H. E. BROCK & E. Z. MYRE.

BOX.

APPLICATION FILED JULY 16, 1914.

1,155,206.

Patented Sept. 28, 1915.

Fig. 1.

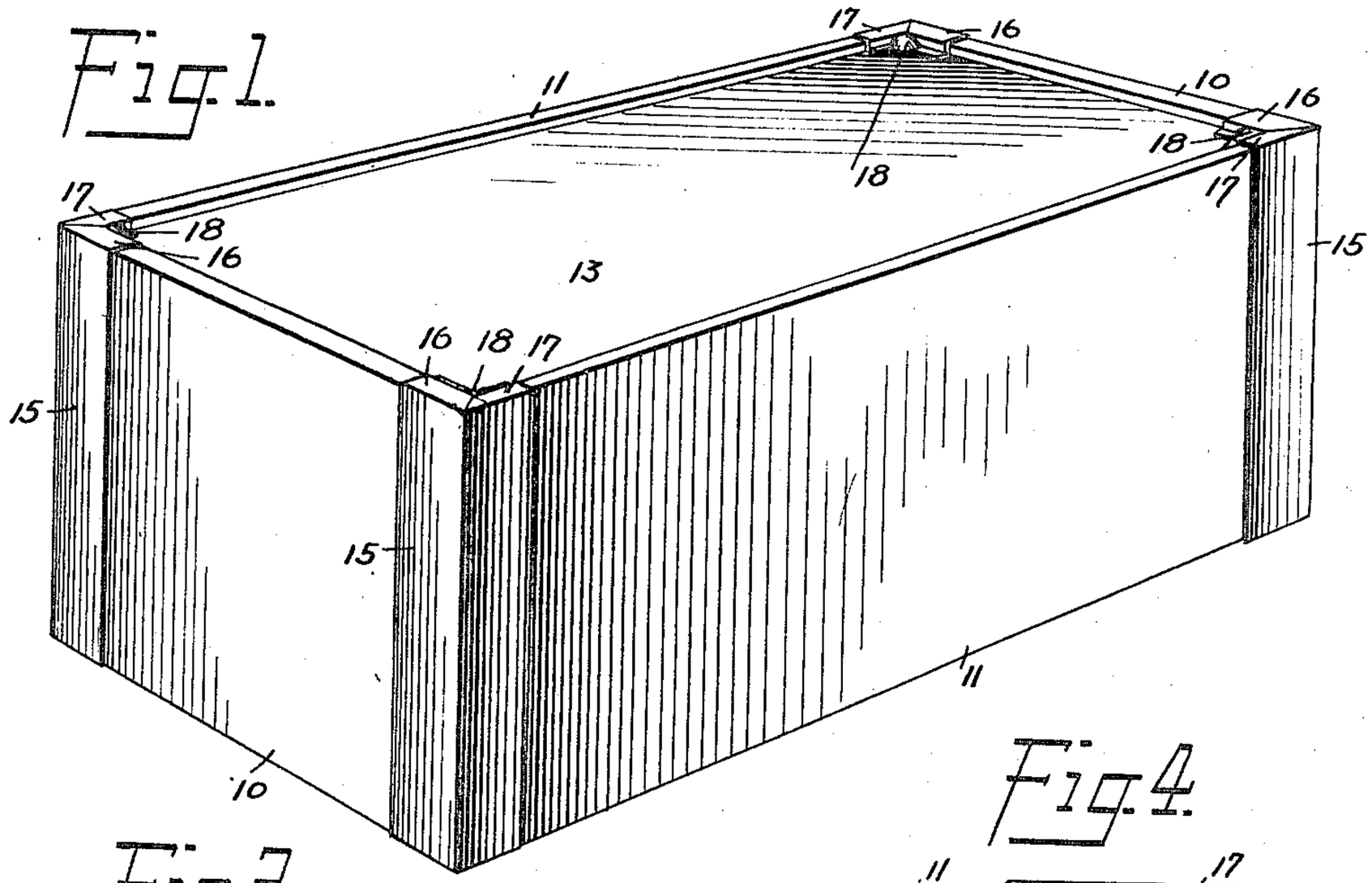


Fig. 2.

