No. 767,613. PATENTED AUG. 16, 1904.

E. L. WALKER.

KNOCKDOWN FRUIT PACKAGE.

APPLICATION FILED NOV. 18, 1903.

NO MODEL. 3 SHEETS—SHEET 1.

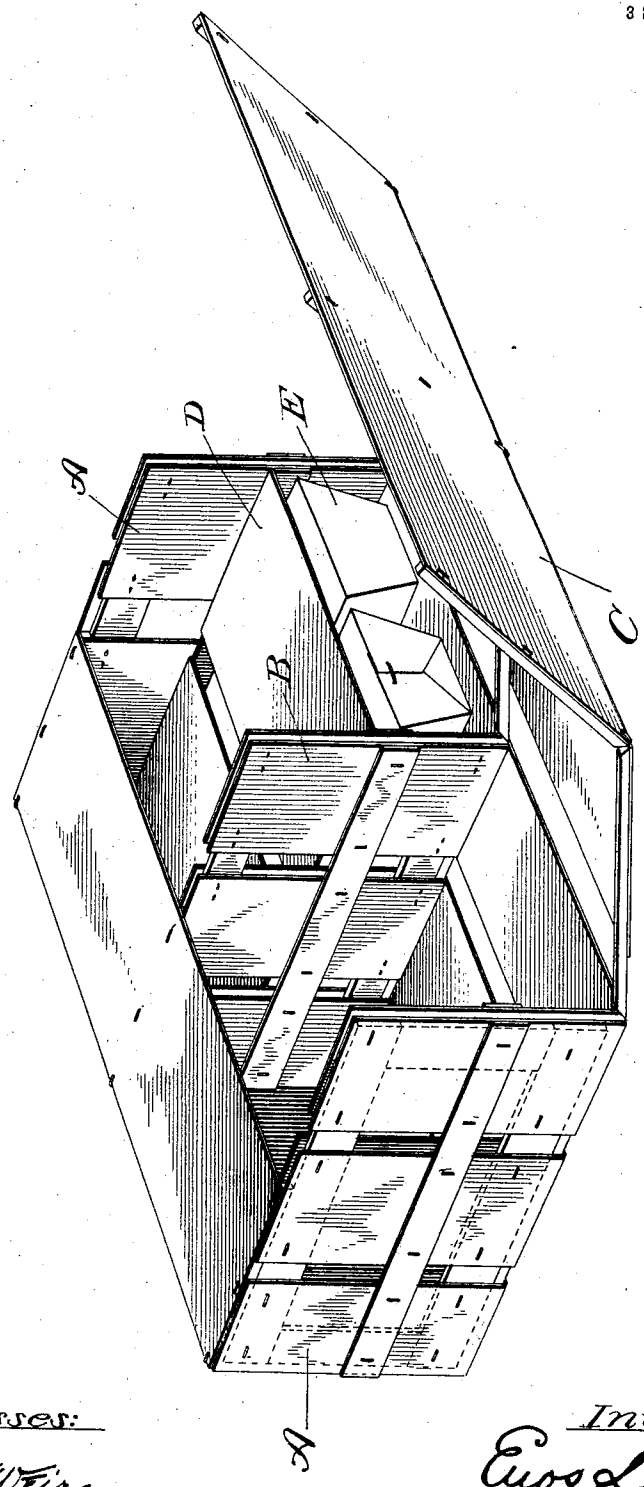


Fig. 1.

Witnesses:
Robert A. Weir
M. J. McSike

Inventor:
Enos L. Walker
By Burleigh & Durand
Attys

No. 767,613. PATENTED AUG. 16, 1904.

E. L. WALKER.

KNOCKDOWN FRUIT PACKAGE.

APPLICATION FILED NOV. 18, 1903.

NO MODEL. 3 SHEETS—SHEET 2.

Fig. 2.

