No. 892,146. PATENTED JUNE 30, 1908.

E. E. FLORA.

BOX.

APPLICATION FILED AUG. 19, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

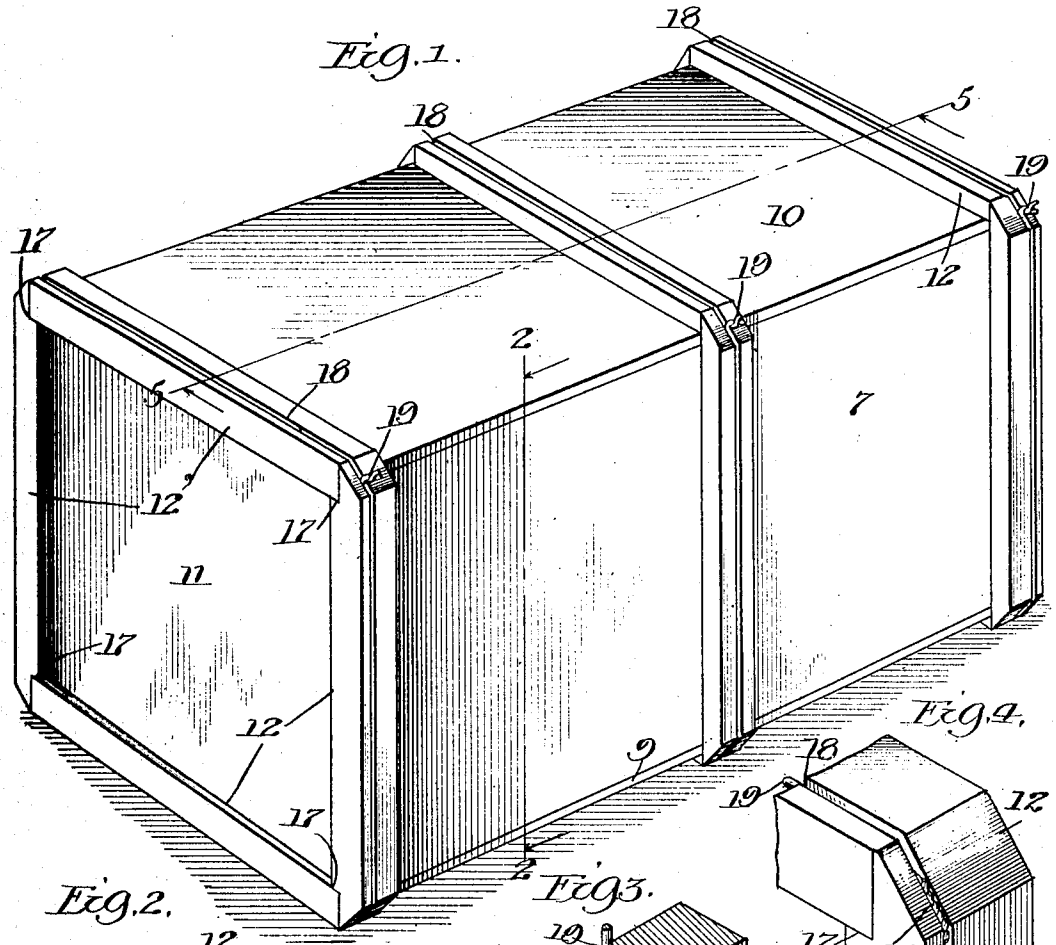


Fig. 4.

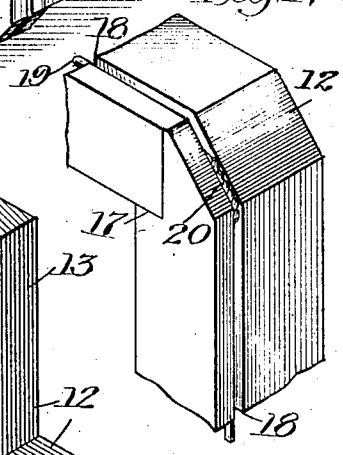


Fig. 2.

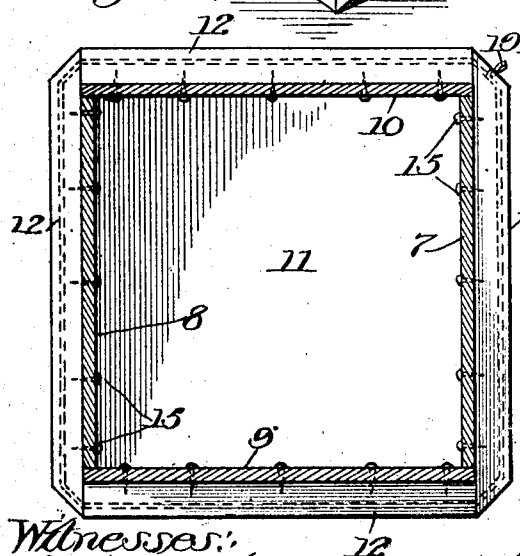


Fig. 3.