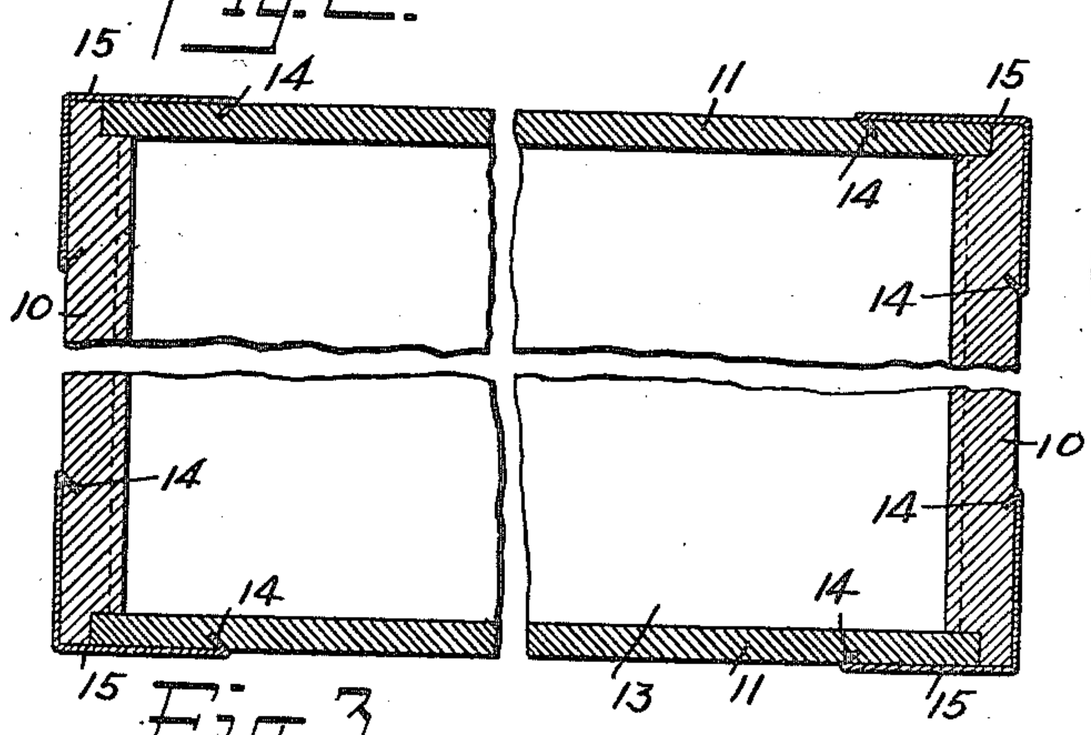


Fig. 3.

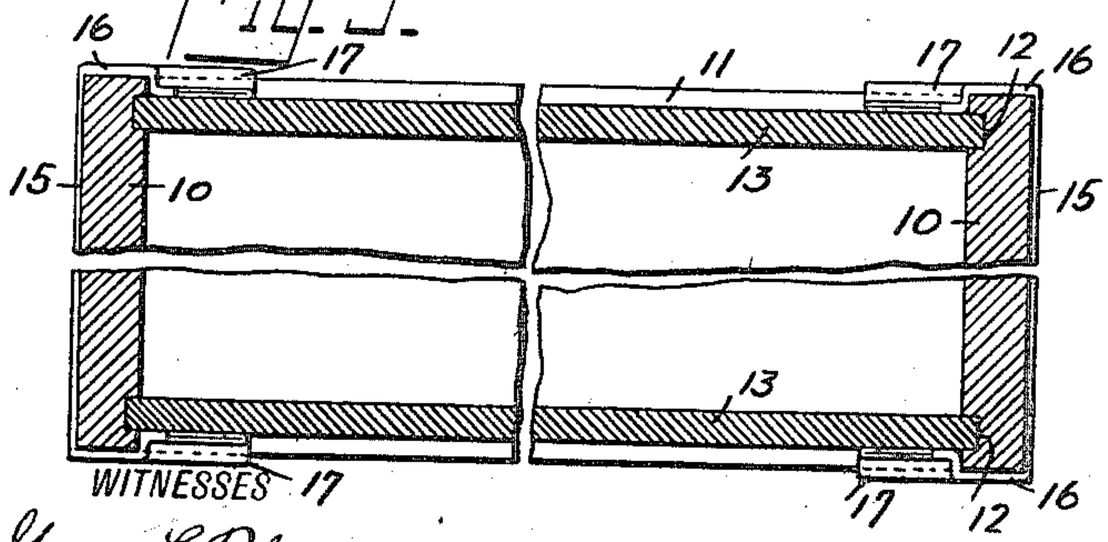


Fig. 4.