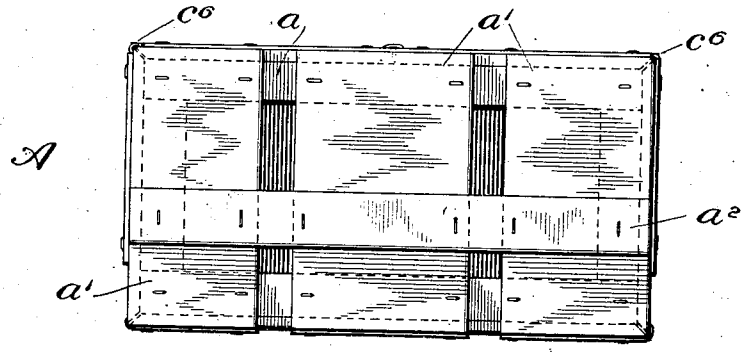
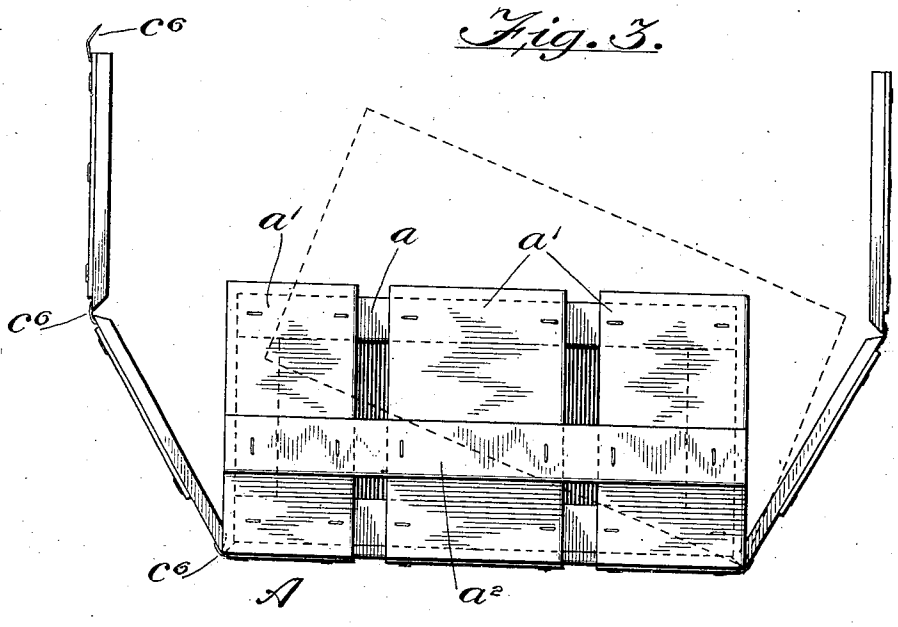


Fig. 3.



Witnesses
Robert F. Weir
M. J. McGuire

Inventor
Enos L. Walker
By Bakewell & Durand
Attys

No. 767,613. PATENTED AUG. 16, 1904.

E. L. WALKER.

KNOCKDOWN FRUIT PACKAGE.

APPLICATION FILED NOV. 18, 1903.

NO MODEL. 3 SHEETS—SHEET 3.

Fig. 4.

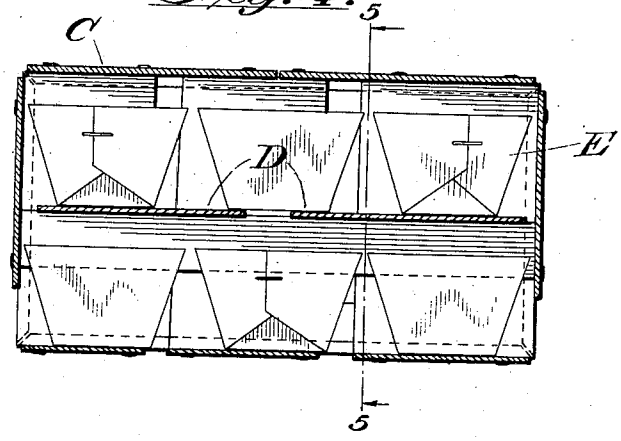


Fig. 5.

