2 Sheets—Sheet 1.

W. RYERSON.

EGG-CARRIERS.

No. 183,778. Patented Oct. 31, 1876.

Fig 1

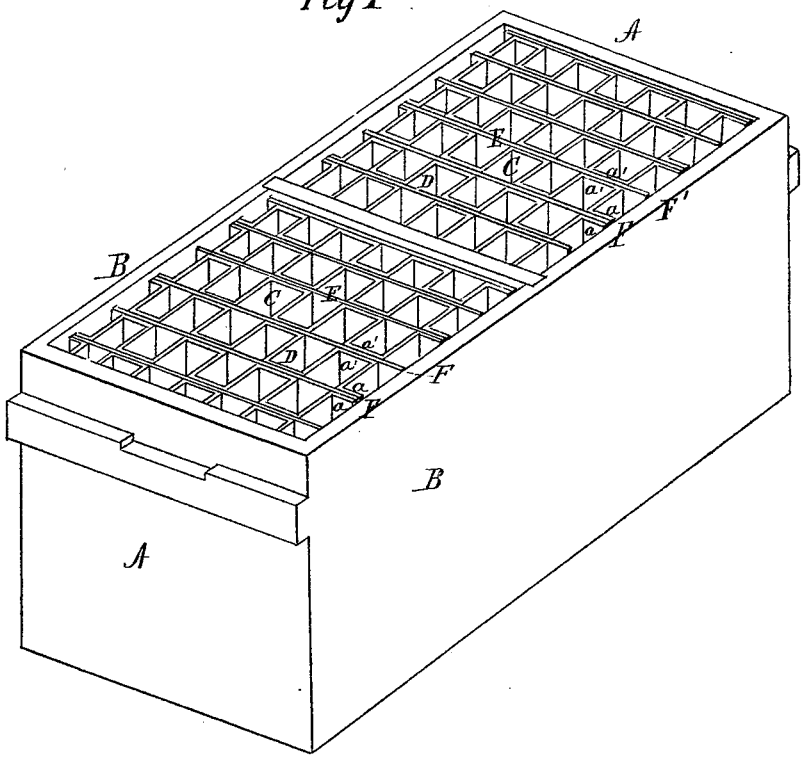
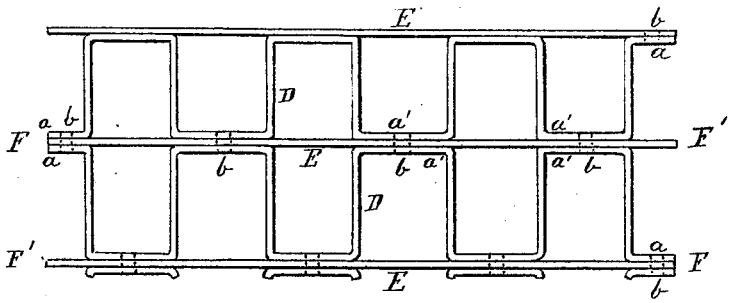


Fig 2



Witnesses
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2 Sheets—Sheet 2.

W. RYERSON.

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Fig 3.

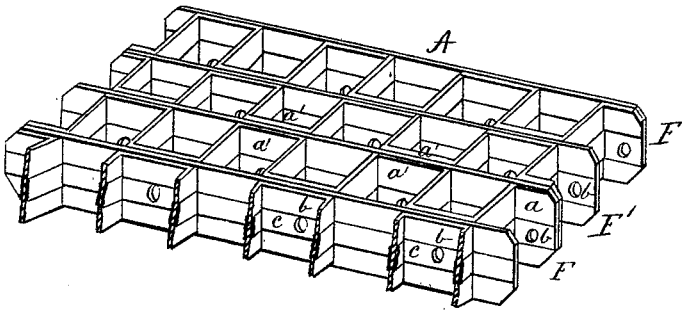
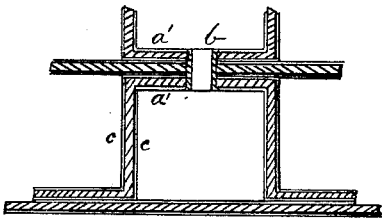


Fig 4.