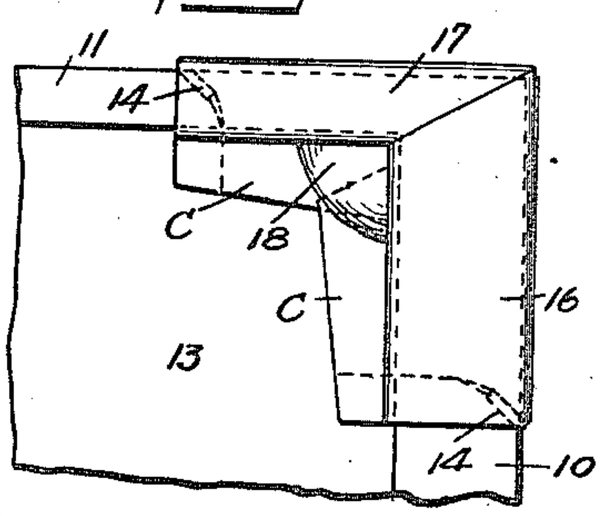
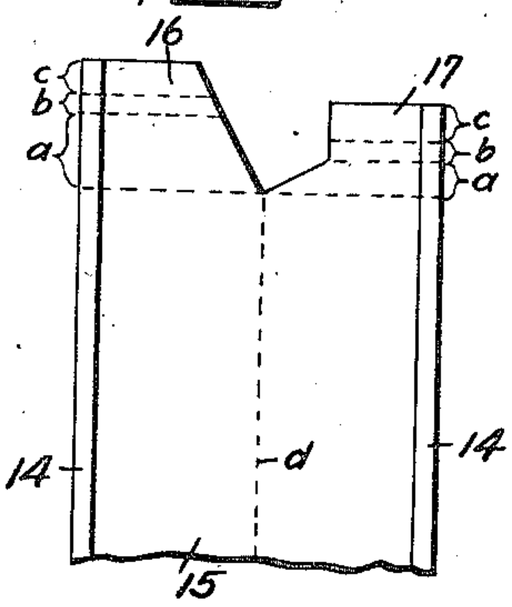


Fig. 5.



WITNESSES

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BOX.

1,155,206. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed July 16, 1914. Serial No. 851,371.

To all whom it may concern:

Be it known that we, HENRY E. BROCK and EDWARD Z. MYRE, both citizens of the United States, and residents of Hancock, in the county of Houghton and State of Michigan, have invented a new and Improved Box, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to reduce the necessary labor of joining; to strengthen the construction; to increase the wearing resistance; and to provide a box which may be readily and quickly dismantled or knocked down for return shipments of the box.

Drawings.—Figure 1 is a perspective view of a box constructed and arranged in accordance with the present invention; Fig. 2 is a horizontal section of the same, showing the construction as separated and contracted; Fig. 3 is a vertical section of the same, showing the structure as separated and contracted; Fig. 4 is a detail view on an enlarged scale, showing in top plan a corner fragment of the box when constructed and arranged in accordance with the present invention; Fig. 5 is a detail view showing an end fragment of one of the armor strips employed in joining the box when constructed and arranged in accordance with the present invention.

Description.—When turning out the lumber from which the box is constructed, the ends 10 are rabbeted on the vertical sides to form seats for the side boards 11. Adjacent the upper and lower edges, said ends are routed to form grooves 12, into which may be slipped the top and bottom boards 13. The side boards and ends are each provided with suitable saw-cuts to receive the hooked edges 14 with which the metal corner strips 15 are provided, as shown best in Fig. 2 of the drawings.

