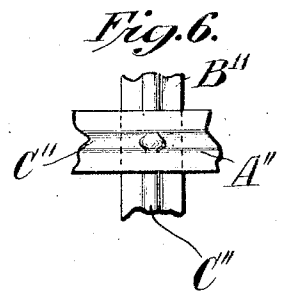
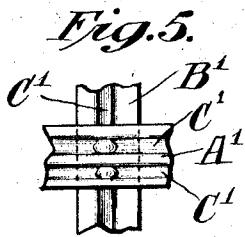
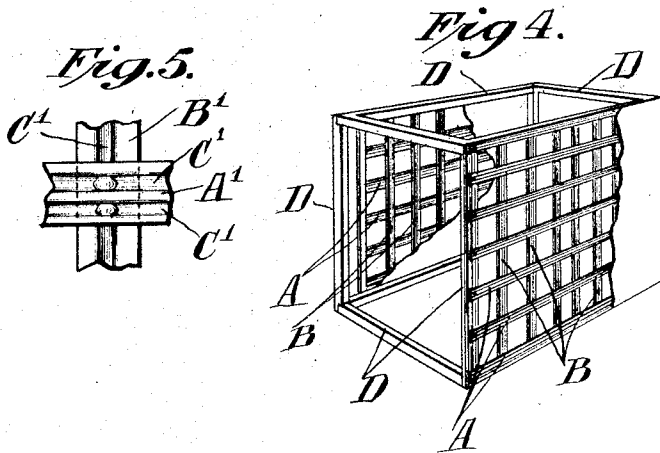
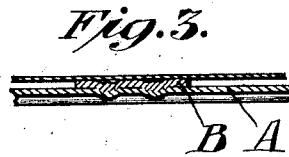
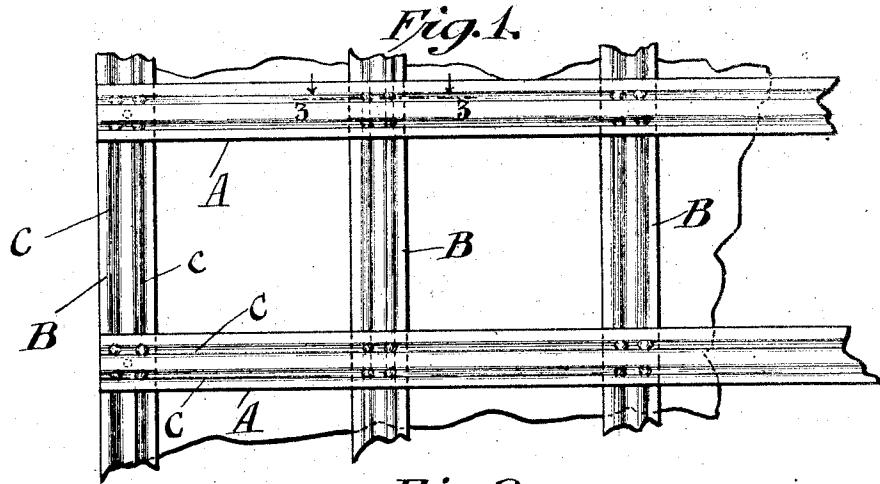


L. S. LACHMAN.
 FRAME FOR PACKING BOXES.
 APPLICATION FILED OCT. 21, 1908.

1,044,667.

Patented Nov. 19, 1912.



Attest:
W. Mitchell
Frank E. Lachman

Inventor:
Laurence S. Lachman
 by *Dickinson, Brown, Pargenier & Maltby*
 Attys

UNITED STATES PATENT OFFICE.

LAURENCE S. LACHMAN, OF NEW YORK, N. Y., ASSIGNOR TO UNIVERSAL ELECTRIC WELDING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

FRAME FOR PACKING-BOXES.

1,044,667.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed October 21, 1908. Serial No. 458,898.

To all whom it may concern:

Be it known that I, LAURENCE S. LACHMAN, a citizen of the United States, and a resident of the city of New York, county of New York, and State of New York, have invented certain new and useful Frames for Packing-Boxes, of which the following is a specification.

This invention relates to a metal frame for use as a partition or for the sides of packing boxes, which comprises a series of ridged longitudinal sheet metal members united at intervals to a series of ridged transverse sheet metal members by means of electric welding, said members being provided with means which permit of the same being electrically welded, and also with means for stiffening the frame work.

The objects of the invention are to provide a metal frame which is very light and strong, and which can be made from thin strips of sheet metal which are easily ridged, so as to afford means for electric welding the same together, and to afford great stiffness and strength to the completed frame.