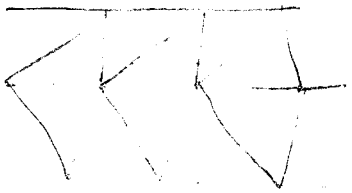


Fig 5.

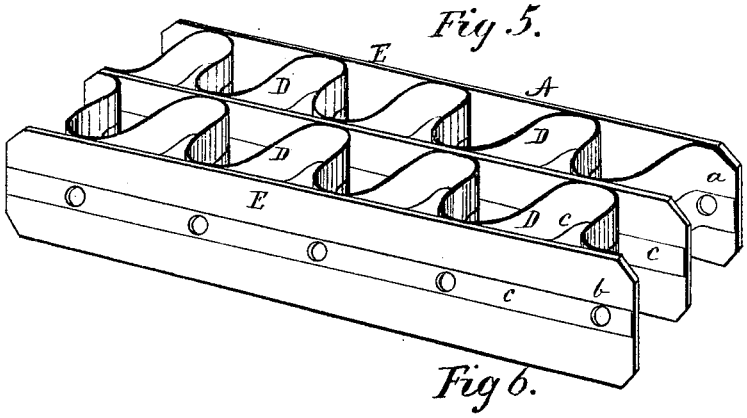
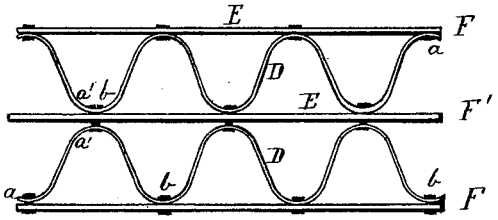


Fig 6.



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UNITED STATES PATENT OFFICE.

WALLACE RYERSON, OF WEST SUMNER, MAINE.

IMPROVEMENT IN EGG-CARRIERS.

Specification forming part of Letters Patent No. **183,778**, dated October 31, 1876; application filed September 27, 1876.

To all whom it may concern:

Be it known that I, WALLACE RYERSON, of West Sumner, in the county of Oxford and State of Maine, have invented certain new and useful Improvements in Egg-Carriers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in that class of egg-carriers in which the trays are made up of a number of series of egg-compartments, each series being formed from a strip of pasteboard or other similar material, folded or bent so as to provide a compartment for each egg, and the several series being secured to intermediate walls by eyelets or other suitable metallic fastenings.

Its object is to provide a strong and substantial tray, which cannot be crushed or broken by the weight of the eggs, and which will provide against the breaking of the eggs when the boxes are being handled and transported.

It consists in folding or bending the strips from which the several series of compartments are made, and uniting them to the intermediate walls, so that there is formed on the sides of the tray strong lateral-projecting arms or supports, which rest against the sides of the box and receive and relieve the force of any shocks or jars; and it consists, further, in certain improvements, all of which will be hereinafter fully explained.

In the drawings, Figure 1 is a perspective of an egg-box filled with egg-trays, constructed according to my invention. Fig. 2 is a detail view of a portion of a tray. Fig. 3 is a plan of a tray in which the compartments are lined with strips of muslin or other soft material. Fig. 4 is a horizontal section of a portion of the tray shown in Fig. 3; and Figs. 5 and 6 show trays formed with U-shaped compartments.

