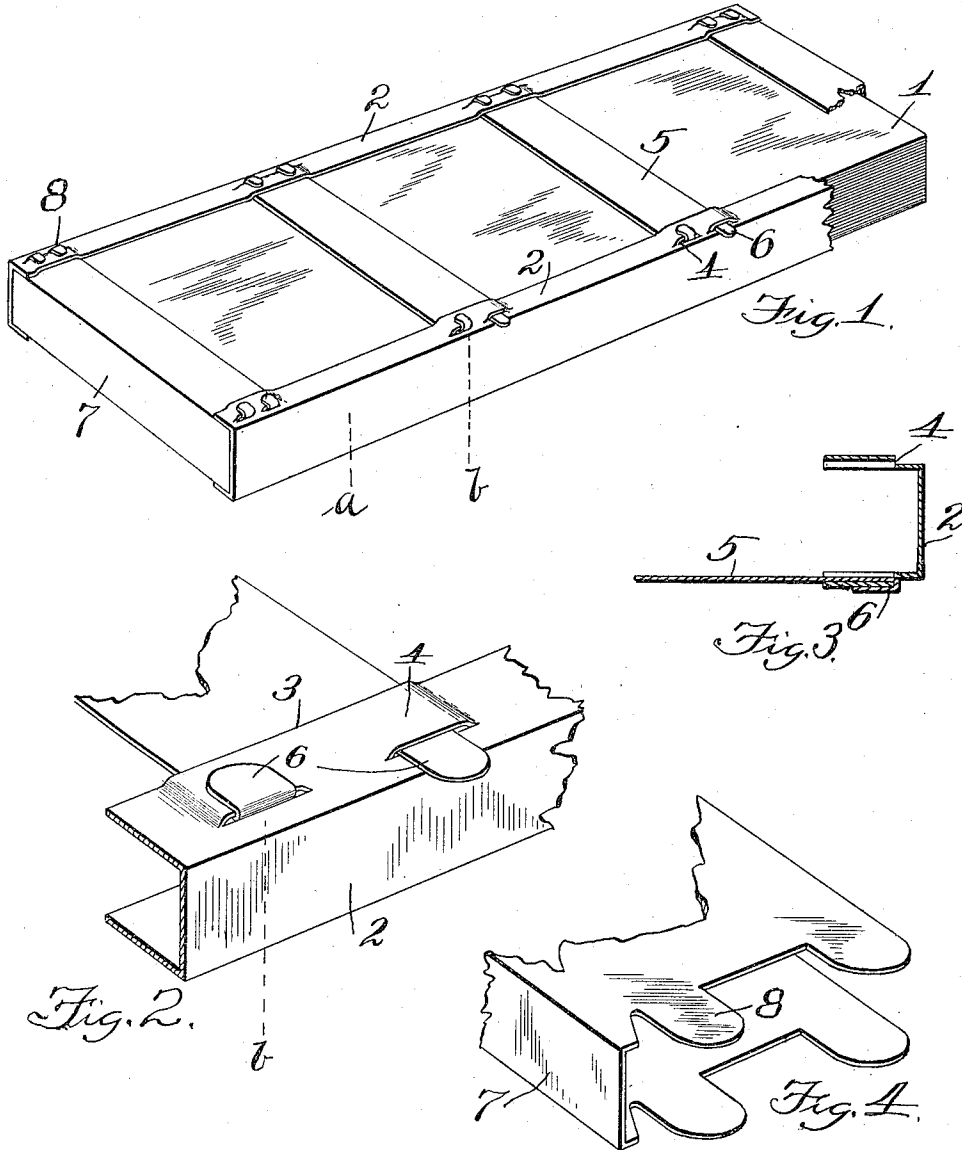


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 METALLIC CRATE.  
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1,146,149.

Patented July 13, 1915.



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# UNITED STATES PATENT OFFICE.

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## METALLIC CRATE.

1,146,149.

Specification of Letters Patent.

Patented July 13, 1915.

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To all whom it may concern:

Be it known that I, JONATHAN ROY FREEZE, a citizen of the United States, residing at Middletown, Butler county, Ohio, have invented certain new and useful Improvements in Metallic Crates, of which the following is a specification.