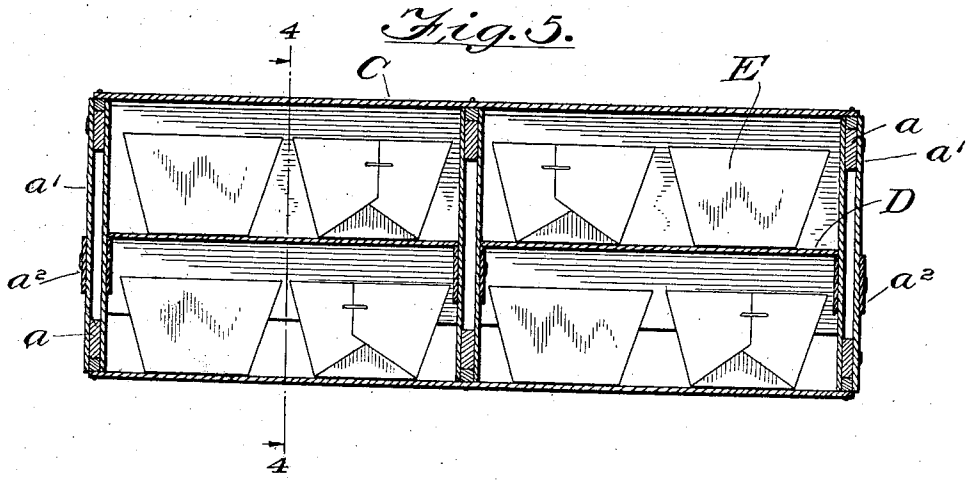
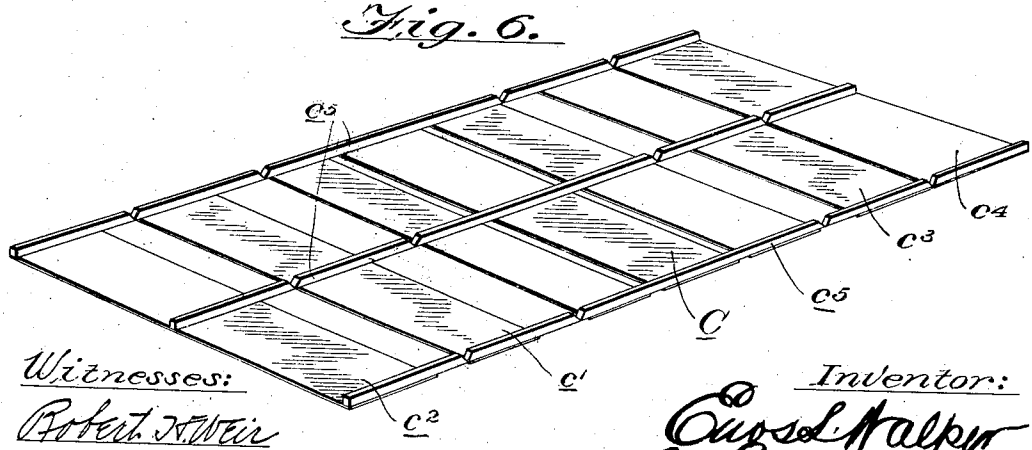


Fig. 6.



Witnesses:
Robert F. Weir
M. J. McGirr

Inventor:
Eugene L. Walker
By Bakewell & Duncan
Attys.

No. 767,613. Patented August 16, 1904.

UNITED STATES PATENT OFFICE.

ENOS L. WALKER, OF ST. LOUIS, MISSOURI.

KNOCKDOWN FRUIT-PACKAGE.

SPECIFICATION forming part of Letters Patent No. 767,613, dated August 16, 1904.

Application filed November 18, 1903. Serial No. 181,747. (No model.)

To all whom it may concern:

Be it known that I, ENOS L. WALKER, a citizen of the United States of America, and a resident of St. Louis, Missouri, have invented a certain new and useful Improvement in Knockdown Fruit-Packages, of which the following is a specification.

My invention contemplates an improved form of knockdown fruit-package for shipping berries or other kinds of fruit, and involves, preferably, a knockdown crate composed of end and intermediate walls having grooved or channeled edges, both at top and bottom and at the sides, and a flexible member or member composed of hinge-connected sections adapted to be folded about or made to conform to the rectangular outline of said walls and provided with tongues or projections adapted to engage the grooves in the edges of said walls.