Further objects of the invention are to construct a metal frame, which may be covered with suitable material, and secured to the edges of the framework of a box for the sides of the same, which will be of great strength when so constructed.

In the drawings: Figure 1 represents a portion of the metal frame one side of which is covered with material such as cardboard or canvas; Fig. 2 is a top view of Fig. 1; Fig. 3 is a detail view in cross section on the line 3—3 of Fig. 1; Fig. 4 is a perspective view of a box partly covered with my improved frame covered with cardboard or canvas which is broken away; Figs. 5 and 6 are detail views of alternate forms of frame.

Referring to the drawings, A designates the longitudinal members of the frame and B designates the transverse members of the frame, both the longitudinal members A and the transverse members B being suitably ridged with one or more ridges C which are placed face to face so that the ridges of the respective members cross each other. The ridges C project above the surface of the adjacent metal of the member and correspond approximately in cross-sectional area to that of the ridges C on the other member, so that when an electric cur-

rent is passed through the metal members at the intersection of the ridges, and the same are forced together in any desired manner, the metal at the points of contact will be heated to the welding temperature, after which the same are forced together until the metal of the ridges adjacent to the point or points of welded union meets and contacts with the flat surface of the opposite member so as to short circuit the welding current by affording a larger path for the passage of the current thereby reducing the effective welding heat of the current.

The members A and B are usually constructed of sheet metal suitably pressed to form the ridges C, although if desired the ridges C may be made in any other suitable manner, it being immaterial whether the ridges C are forced up out of the metal as shown in Fig. 2, or whether the metal is rolled to produce a solid ridge.

As shown in Fig. 1, the members A and B are each provided with two ridges C which are welded at their intersection to produce four spot welds, which makes a very rigid joint of great strength. It is also to be noted that the ridges C are preferably made continuous so as to suitably stiffen the members A and B to make a rigid frame.

Instead of providing both members A and B with two ridges C, as shown in Fig. 1, the same may be constructed as shown in Fig. 5 in which the member B' has only one ridge C' whereas the member A' has two ridges C' making two welds at the intersection of the members A' and B'. In Fig. 6 are shown the members A'' and B'' each provided with only one rib C'' making only one weld at the intersection of the members A'' and B''.

It is obvious that as desired any number of ridges C may be provided on the members A and B but it is important that if more than one ridge is used the same should be suitably spaced apart so as to facilitate the welding current being short circuited when the members are forced together and also to facilitate the ridges being brought to the proper welding temperature. It is also obvious that the ridges C are not necessarily made continuous, and can just as well be provided only where the members A and B cross, the remaining portion of the ridges being of no advantage in welding the parts together, but of considerable

advantage in stiffening the members, and the ease with which the same can be manufactured and put together, and it is for the above reasons that the ridges are preferably made continuous. It is also immaterial at what angle the members are welded together as the angle may be varied to suit different conditions for which the members are used.

A frame as above described can be used for a great variety of purposes, the same being constructed of different weights of metal and of different meshes to meet the different requirements.

15 A frame constructed as shown in Fig. 1 is very useful for making packing boxes as shown in Fig. 4 in which the edges of the box are preferably made of strips of wood D suitably secured together at the corners. To complete the box a metal frame similar to that shown in Fig. 1, is nailed to the strips D, the metal of the frame being of sheet metal which is readily punctured by a nail, and which readily permits of the same being cut by shears to fit the box, which when completed is very strong and rigid and can be made so as to cost far less than a box constructed entirely of wood with anywhere near the strength of the box constructed as shown in Fig. 4.

30 In order to close the perforations or meshes of the frame the same is preferably

covered with cardboard or other material such as canvas, which can be secured to one or both sides of the frame in any desired manner. If canvas is used the same can be made watertight by varnish or paint.

While the invention has been described with particular reference to a packing box, the same is not intended to be limited thereto, as the frame can be used simply as a partition or for any purpose to which the same is applicable.

What I claim is:—

A sheet metal frame comprising a series of ridged crossed sheet metal members each member ridged in one direction only, the ridges of said members arranged transversely respectively and welded together where said ridges cross each other, the cross sectional area of the ridges being approximately equal near such points of welded union, and the outer edges of the ridges of each such member being in contact with but not welded to the surfaces of the adjacent member near the point of welded union.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LAURENCE S. LACHMAN.

Witnesses:

LEO J. MATTY,

FRANK E. RAFFMAN.