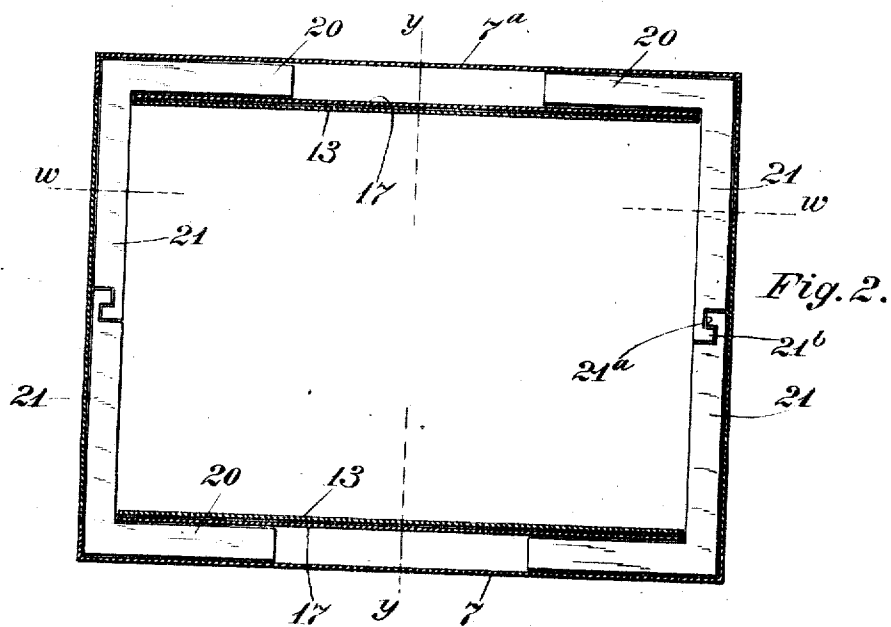
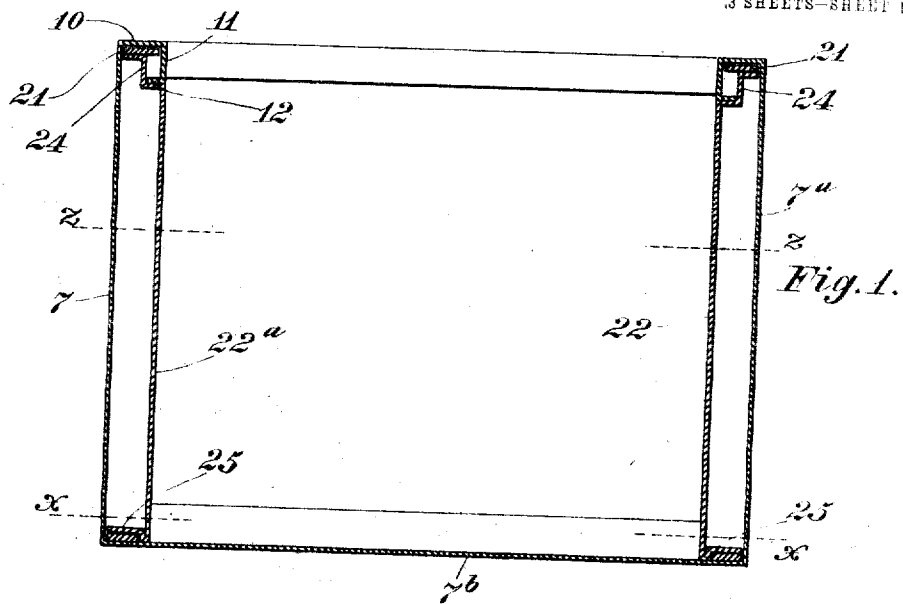


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WALLED SHEET METAL STRUCTURE.
APPLICATION FILED DEC. 9, 1909.

Patented Feb. 13, 1912.

3 SHEETS—SHEET 1



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3 SHEETS—SHEET 2.