Witnesses:
Ou. Dennis
R. A. Schaefer.

Inventor:
Ellsworth E. Flora:
by Dyrenforth, Lee, Chritton & Wilkes,
Atty.

No. 892,146. PATENTED JUNE 30, 1908.

E. E. FLORA.

BOX.

APPLICATION FILED AUG. 19, 1907.

2 SHEETS—SHEET 2.

Fig. 5.

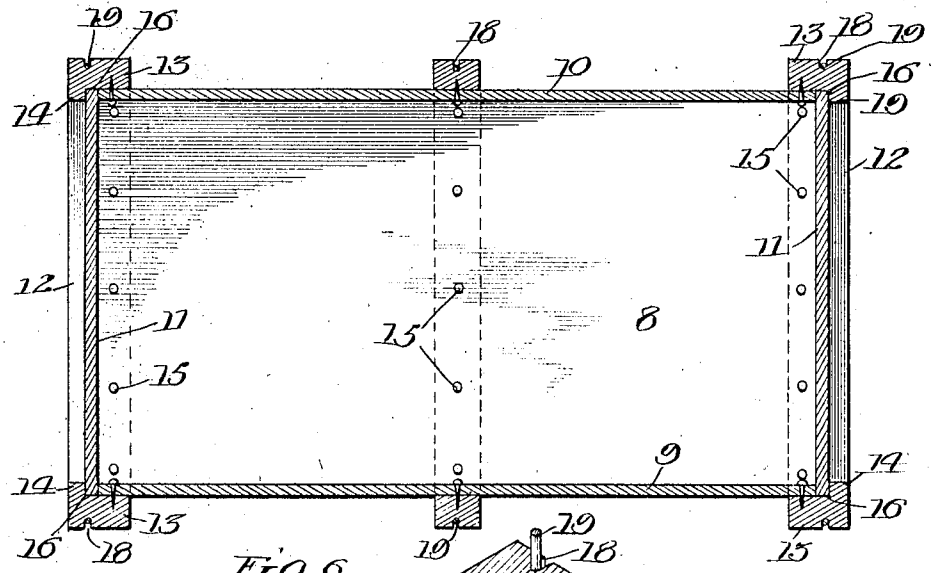
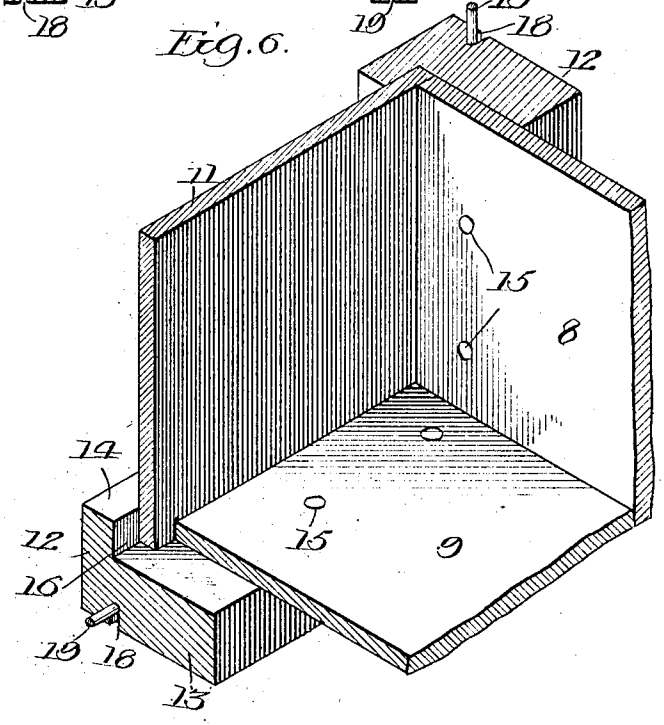


Fig. 6.



Witnesses:
O. M. Kennedy
R. A. Schaefer.

Inventor
Ellsworth E. Flora.
by Dyrenforth, Lee, Christy & Wiles,
Attys.

UNITED STATES PATENT OFFICE.

ELLSWORTH E. FLORA, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO W. E. ROTHERMEL, OF CHICAGO, ILLINOIS.

BOX.

No. 892,146. Specification of Letters Patent. Patented June 30, 1908.

Application filed August 19, 1907. Serial No. 389,141.

To all whom it may concern:

Be it known that I, ELLSWORTH E. FLORA, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Boxes, of which the following is a specification.

My invention relates to an improved construction in the class of wire-bound boxes made of sheet-material such as veneer, paper board, and the like.

