

(No Model.)

A. D. LINN.  
EGG CRATE.

No. 402,464.

Patented Apr. 30, 1889.

Fig. 1.

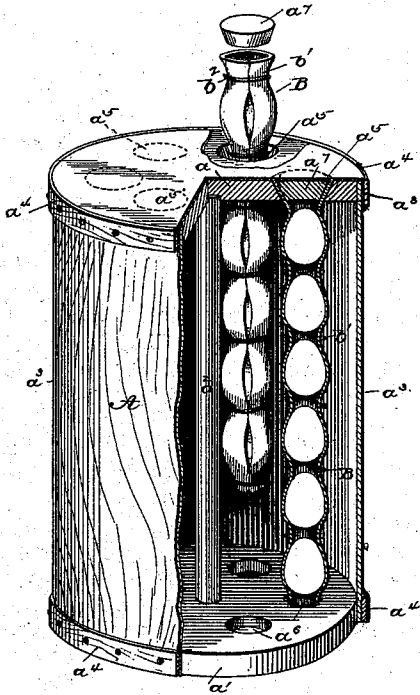


Fig. 2.

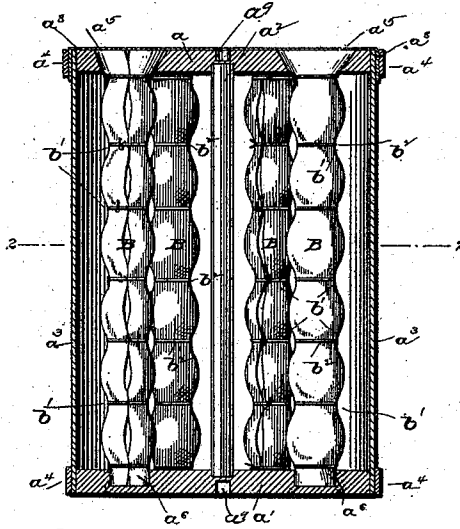


Fig. 3.

ON LINE 2-2

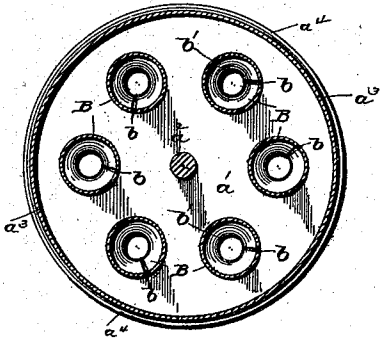


Fig. 5.

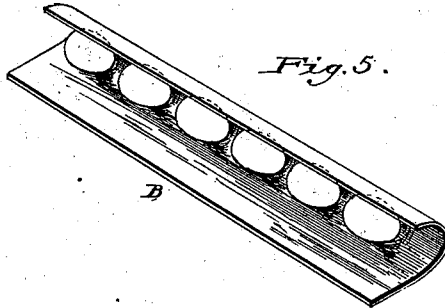
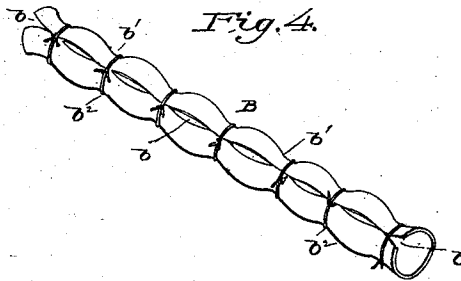


Fig. 4.



Witnesses,

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# UNITED STATES PATENT OFFICE.

ALLEN D. LINN, OF GRAND RAPIDS, MICHIGAN.

## EGG-CRATE.

SPECIFICATION forming part of Letters Patent No. 402,464, dated April 30, 1889.

Application filed January 30, 1889. Serial No. 298,103. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN D. LINN, of Grand Rapids, in the county of Kent and State of Michigan, have invented certain Improvements in Egg-Crates, of which the following is a specification.

The aim of my invention is to provide a light and cheap receptacle which may be roughly handled without danger of breaking the contained eggs.

To this end it consists, first, in longitudinally-divided tubes adapted to receive a number of eggs, and provided with annular contractions to prevent contact between them, and, second, in a case or body of peculiar construction adapted to receive and support a series of these tubes.

I prefer to construct the case or body of cylindrical form and in the peculiar manner herein described, and I also prefer to construct the egg-carrying tubes of thin wood veneers; but it is to be understood that the external form of the body may be modified, and that in place of veneer paper or cardboard, or similar material possessing pliability and moderate strength, may be substituted.

In the accompanying drawings, Figure 1 is a perspective view of my crate in its preferred form, one side being shown in section and one of the tubes shown as partially withdrawn. Fig. 2 is a vertical central cross-section of the crate. Fig. 3 is a horizontal section of the same on the line 2 2. Fig. 4 is a perspective view showing one of the tubes as it appears when filled and ready for insertion into the crate. Fig. 5 is a perspective view showing the manner in which the eggs are enveloped by the tube.