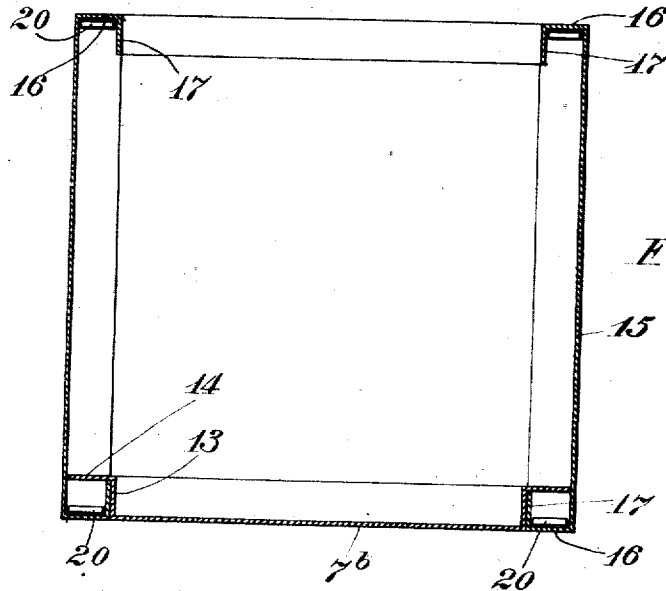


Fig. 3.

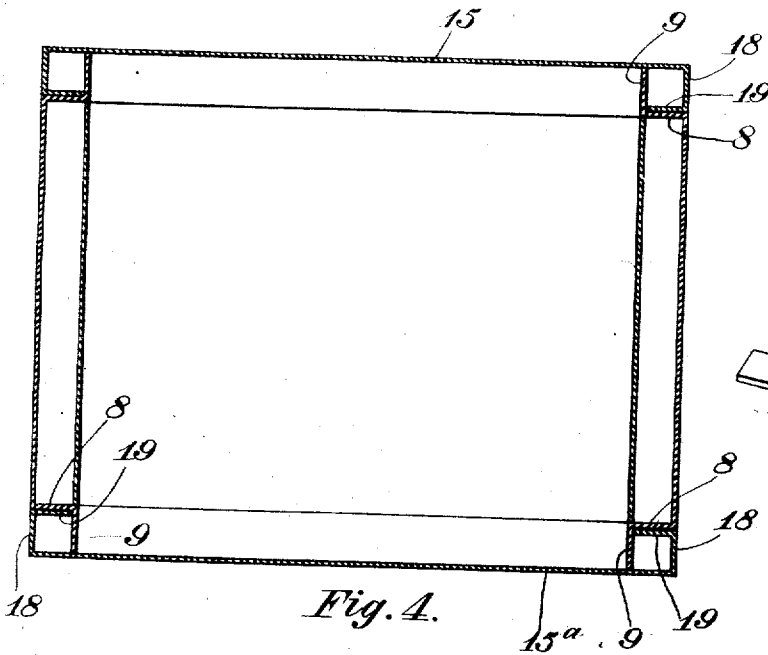


Fig. 4.

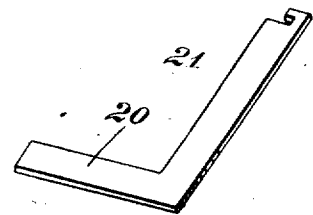


Fig. 5.

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3 SHEETS—SHEET 3.