In the accompanying drawings, Figure 1 is a perspective view of my improved box; Fig. 2, a section taken at the line 2—2 on Fig. 1 and viewed as indicated by arrows; Fig. 3, a perspective view of a broken portion of two of the jointed battens employed in the construction and to which the binding wire is applied, the view showing the inner rabbeted faces of the battens; Fig. 4, a similar view of the same batten-sections, presenting their outer surfaces, to show the manner, permitted by the construction, of shielding the fastened ends of the binding-wire; Fig. 5, a section taken at the line 5—5 on Fig. 1 and viewed as indicated by arrows, and Fig. 6, a broken perspective view showing an inner corner-portion of the box-structure.

The sides 7 and 8, bottom 9 and lid or top 10 are formed of the thin sheet-material referred to, preferably, (though not necessarily) in separate sheets; and the ends 11, 11 are preferably formed of similar material. On opposite ends of each section or sheet forming a side, the bottom and the lid, are fastened similar battens 12, 12 of heavier material. Each of these battens is formed of a rabbeted inner side affording the wider section 13 and the flange-section 14. The under portions of the sheets are fastened, as by tacking (the tacks being indicated at 15) to the inner surfaces of the batten-sections 13 in a manner to leave between the extremities of the sheets and the flanges 14 groove-forming spaces 16 for a purpose hereinafter explained, and the side-battens may be rabbeted on their ends, as represented at 17 (Fig. 1) to form joints with the top and bottom battens; though these joints may be formed in any other suitable manner. In each batten 12, and preferably in its outer side, as shown, is provided a longitudinal groove 18 to receive the binding-wire 19, the width of the groove being by preference such as to cause the wire to fit tightly within it. It is also desirable to provide each sheet externally with an intermediate transverse batten, to which the sheet may be fastened by tacks 15, as represented, this central batten tending to prevent warping of the material of the sheet and being provided in its outer side with a longitudinal groove 18, like that in each batten 12, for receiving binding-wire 19.

The bottom, side and lid sections of the box may be furnished to the user in the form of a blank with the sections tied together by the wires tightly fitting in the grooves of the battens on each section, or the boxes may be so furnished in complete knock down condition, without wiring, either way facilitating shipment. When furnished in the first-named form, all that is required to assemble a box is to bend the wires between sections 7 and 9, inclusive, to reduce the latter to box form, meantime inserting the ends 11 into the grooves 16, wherein they are rigidly confined between the batten-flanges 14 and sheet-ends. When furnished in the other form referred to the sections 7 to 9, inclusive, may be assembled by arranging them in box-form to produce the body of the box and in so assembling these sections the ends are introduced into and confined in the grooves 16; and when the parts are assembled the binding-wires may be applied by stringing or "rolling" them into the batten-grooves 18. The ends of each wire protrude at the edges of the lid 10 and adjacent side 7, where they may be twisted together, as represented; and the respective grooves 18 afford a receptacle for the twisted wire-ends by enabling them to be bent into the grooves and shielded thereby, as represented at 20 in Fig. 4, to prevent them from protruding and the consequent tendency to lacerate the hands and tear the clothing of persons handling the box.

Among the further advantages of my improved construction of this variety of box may be mentioned the economy of constructing it in saving stapling of the battens, it being susceptible of shipment in knockdown condition and adaptable to be readily assembled by the user without requiring the use of any tools in the assembling; and the end-battens on the outside of the box elevate it from contact with the floor, facilitating the matter of taking hold of it and preventing otherwise undesirable contact with the floor.

What I claim as new, and desire to secure by Letters Patent, is—

1. A wire-bound box having its body-portion formed of sheet-material and provided with ends, end-battens provided with rabbeted inner sides, and with the ends of the sides forming the body-portion fastened to said inner sides and forming at their ends with said battens box-end-confining grooves said ends being seated in said grooves, and binding-wires secured about said battens.

2. A wire-bound box having its body-portion formed of sheet-material and provided with ends, end-battens provided with rabbeted inner sides, and with the ends of the sides forming the body-portion fastened to sections of said inner sides and the other sections thereof affording flanges forming with the ends of said body-portion box-end-confining grooves said ends being seated in said grooves, and binding-wires secured about said battens.

3. A wire-bound box having its body-portion formed of sheet-material and provided with ends, end-battens provided with longitudinal wire-grooves in their outer sides and with rabbeted inner sides, the ends of the sides forming the body-portion being fastened to sections of said inner sides and the other sections thereof affording flanges forming with the ends of said body-portion box-end-confining grooves said ends being seated in said grooves and binding wires confined in the wire grooves.

4. A wire-bound box having its body-portion formed of sheet-material and provided with ends, end-battens provided with longitudinal wire-grooves in their outer sides and with rabbeted inner sides, the ends of the sides forming the body-portion being fastened to sections of said inner sides and the other sections thereof affording flanges forming with the ends of said body-portion box-end-confining grooves said ends being seated in said grooves, intermediate battens about the exterior of the body-portion provided with longitudinal wire-grooves, and binding-wires confined in the grooves in the outer batten-sides.

ELLSWORTH E. FLORA.

In presence of—
RALPH A. SCHAEFER,
W. T. JONES.