

P. M. WEGE.
METALLIC STRUCTURE.
APPLICATION FILED MAY 14, 1910.

999,929.

Patented Aug. 8, 1911.

3 SHEETS—SHEET 1.

Fig. 2

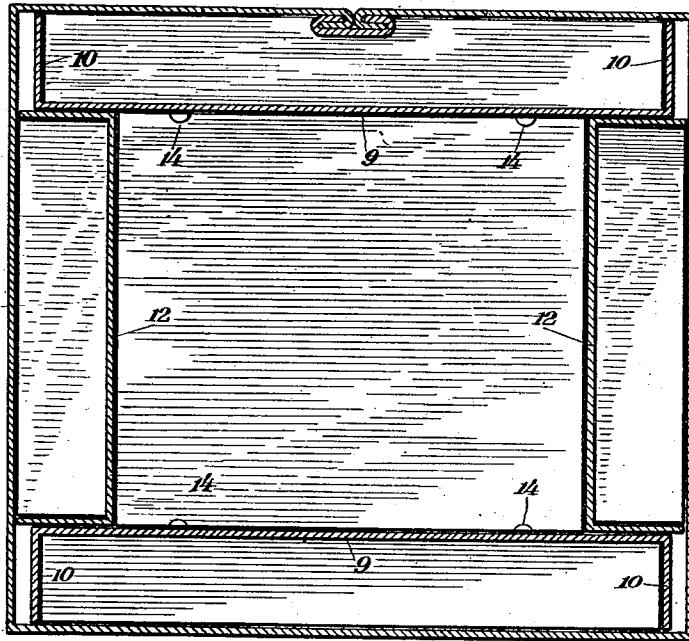
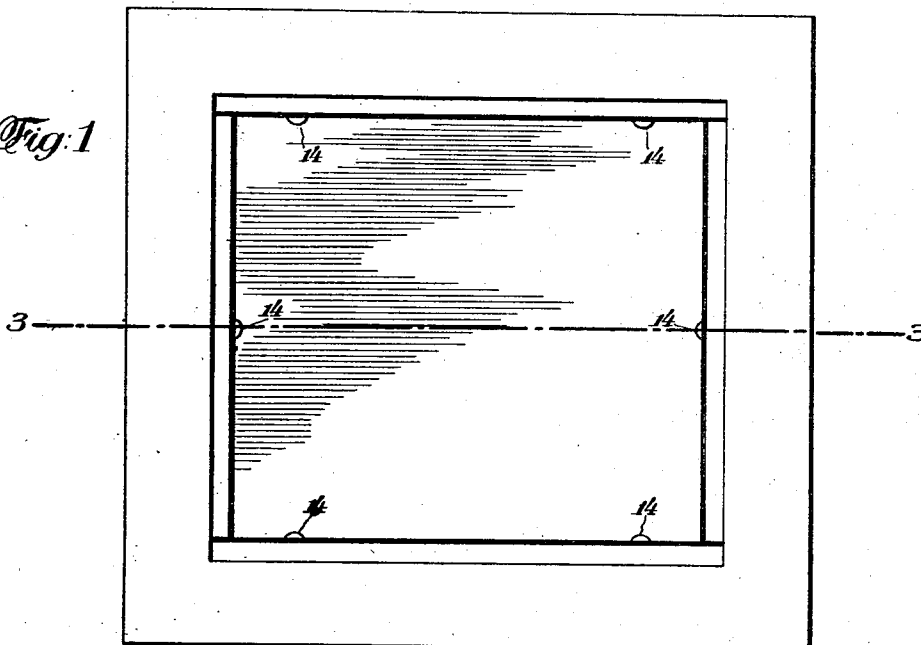


Fig. 1



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3 SHEETS—SHEET 2.