The corner strips 15 are principally relied upon for joining the side boards 11 to the ends 10. The top and bottom boards 13 are joined to the end boards 10 by being inserted in the grooves 12 formed therein. To hold the strips 15 in service relation, each strip is provided with relatively wide and extensions 16 and relatively narrow end extensions 17. When the strips 15 are adjusted to hold the boards 11 and the ends 10, said extensions are turned over the exposed edges of said boards and ends, to the position best shown in Fig. 4 of the drawings. To do this neatly, the extensions are bent as indicated by the dotted lines in Fig. 5 of the drawings. It will be observed that the extension 17 as shown in Figs. 4 and 5 of the drawings, is bent to form a relatively narrow surface *a*, which crosses the exposed edge of the side board 11; a short area *b*, which covers the inner side of the board 11, above the level of the top and bottom sides 13; and an area *c*, which rests upon the surface of the adjacent top or bottom board 13. The areas *b* and *c* of the extensions 16 coincide with the areas *b* and *c* of the extensions 17. The area *a* of the extension 16, however, is wider than the area *a* of the extension 17, for the reason that the area of the extension 16 crosses a relatively thicker end board 10. The area *c* of the extension 17 is squared, so that when folded into position as shown best in Fig. 4 of the drawings, the corner of said area rests under the area *c* of the extension 16. This arrangement permits the use of a body of solder 18. This solder prevents the subsequent disarrangement of the extensions 16 and 17, without which, it will be observed, it is impossible to move the strips 15 from the service relation thereof to the board elements of the box.

Having the lumber formed as described, and the metal strips, the operation of constructing the box is as follows:—The bottom board is adjusted in the grooves 12 provided therefor in the ends 10. The boards 13 are then placed in the rabbets provided in the end boards to receive them. The metal strips having been bent on the line *d* shown in Fig. 5 of the drawings, to an angle of 90°, and the edges 14 having also been properly shaped, the strip is lifted above the joined ends and side boards, and the hooked edges 14 thereof are then introduced into the saw-cuts in said ends and boards provided to receive said hooks. Prior to moving the strips 15 the entire height of the box, the structure is reversed, and the top board 13 is inserted in the grooves 12 provided in the top edges of the ends 10, one of the side boards 11 being receded to expose said grooves. When the top board 13 is thus housed in the grooves 12, the extensions 17 and 16 in the order named, at both ends of the strips 15, are overturned on the edges of the side boards 11 and the ends 10. Having folded the extensions in the manner indicated, the solder 18 is placed to lock the adjacent edges of the areas *c* of the adjacent

extensions, as shown best in Fig. 4 of the drawings. The box is now closed and ready for shipment. When it is desired to open the box, this is accomplished by separating the extensions 16 and 17 of two, at least, of the strips 15. This distending of the extensions permits the retraction of the strips 15 and the side board 11 adjacent thereto. When the grooves 12 holding the top board 13 are exposed, said board is drawn outward, affording access to the interior of the box. If the box is to be returned to the shipper, the various strips 15 are removed from engagement with the ends 10 and boards 11, which may then be formed into a flat package, while, if desired, the strips may be nested in shape for crating, thus effecting a material saving in the cost of transportation.

While the construction herein shown and described has recognized the employment of wood for the sides and ends, it will be understood that the materials from which the boxes are constructed may be varied to include metal, cement and other suitable materials.

We claim:

A box comprising, a plurality of end boards transversely grooved adjacent opposite edges to receive therein top and bottom boards, said end boards being rabbeted adjacent the vertical edges to receive side boards; a plurality of top and bottom boards fitting in said grooves; a plurality of side boards fitting within said rabbets, said side boards and end boards forming a standing edge encircling said top and bottom boards; a plurality of square-angled metal strips enfolding the vertical corners of said end boards to cover the joints thereof with said side boards, said strips having bifurcated terminals folded over said standing edges of said end and side boards, and lapped each on the other and on said top and bottom boards; and means for rigidly uniting the bifurcated terminals of said strips.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HENRY ERNEST BROCK.
EDWARD ZENOFHIL MYRE.

Witnesses:
I. JOHN TRUSCOTT,
JOB J. EIHKEIN.