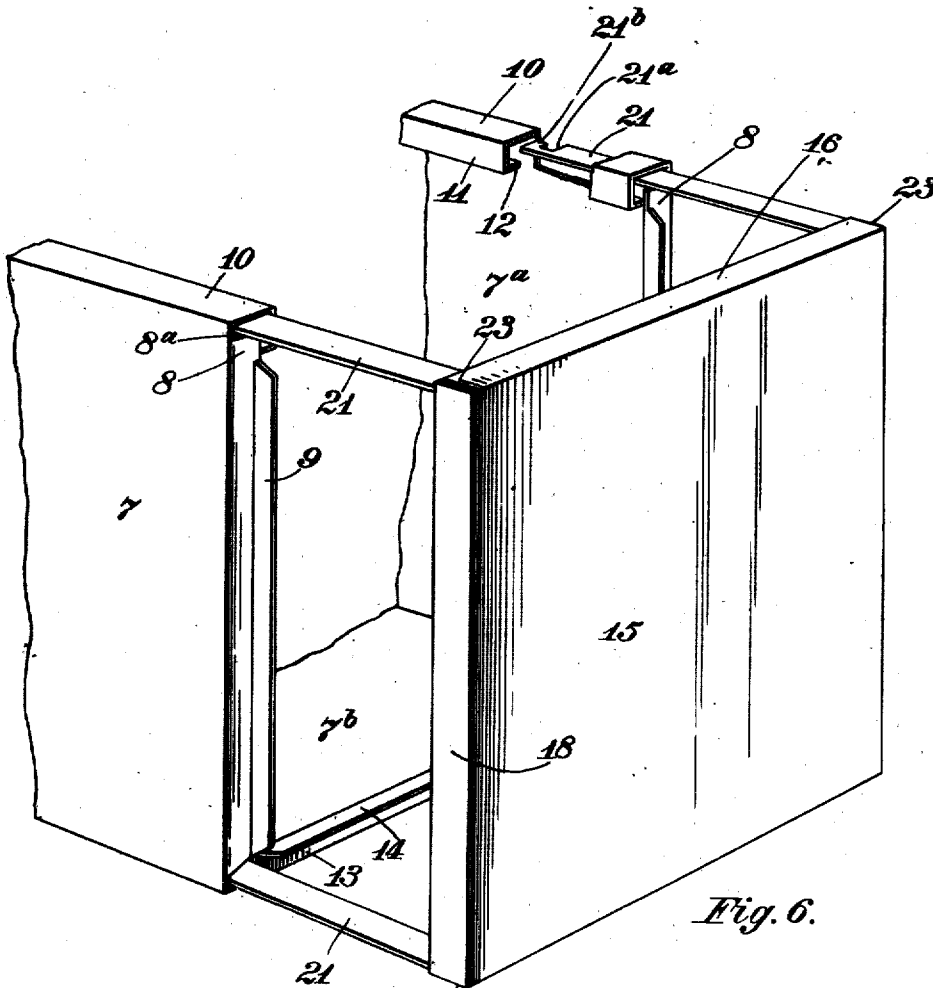


Fig. 6.

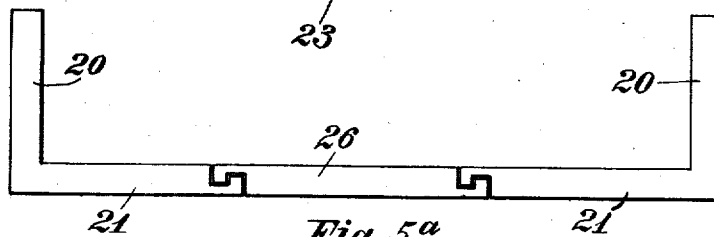


Fig. 5a.

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UNITED STATES PATENT OFFICE.

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WALLED SHEET-METAL STRUCTURE.

1,017,354.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed December 9, 1909. Serial No. 532,204.

To all whom it may concern:

Be it known that I, PETER M. WEGE, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented a certain new and useful Improvement in Walled Sheet-Metal Structures, of which the following is a specification.

The object of this invention is to provide a walled structure of sheet metal of simple, economical and durable construction the parts of which are adapted to be readily assembled.

The invention is embodied in the construction herein shown and described the features of novelty being pointed out in the appended claims.

In the accompanying drawing—Figure 1 is a section of the line $w-w$ Fig. 2. Fig. 2 is a section on the line $x-x$ Fig. 1, with interior end pieces omitted. Fig. 3 is a section on the line $y-y$ Fig. 2. Fig. 4 is a section on the line $z-z$ Fig. 1. Fig. 5 is a perspective view of an interlocking corner member and Fig. 5^a is a plan view showing how a straight intermediate interlocking corner member can be added to two corner members. Fig. 6 is a perspective view of a portion of a structure containing the invention showing a side about to be added and with portions broken out to show details.

The structure is shown in plain box form of five walls and without a cover or door.

The outer end walls 7 and 7^a and the bottom 7^b are all formed of a single piece of sheet metal. The vertical margins of the ends 7 and 7^a are each bent inward as indicated at 8 and then outward as seen at 9 to form reëntrant vertical corners and the horizontal or upper edges of the ends 7 and 7^a are each bent inwardly as seen at 10 then downward as seen at 11 and then inward as seen at 12. The two side margins of the bottom 7^b are bent upward as seen at 13 and then outward as seen at 14 to form reëntrant horizontal corners. Portions of the metal 8 at the top and bottom corners are cut out as indicated at 8^a to permit the insertion of the angular interlocking pieces.

The side pieces 15 and 15^a each have their top and bottom or horizontal margins bent inward as indicated at 16 and then toward each other as seen at 17 to form channels, and their vertical margins each bent inward as indicated at 18 and then toward each

other as seen at 19. The corners of the side pieces where the inwardly bent margins meet are preferably welded to make a neat finish as seen at 23.