Egg-boxes, in being packed for transportation, are laid on either the bottom or top, or on one or the other of the sides, and are rarely, if ever, set on one of the ends, as on the latter are secured the necessary handles and attachments for holding on the lid. The bottom of the box and the inside of the lid are covered with cushions of soft material, which prevent injury to the eggs from sudden jars or shocks on these parts of the box. Heretofore inadequate provision has been made to guard against shocks received against the sides of the box. In some cases the walls of the crate lie directly against the side, between which and the egg there is only the strip of pasteboard. In other instances, where the compartments are formed by strips intersecting each other, having extended ends, the latter being but a single ply of pasteboard, are so flexible or weak that they bend or break down when the box is laid on its side and the weight of the eggs in the crate is thrown upon them. In all such constructions frequent breakage of eggs occurs while the boxes are being handled or transported. In my improved crate these objections are guarded against, and perfect security is provided against breakage in the processes of handling or shipping or by the pulling apart of the strips and walls, as often occurs where paste or other gumming material is employed to fasten the series of compartments together.

The first part of my invention relates to the manner of folding the outer ends of the strips from which the series of egg-compartments are formed, and combining them with the ends of the intermediate walls to form strong lateral-projecting arms or supports, which will sustain and relieve the force of shocks or jars on the eggs in the crate.

A is the egg-box, and B B are its sides. C is the egg-crate, formed of the strips D and intervening walls E, which are cut so that they will fit neatly within the box between the sides. The strip of pasteboard or other suitable material D has bent outward from each end a small portion, *a*, which is placed against the side of and flush with the end of the wall E, and with the corresponding portion *a* on the next strip similarly placed on the other side of the said end, is secured to said wall by rivet or eyelet, thus forming the triple arm or support F. The strip D, by preference, is folded into an even number of compartments, which brings the portions *a* on opposite ends against different walls, thus forming the ex-

tensions F, alternately on opposite sides of the crate, which arrangement gives greater strength and firmness to said crate. The series of arms or supports F will sustain the weight of the eggs in the crate when the box is laid on its side, and at the same time they have a sufficient elasticity to relieve or break the force of any jar given to the box, so that it is next to impossible to break the eggs when packed in a tray of this construction during the process of shipping or other handling. The intermediate ends F′, alternating between and operating with the supports F, aid in sustaining the crate, and are prevented from being broken down by the said supports F.

It will be further seen that the arrangement of the strips as above set forth will bring the rear or inner side *a′* of each compartment in a series opposite to the corresponding part of the adjoining compartment of the next series, thus forming a triple wall, through which the fastening *b* is put.

It will be further seen that in the construction of my crates I dispense with the use of all gumming materials, thus avoiding the frequent pulling apart of the strips and walls by violent handling or by the effects of dampness or heat.

The compartments may be lined with any soft material, *c*, for the purpose of more perfectly protecting the eggs and preventing the "settling" of the yolk caused by the continued shaking or vibration consequent in transporting the boxes long distances. This lining may be extended over the entire surface of the strips and walls, or it may be arranged along the central line, covering that portion against which the sides of the eggs press. This lining is not essential where the eggs are to be carried but short distances. When shipped long distances and subjected to numerous handlings, this lining is invaluable in protecting the eggs.

In Figs. 5 and 6 is shown a form of crate wherein the strips D are bent into U-shaped compartments. This form of compartment cannot be employed where gumming materials are employed to attach the strips to the walls, as the surface of contact between the wall and strip is too small to hold the requisite amount of gum. Crates of this form can be made with less labor and with much more rapidity than those having rectangular compartments. In my improved method of forming the crates the same arrangement is observed, and a substantial crate is provided, whether rectangular, U-shaped, or other form of compartment be employed.

In packing the crates in the box A, the ordinary division card or diaphragm is placed between said crates.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An egg-crate formed of a series of strips, D, having a portion, *a*, on each end bent outward and fastened by rivet or eyelet to the intervening wall E, forming the lateral arms or supports F, as specified.

2. An egg-crate formed of a series of strips, D, bent into U-shaped compartments, and secured to the intermediate walls by metallic fastenings *b*, and having the lateral arms or supports F, as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WALLACE RYERSON.

Witnesses:

E. A. RYERSON,

J. W. CROMMETT.