Generally stated, the object of my invention is to provide a simple and improved form of knockdown fruit-package, to provide a construction which will tend to reduce the cost of manufacture, to provide a construction which will combine simplicity and lightness with strength and rigidity, to provide an improved form of knockdown crate which can be sold and satisfactorily shipped in a dismembered or knockdown condition, and also to provide certain details and features of improvement tending to increase the general efficiency and serviceability of a knockdown crate or fruit-package of this particular character.

The nature and advantages of my invention will, however, hereinafter more fully appear.

In the accompanying drawings, Figure 1 is perspective of a knockdown fruit-package involving the features of my invention, the crate being shown partially open and one compartment of the crate being shown partially filled with berry-boxes. Fig. 2 is an end view of the said package, showing the crated in a closed condition. Fig. 3 is a view similar to Fig. 2, but showing the crate open above and at each side. Fig. 4 is a cross-section of the crate in a closed condition. Fig. 5 is a longitudinal section showing the crate closed. Fig. 6 is a perspective of the flat and flexible member or member composed of swingingly-connected sections, which constitutes the covering or enveloping medium of the crate and which when applied provides the top and bottom and sides of the crate.

As thus illustrated, my improved fruit-package comprises end and intermediate walls A and B, the inclosing or enveloping member C, and the thin boards D, which latter are employed as the upper floor of the crate. The said end and intermediate walls are each of a built-up character—that is to say, each wall consists of a plurality of layers or strips secured flatwise together and preferably with the grain of one layer running at right angles to the grain of the other layer. For example, the wall A, as shown in Figs. 1, 2, and 3, comprises the rectangular frame a, the thin strips or boards a', applied crosswise and to each side of said frame, the grain of the boards a' extending vertically, and these boards being of a length and width to extend slightly beyond the edges of the said frame. In this way each wall is provided with grooved or channeled edges both at top and bottom and at the sides, said grooves being of some depth and corresponding in width to the thickness of the frame a. With this construction the walls combine lightness with strength and rigidity, and, furthermore, they are not liable to warp or shrink out of shape. If desired, each wall can be provided on each surface with a strengthening or reinforcing strip a^2, and these strips, which occur on the inner surfaces of the end walls and on both surfaces of the intermediate wall, may serve as supporting-ledges for the boards D.

The inclosing or enveloping member C comprises five swingingly or hinge connected sections c, c', c^2, c^3, and c^4. It will be observed that each section comprises one or more thin strips of wood or other suitable material secured to the end and intermediate narrow strips. These end and intermediate strips have their ends preferably beveled, so as to permit the sections to swing relatively to each other when they are all connected up in the manner shown in Fig. 6. Thus constructed, the inclosing or enveloping member

C is provided with a plurality of tongues or ridges c^5, these tongues or ridges being divided up into hinge-connected sections corresponding in length to the different sections of which the member C is composed. The flat strips and the narrow strips of which the member C is composed can be secured together in any suitable manner; but as a matter of further and special improvement they are secured together by staples, and the junctions between the sections are provided with staples c^6, these staples c^6 spanning the joints, and thus serving as hinges. In other words, the staples c^6 are sufficiently flexible to permit the sections of the member C to be swung relatively to each other quite a number of times and as much as is necessary before breaking. It will be seen that it is the beveled ends of the sections of the tongues c^5 which permit the member C to be applied and folded about the intermediate and end walls A and B. It is also preferable to employ staples for securing together the different pieces or strips of which the end and intermediate walls A and B are composed.

When applied, the inclosing or enveloping member C folds up in such manner as to fit the top and bottom and sides of the end and intermediate walls A and B, as shown in the drawings, the different sections of the tongues c^5 fitting and engaging in the grooves in the top and bottom and side edges of the said walls. These tongues can fit within the grooves in such manner as to render it not absolutely necessary to employ nails or any other fastening devices for securing the cover portions or sections c^2 and c^4 in place upon the top of the crate. It is obvious, however, that nails or other fastening devices can be inserted through the cover portions c^2 and c^4 and into the top edges of the end and intermediate walls, so as to securely close the crate, if such is desired.

Berry-boxes E of any suitable form or construction can be placed within the compartments provided in the crate, the boxes being arranged in upper and lower tiers, the lower tiers of the two compartments resting on the section c of the enveloping member and the boxes of the upper tiers resting on the upper floor-pieces D, as shown in Figs. 1, 4, and 5.