Fig. 5

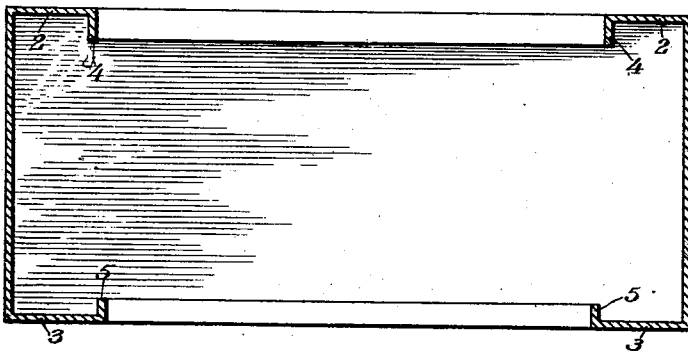


Fig. 4

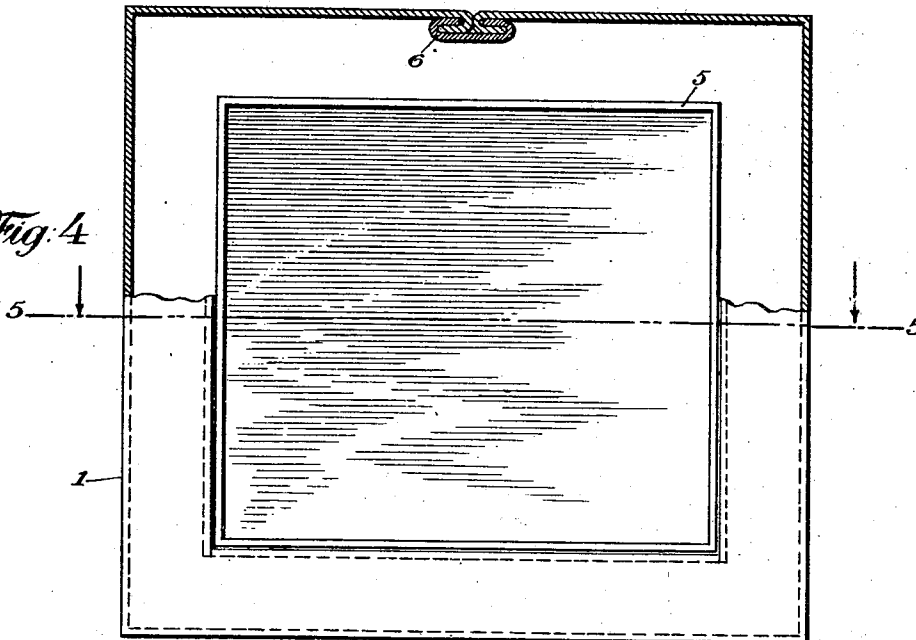
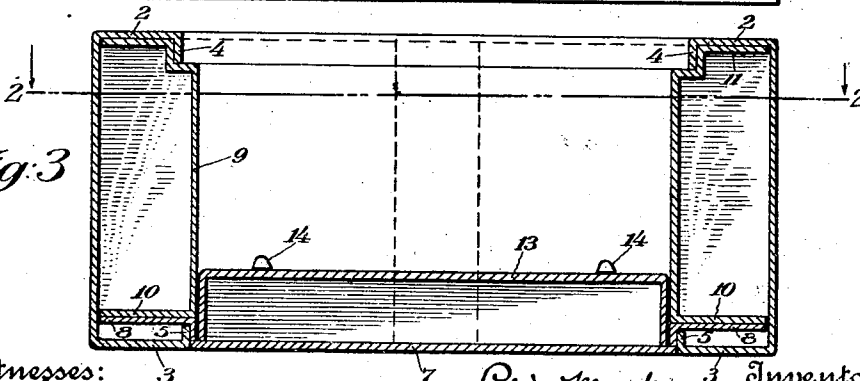