In the shipping of packs of material in sheet form, packs of sheet iron for instance, the edges and corners of the sheets composing the pack are liable to injury by careless handling unless the pack is carefully crated, which crating is of high importance where the sheets are nicely trimmed or are of comparatively high value. The crating of packs of material is especially necessary where shipment is by water, and it happens that the usual crating, being of comparatively thick wood adds very considerably to the bulk of the package, and increases the cost of the transportation charges accordingly.

My present improvement in metallic crates secures a maximum of protection for the pack, along with a minimum addition to the bulk of the package.

My improved metallic crate will be readily understood from the following description taken in connection with the accompanying drawing in which:

Figure 1 is a perspective view of a pack of sheets crated according to my improvement: Fig. 2 a perspective view of a portion of one of the side rails of the crate, a section appearing in the plane of line *a* of Fig. 1: Fig. 3 a similar view with a section appearing in the plane of line *b* of Fig. 1: and Fig. 4 a perspective view of one end of one of the end-pieces of the crate.

In the drawing:—1, indicates a pack of sheets, sheet iron for instance; 2, a side rail formed of sheet metal bent transversely into channel form, the dimensions of this channel being such that the rail will fit upon the edge of the pack with such closeness as is consistent with reasonable rapidity in assembling the crate upon the pack, there being one of these rails at each side edge of the pack, and the length of the rails being somewhat in excess of the length of the pack; 3, a longitudinal series of housings outwardly embossed from the flanges of the rails, there being as many of these housings as judgment dictates, a housing being disposed very near each end of the

rail, the intermediate housings being, preferably, equally spaced apart, the housings forming recesses at the inner surfaces of the flanges of the rails; 4, mortises at the outer extremities of the housings; 5, cross-pieces lying across the faces of the pack and extending from rail to rail and projecting into the recesses of the housings; 6, tongues formed on the ends of the cross-pieces and projecting outwardly through the mortises in the housings and adapted to be bent inwardly and down over the tops of the housings; 7, channel-shaped end-pieces, similar in cross-section to the rails and engaging the ends of the pack, the ends of the flanges of these end-pieces projecting into the end housings of the rails, while the ends of the webs of the end-pieces project into the rails and abut against the webs of the rails; and 8, tongues on the ends of the flanges of the end-pieces and adapted to engage the end housings of the rails similar to the engagement of the ends of the cross-pieces 5 with the housings.

The rails, end-pieces and cross-pieces having been assembled upon the pack, the tongues 6 are bent out and back and down upon the tops of the housings, thus forming a substantial protecting crate for the pack of sheets, and a crate which adds very little to the weight and bulk of the package. The crate is opened by straightening out the tongue.

The crate may have its components assembled directly upon the pack, or, if desired, the crate may have its components almost completely assembled and the tongues bent before the contents are placed within it, one of the rails being omitted from the assemblage until the pack has been placed within the crate, after which the final rail may be applied and secured by the bending of the appropriate tongues.

I claim:—

1. A metallic crate comprising, metallic side rails in channel form adapted to engage the edges and top and bottom of the pile of sheets to be crated, outwardly embossed housings at each end of the flanges of said rails, mortises in the outer walls of each of the housings, metallic end pieces in channel form extending from between the ends of the flanges of one side rail to between the ends of the flanges of the opposite side rail, and tongues formed upon the ends of the flanges

of the end pieces and adapted to engage said mortises and be bent inwardly over the tops of said housings, combined substantially as set forth.

5 2. A metallic crate comprising, metallic side rails in channel form adapted to engage the edges and top and bottom of the pile of sheets to be crated, outwardly embossed housings at each end of the flanges of said  
10 rails, mortises in the outer walls of each of the housings, metallic end pieces in channel form extending from between the ends of the flanges of one side rail to between the  
15 tongues formed upon the ends of the flanges

of the end pieces and adapted to engage said mortises and be bent inwardly over the top of said housings, housings with mortises in the top and bottom flanges of the side rails at points between said end pieces, and cross- 20 pieces having their ends engaging within said last-mentioned housings and having tongues engaging their mortises and adapted to be bent over the tops of said housings, combined substantially as set forth.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."