the carton to flow into the trough that is formed between the front wall and the trough-forming panel when the end flaps are partially withdrawn from the carton.

An illustrative embodiment is described below and shown in the accompanying drawings, in which:

Figure 1 shows a closed carton in use as a packaging means for poultry grit or feed;

Figure 2 shows the carton of Figure 1 in readiness for use as a feeder, with the feeding trough open;

Figure 3 is a vertical sectional view of the lower por-

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tion of the carton, showing the trough in closed position (solid lines) and in open position (dotted lines);

Figure 4 shows the single blank from which the carton is formed; and

Figures 5, 6, 7 and 8 show successive stages in the formation of the carton from the blank.

The carton has four vertical walls, namely, a front wall 15, a rear wall 16, a left side wall 17 and a right side wall 18. A fastening flap 19 hinged to the right edge of the front wall 15, is glued, stapled or otherwise fastened to the front margin of the right side wall 18 when the blank of Figure 4 is folded into the form shown in Figure 5. Conventional full overlap glue-seal closure flaps 20 are provided at the top.

A first panel 25, hinged at 26 to the bottom of the front wall 15, extends to the rear wall 16 and is secured thereto by a fastening flap 27, to form the inside bottom surface of the carton.

A second panel 28, hinged at 29 to the bottom of the rear wall 16, extends underneath the first panel 25 to a position below the front wall 15. A trough-forming panel 30, hinged at 31 to the front edge of the second panel 28, extends upwardly therefrom in front of the front wall 15. Two end flaps 32, hinged at 33 to the two ends, respectively, of the trough-forming panel 30, extend into the carton through two slots 34 and 35, respectively, in the walls at the front corners of the carton, to form the end walls of the trough.

Referring to Figure 3, the top edges 36 of the trough end flaps 32 are arcuate about the hinge 31, the radius of the arc being of a length to permit clearance of the tops of the slots 34 and 35 by the edges 36 as the trough is opened and closed in use.

The rear portions of the trough end flaps 32 are shaped to extend upwardly above the arcuate top edges 36 to form stop members 37 for engagement with the inside surface of the front wall 15 after the flaps 32 are partially withdrawn from the carton a given distance when the trough is opened.

In making or assembling the carton, the folding of the second bottom panel 28 into its permanent position as a part of the floor or bottom of the carton, and the insertion of the trough end flaps 32 through the slots 34 and 35, are performed as a single operation following the step that is shown in Figure 6. At this point in the assembly process, the side closure flaps 40 are not yet in position, so that the trough end flaps 32 can temporarily extend downwardly between the side edges of the first panel 25 and the respective side walls 17 and 18 a sufficient distance to permit the tops of the stop members 37 to clear the tops of the slots 34 and 35 (Figure 7), as the flap 28 and the attached trough members 30 and 32 are being moved into their respective positions in the finished carton.

Thereafter a strip of tape 42 is affixed to hold the trough shut, and the two side closure flaps 40 which are hinged at 43 to the bottom edges of the left and right side walls 17 and 18, respectively, are then folded into position (Figure 8). The flaps 40 extend across the bottom of the carton underneath the second panel 28 toward the respective opposite side walls 17 and 18, to form the outside bottom surface of the carton.

The carton is then filled with the grit, feed, or other flowable material, the top closure flaps 20 are fastened in position, and the carton is ready for shipment and storage (Figure 1).

When the grit or other material is to be fed, the tape 42 is removed (or slit, as by a suitable tear string) and the trough is opened (Figure 2), whereupon the grit flows into the trough through the one or more apertures 45 that are provided in the lower portion of the front wall 15, these apertures being in a position to be covered by

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the trough-forming panel 30 when the trough is shut.

The panels 30 and 15 form the front and rear walls of the open trough, respectively, the flaps 32 the end walls.

The invention thus provides a combined packaging and dispensing carton and feeding trough that is efficient and at the same time of the utmost simplicity. It is formed or set up from a single blank. It will be noted that the carton may be quickly and easily assembled therefrom without a distortion of any of the parts.

Constructions other than that of the container-feeder specifically described and illustrated may be made within the scope of the invention described and/or claimed herein.

I claim:

1. As a combined packaging and dispensing carton and feeding trough for flowable granular material, a carton having four vertical walls and a bottom closure; the said bottom closure comprising a first panel hinged to the bottom of the front wall and extending to the rear wall to form the inside bottom surface of the carton, a second panel hinged to the bottom of the rear wall and extending underneath the first panel to a position below the front wall, a trough-forming panel hinged to the front edge of the second panel and extending upwardly therefrom in front of the front wall, two end flaps hinged to the two ends, respectively, of the trough-forming panel, two vertical slots in the walls at the front corners of the carton to receive the two end flaps, respectively, stop members on the end flaps to engage the walls when the flaps are partially withdrawn from the carton a given distance, and two side closure flaps hinged to the bottom edges of

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the two side walls, respectively, each extending across the bottom of the carton underneath the second panel toward the opposite side wall to form the outside bottom surface of the carton; the front and rear walls and the first and second bottom panels being of equal width, the said width being equal to the lateral extent of the trough-forming panel, and the slots connecting with the lateral edges of the first bottom panel; and an aperture in the front wall opposite the trough-forming panel to permit the contents of the carton to flow into the trough that is formed between the front wall and the trough-forming panel when the end flaps are partially withdrawn from the carton, the said aperture being closed by the trough-forming panel when the latter is in contact with the front wall.

2. A carton according to claim 1 wherein the top edges of the said end flaps are arcuate about the trough-forming panel hinge, the radius of the arc being of a length to permit clearance of the tops of the vertical slots in the walls of the carton by the top edges of the end flaps, the rear portions of the end flaps being shaped to extend upwardly above the said top edges to form the said stop members.

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