Referring to the drawings, A represents the case, crate, or body, consisting of circular end pieces,  $a$  and  $a'$ , a central connecting-post,  $a^2$ , and a cylindrical shell,  $a^3$ , surrounding and connecting the two heads. The central post is seated in or against the inner faces of the heads, and serves to maintain their proper separation. The external shell,  $a^3$ , which may consist of one or more sheets of veneer, pasteboard, or similar material, is nailed or otherwise firmly secured to the edges of the end pieces or heads with or without the addition of external re-enforcing strips,  $a^4$ . When

the veneer is used, I arrange the grain of the wood lengthwise of the body. When thus arranged, the tensile strength of the veneer effectually prevents the separation of the heads, while the rigidity of the central post prevents the veneer from being crushed by longitudinal pressure. Through the end  $a$ , I form a series of circular openings,  $a^5$ , to admit the egg carrying or supporting tubes, and in the lower end,  $a'$ , I form recesses  $a^6$ , to receive and sustain the lower ends of the tubes. Blocks  $a^7$  are provided for closing the top openings.

B B represent the egg-holding tubes, each consisting of a thin sheet, preferably wooden veneer, bent into the form of a tube, with a longitudinal slot or opening,  $b$ , in one side, and with a series of circumferential contractions,  $b'$ , at suitable distances apart. Each of these tubes is made of suitable length and diameter to receive from half a dozen to a dozen eggs arranged in a row or line end to end. The eggs introduced into one of these tubes are inclosed and supported thereby, but are prevented by the contractions  $b'$  from coming in contact at their ends.

After the introduction of the eggs bands  $b^2$ , of rubber, twine, wire, or other suitable material are applied around the tubes at suitable intervals to prevent them from opening or from yielding in such manner as to permit contact of the eggs. The tubes may be formed of material of such lightness and pliability that the contractions may be produced in the act of applying the encircling bands, or they may be pressed or molded or otherwise manufactured with the contractions therein. After being filled the individual tubes are introduced through the openings  $a^5$  in the top of the crate or body, care being taken to seat their lower ends in the recesses  $a^6$ . The openings in the top are closed by the caps or blocks  $a^8$ , which are preferably made of conical form and introduced into the ends of the tubes, as shown in Fig. 1, so as to wedge the latter tightly in place in the head. The caps or blocks may be fastened in any suitable manner. In practice I find the best plan is to paste a sheet of strong paper,  $a^8$ , over the entire end, thereby confining the entire series

When it is required to remove the eggs, the

paper may be readily broken so as to permit the withdrawal of the caps and tubes.

It is to be noted as a peculiar and advantageous feature of my construction that the tubes are sustained at their ends only out of contact with each other. Thus sustained, the tubes possess sufficient elasticity to admit of the crate being roughly handled without danger of fracturing the eggs.

Owing to the cylindrical form of my crate, it may be conveniently rolled and handled when of large size and great weight. The cylindrical form is also advantageous in that it admits of the crate being easily turned over in order to reverse the position of the eggs, as is necessary for their long preservation. In some cases I provide the crate at its two ends with central holes, *a*<sup>9</sup>, to receive journals or pivot-pins on which the crate may be mounted in a suitable supporting-frame to admit of its being conveniently turned when the eggs are to be inverted.

Having thus described my invention, what I claim is—

1. The egg-crate consisting of an external case or body, and a series of independent tubes each sustained at its two ends in the body, and composed of a flexible sheet adapted to encircle a row of eggs, and provided with contractions to maintain their separation.

2. In an egg-carrier, a rigid case or body having openings through one end, in combination with a series of independent egg-re-

ceiving tubes adapted to be introduced through the end openings and sustained at their ends within the body, substantially as described and shown.

3. The egg-carrier consisting of the cylindrical body having top openings, the caps to close the openings, and the series of removable tubes, each divided longitudinally and provided with transverse contractions.

4. In an egg-carrier, the combination of the two heads, the sustaining-post, the outer shell, and the series of tubes sustained at their ends in said heads.

5. An egg-holder consisting of a sheet of veneer bent into tubular form with the grain lying longitudinally, and the contractions therein at different points in its length.

6. An egg-holder consisting of a longitudinally-divided tube having a series of circumferential contractions to maintain the separation of the eggs.

7. An egg-holder consisting of a longitudinally-divided tube with a series of circumferential contractions and removable encircling bands.

In testimony whereof I hereunto set my hand this 4th day of January, 1889, in the presence of two attesting witnesses.

ALLEN D. LINN.

Witnesses:

HENRY J. FELKER,  
C. A. MERRILL.