The channels formed by the top and bottom marginal portions 16 and 17 receive the plain arms 20 of the corner interlocking pieces. The other arms 21 of these interlocking pieces are formed at their ends to engage each other in the channels formed by the marginal portions 10, 11 and 12. These arms 21 are provided for example with recesses 21^a and tongues 21^b reversely arranged on the two arms 21 so that when hooked into each other and held while lying in the same plane they resist separation when drawn on in that plane in a direction coinciding with the center line of the connected arms. The two side pieces 15 and 15^a of the structure are therefore connected with the member comprising the ends and bottom, (7, 7^a and 7^b) by properly placing the plain arms of the corner interlocking pieces in the channels of the side pieces 15 and 15^a and then pressing the sides inward toward each other until the interlocking arms 21 of the corner pieces are in position to have their hooks inter-engaged. Care should be taken that interlocking arms of the corner pieces are made of such length that they will inter-engage when the sides are fitted up against their seats on the member comprised of the ends and bottom (7, 7^a, and 7^b). If the corner interlocking pieces are made of metal of ample gage the sides will be sufficiently locked in place by simply pressing the interlocking arms into their intended engagement. But to make sure that they shall remain so locked, and to make a neat finish, and provide also a double wall at the ends, if desired, it is proposed to employ pieces of sheet metal 22 and 22^a cut to proper size and bent outward and upward at its upper edge as shown at 24 and doubled and bent outward at its lower edge as seen at 25 so as to closely fit in the spaces to be occupied and to fit against the inter-engaged arms 21 at the top and bottom at each end of the structure to hold said arms engaged with each other. Thus constructed the parts are tightly held together.

The arms 20 or 21 or both can be riveted or "spot welded" in place, and if this be done the interior end pieces 22 and 22^a can be dispensed with.

It will be observed that by this construc-

tion the use of rivets or bolts can be avoided at least in the manufacturing of the body and that the structure presents a neat and chaste appearance. The construction is useful in the manufacture of cabinets, chests, boxes, cases and many other forms of walled structure. If the structure be of extraordinary width it may be advantageous or important to interpose an intermediate locking piece 26 between the hook arms 21.

The terms "top", "bottom", "side" and "ends" are used herein in a special sense because the device conventionally is so shown. In practice for example what is herein termed the "bottom" might become the back and what is called a side or end might be the bottom.

What I claim is—

1. In a sheet metal structure of the kind described, two parallel walls and a connecting wall, said parallel walls provided with bent over concealing margins, combined with walls joining said parallel walls, and arms connected with said joining walls and extending under the concealing margins of the first named walls, the arms at each side of the structure provided with means for interlocking them at their ends whereby the joining walls are held in position with reference to the first mentioned walls.

2. In a sheet metal structure of the kind described, two parallel walls and a wall permanently connecting them at their corresponding edges, the free margins of said parallel walls being inwardly bent to form grooves, combined with closing walls to connect the aforesaid parallel walls, said closing walls also provided with inwardly standing marginal grooves, and angular pieces, each having an arm secured in said last named marginal grooves and a second arm extending into one of the first mentioned marginal grooves, the corresponding last named arms being interlocked with each other, substantially as described.

3. In a sheet metal structure of the kind described two parallel walls and a wall permanently connecting them at corresponding edges, combined with separate walls to con-

nect the aforesaid parallel walls, said separate walls provided with marginal grooves and angular pieces engaging the marginal grooves of the said separate walls and having arms interlocked with corresponding arms adjacent the first named parallel walls.

4. In a sheet metal structure of the kind described two parallel walls and a wall permanently connecting them at corresponding edges, combined with separate walls to connect the aforesaid parallel walls, said separate walls provided with marginal grooves, angular pieces engaging the marginal grooves of the said separate walls and interlocked with each other adjacent the first named parallel walls, and means for holding said angular pieces interlocked with each other.

5. In a sheet metal structure of the kind described, in combination, two parallel walls and a wall permanently connecting them at corresponding edges, separate end walls to connect the aforesaid parallel walls, said end walls having marginal grooves, angular pieces each having an arm engaging one of the said marginal grooves and an arm interlocked with the corresponding arm of an opposite angular piece, and separate inserted walls to hold said angular pieces interlocked.

6. In a sheet metal structure of the kind described, two parallel walls and a wall permanently connecting them at corresponding edges, the end edges of said parallel walls provided with inwardly and outwardly bent flanges forming corners, separate connecting end walls provided with flanges forming marginal grooves, the flanges of the end walls fitting in the aforesaid corners, angular pieces each having one arm located in a marginal groove of one of the end walls and a second arm interlocked with the corresponding arm of an angular piece in the opposite end wall.

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