The knockdown crate thus constructed is simple, comparatively cheap to manufacture, and is comparatively light and strong. The construction tends to prevent the different parts from warping or shrinking out of shape and renders the completed article very satisfactory in use. Comparatively few staples or other fastening devices are necessary for securing the different parts together, and, as previously explained, only one staple is necessary at each joint or junction between any two sections of the tongues c^5. The crate can be sold and satisfactorily shipped in a dismantled or knockdown condition.

In my improved construction it will be seen that the tongues c^5 are secured to the inner surface of the enveloping member C and that consequently these tongues are adapted to engage in the grooves formed between the top and bottom and side edges of the outer layers of strips of which the transverse walls A and B are composed. In other words, these transverse end and intermediate partitions or walls are each composed of outside and intermediate strips or layers, the intermediate strips or layers being of sufficient thickness and positioned far enough back from the edges of the outside strips or layers to provide each wall as a whole with top and bottom and side grooves adapted to receive the tongues provided on the inner surface of the flexible enveloping member.

What I claim as my invention is—

1. A knockdown fruit-package comprising end and intermediate walls having their top and bottom and side edges provided with grooves, and an inclosing or enveloping member, said inclosing or enveloping member being composed of swingingly-connected sections provided on the inside with tongues adapted to engage the said grooves.

2. A knockdown fruit-package comprising end and intermediate walls having their top and bottom and side edges provided with grooves, each wall consisting of a rectangular frame having flat strips secured to its sides, and an inclosing or enveloping member composed of a plurality of swingingly-connected sections provided on the inside with projections adapted to engage said grooves.

3. A knockdown fruit-package comprising a plurality of vertical walls having their top and bottom and side edges provided with grooves, and an inclosing or enveloping member provided on the inside with tongues adapted to engage said grooves.

4. A knockdown fruit-package comprising a plurality of walls having their top and bottom and side edges provided with grooves, and an inclosing or enveloping member composed of swingingly-connected sections provided with tongues adapted to engage said grooves, each joint or junction between two tongue-sections being provided with a single staple adapted to act as a hinge.

5. A knockdown receptacle comprising a plurality of walls having their top and bottom and side edges provided with grooves, and an inclosing or enveloping member provided on the inside with tongues adapted to engage said grooves.

6. A knockdown fruit-package comprising a plurality of walls having their top and bottom and side edges provided with grooves, each wall consisting of outer and intermediate strips of wood secured together by staples, and an inclosing or enveloping member composed of sections provided with tongues adapted to engage said grooves, the said sec-

tions being swingingly connected together by staples, a single staple being applied to each joint between two tongue-sections.

7. A knockdown fruit-package comprising removable vertical walls, and a flexible enveloping member, said vertical walls having edges provided with grooves, and said enveloping member consisting of parallel strips connected together by tongues adapted to engage said grooves, and said tongues being made in sections having their ends connected by staples serving as hinges.

8. A knockdown fruit-package comprising a plurality of rectangular vertical walls, and a flexible enveloping member adapted to be folded about the said vertical walls to provide the top and bottom and side walls of said package, the said vertical walls having edges provided with suitable grooves, and said enveloping member being provided on its inner surface with tongues adapted to engage said grooves.

9. A knockdown fruit-package comprising removable vertical walls, and a flexible enveloping member, said vertical walls having edges provided with grooves, and said enveloping member consisting of parallel strips connected together by tongues extending at right angles to said strips and adapted to engage said grooves.

10. A knockdown fruit-package comprising a plurality of detachable and rectangularly-shaped vertical walls, each vertical wall consisting of outside and intermediate strips of wood, the intermediate strips being arranged at right angles to the outside strips, and a flexible enveloping member adapted to be folded about the said vertical walls to provide top and bottom and side walls for the package, said flexible enveloping member being provided with narrow strips adapted to engage between the top and bottom and side edges of the outside strips of said vertical walls.

Signed by me at Chicago, Cook county, Illinois, this 2d day of November, 1903.

ENOS L. WALKER.

Witnesses:

S. B. CHABOWSKI,

WM. A. HARDERS.