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COLLAPSIBLE EGG CRATE.

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WITNESSES

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Fig. 1

Fig. 2

Fig. 3
To all whom it may concern:

Be it known that I, Oris W. Allison, a citizen of the United States, residing at Algona, in the county of Kossuth and State of Iowa, have invented certain new and useful Improvements in Collapsible Egg-Crates, of which the following is a specification.

The objects of my invention are to provide a folding crate for egg-tills of simple, durable, and inexpensive construction which is so constructed that the crate when set up is of sufficient strength to protect thoroughly the egg-tills and eggs carried in the tills and when folded to occupy a minimum amount of space for convenience in shipping.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the unfolded crate with the cover open. Fig. 2 is an end view of the folded crate. Fig. 3 is a side elevation of the folded crate. Fig. 4 is a detail view of one of the supports against which the bottom rests when unfolded. Fig. 5 is a cross-sectional view of the crate, showing the bottom partially folded. Fig. 6 is a cross-sectional view of the unfolded crate, showing the partition on its interior. Fig. 7 is an inverted plan view of the crate. Fig. 8 is a detail view of one of the upper corners of the crate, showing the hinged hook which is used to hold the cover both in an open and a closed position; and Fig. 9 is a detail view of one of the hinges used for securing the partition to the crate.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the back portion of the crate and the reference-numeral 11 to indicate the front portion thereof. Extending at right angles to one end of the back portion 10 is a strip 12. Extending at right angles to the opposite end of the front 11 is a strip 13. Hinged to the strip 13 and to the adjacent end of the front 11 is the end 14, having an opening 15 in its upper portion through which air is admitted to the interior of the crate and which also serves as a handle. Hinged to the strip 13 and to the adjacent end of the back 10 is the end 16, having an opening 17 in its upper portion to serve as the other handle and also to admit air into the interior of the crate.

The strips 12 and 13 are braced relative to the back 10 and front 11 by means of metal angle pieces 18.

I have provided a two-part bottom portion 60 having the parts 20 and 21 therein. The part 20 is hinged to the front portion 11, and the part 21 is so arranged that it will swing downwardly and engage the under surface of the part 20 when the part 20 is swung upwardly 65 on its hinges. Attached to the lower edges of the back 10 and the ends 14 and 16 is a series of supports 22, which extend inwardly from the lower edge of the crate and are designed to support the bottom when it is in its unfolded position, as shown clearly in Fig. 8 of the drawings. Each of these supports is composed of a flat metal piece 23, having two upwardly-extending members 24 and 26, and two or three outwardly-extending members 26, 27, and 28 to be secured to the lower edge of the back or one of the ends. The upwardly-extending members 24 and 25 are attached to the interior of the back or one of the ends. This form of support is provided so as to form a rigid support and one which can be securely held to the back and ends in order to provide a sufficient support for the bottom when in its unfolded position. The parts 20 and 21 of the bottom portion are hinged together by hinges which have flaring projections on them, and these flaring projections are thus formed to permit of very light material being used for the bottom.

Hinged to the back 10 at a point midway between the ends is the partition 30, which partition is detachably connected with the back, so that by simply removing the rod 31 from hinges 31 the entire partition may be taken out and the box used without this, if it is desirable to do so. On the inside of the front of the crate at a point midway between the ends there are two eyes 32 and 33, against which the partitions 30 are designed to rest when the crate is unfolded. On the partition 30 there are two hooks 34 and 35, which are to be hooked into the eyes 32 and 33, respectively, and fasten the parts 30 against swinging movement and maintain it in its unfolded position.

Hinged to the upper portion of the back 10 is the cover 36, which cover has an angled metal portion 37 at each end thereof. One part of each of these angled portions is screwed to the cover, and the other part extends outwardly from it, so that when the cover is closed the part of these hinge portions which
extends outwardly passes outside of the ends 14 and 16 of the crate and prevents the crate from racking while it is being delivered or transmitted from one place to another. Attached to each end of the cover are the hinges 38, each of which hinges pivotally attached to it a hook 39, which is capable of entering the eyes 40, one of which is in the strip 13 and the other of which is in the end 14 and both of which are adjacent to the front 11 for the purpose of holding the cover in its closed position. One of these hooks is also capable of entering an eye 41, which is in that end of the back adjacent to the strip 12, and when the hook 39 is in this eye 41 and the cover 36 is swung against the back 10 the cover will be securely held against the back.

In practical use and assuming that the crate is unfolded and that the egg-tills have been removed and it is desired to fold the crate the cover is first folded back and fastened against the back, and one of the hooks 39 is swung into the eye 41, as shown in Fig. 2. This will hold the cover in its folded position.

The hooks which hold the partition in its unfolded position are then unhooked and the partition is swung to the position against the back 10, so that its free end is immediately inside of the strip 12. The bottom is then withdrawn from its active position and is swung on its hinges, so that both parts are in line, and is then folded against the front 11, as shown by dotted lines in Fig. 5. The front is then swung longitudinally and moved toward the back 10 into the position shown in Fig. 3, so that the front 11 and the end 15 are substantially parallel with the back and end 16 and the partition and bottom are between the strips 12 and 13. This leaves the crate in a collapsed condition and in a minimum amount of space and in readiness for storage or transmission.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

A collapsible crate comprising a back portion having an angular strip at one end, a front portion having an angular strip at its end remote from the strip-bearing end of the back portion, an end portion hinged to the angular strip of the back portion and the adjacent end of the front portion, an end portion hinged to the angular strip of the front portion and the adjacent end of the back portion; all of the said hinges being so disposed as to enable the front portion and the end portions to swing in a common direction, a horizontally-swinging partition interposed between the back portion and the front portion and hinged to one of the same, a vertically-swinging bottom interposed between the back portion and the front portion and hinged to one of the same; said bottom being made up of two sections connected in a hinged manner, and means at the lower edges of the said portions for supporting the bottom when the latter is in use.

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Witnesses:
C. F. GAUGE,
B. W. ALLISON.