Fig. 3



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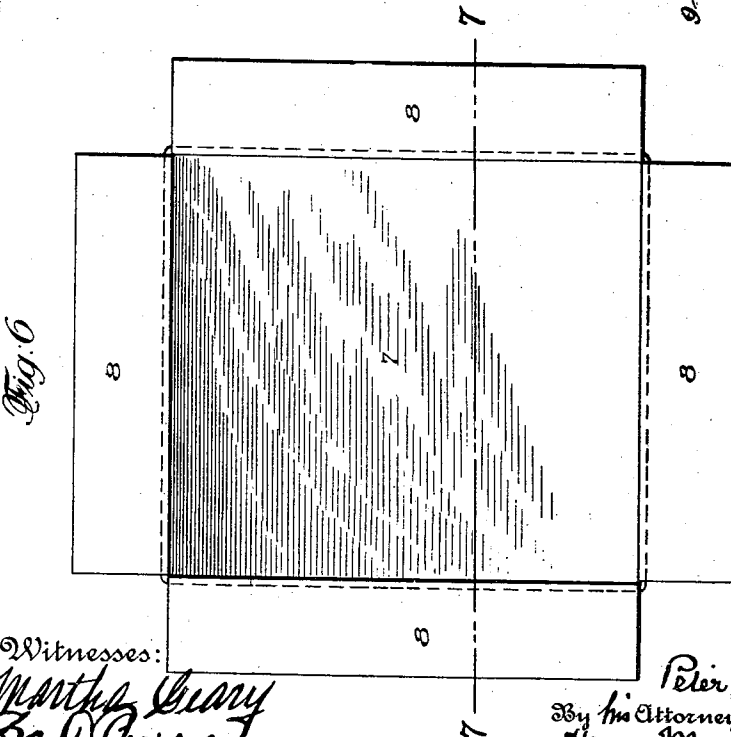
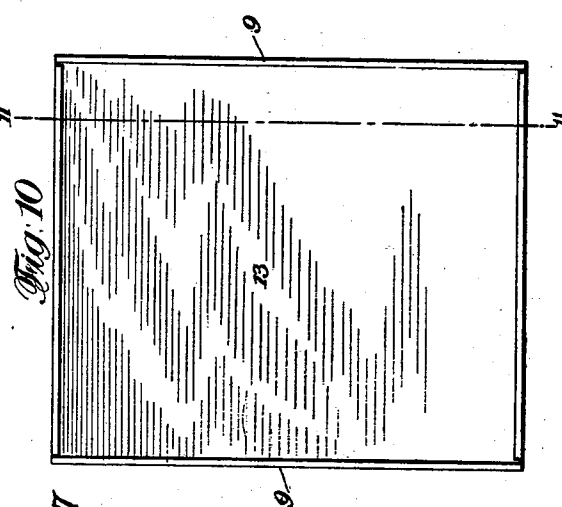
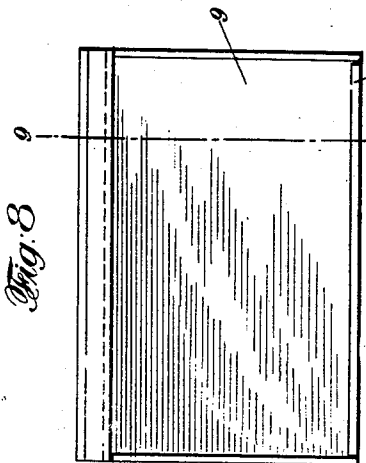
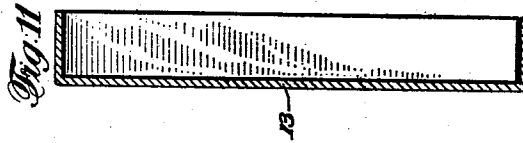
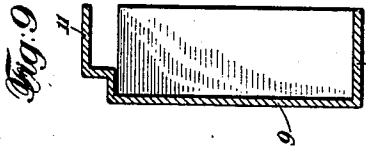
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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

PETER M. WEGE, OF MARIETTA, OHIO, ASSIGNOR TO THE SAFE-CABINET COMPANY, A CORPORATION OF OHIO.

METALLIC STRUCTURE.

999,929.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed May 14, 1910. Serial No. 561,510.

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 new and useful Improvements in Metallic Structures, of which the following is a specification.

My invention relates to improvements in metallic structures which are built up of sheet metal or metal plates which form the walls thereof, and the objects of my invention are to provide a strong rigid structure which can be manufactured at a low cost, will possess great strength and rigidity and the respective parts of which can be readily and easily assembled, and the parts of which are maintained and locked in their assembled positions without making use of any screws, bolts, rivets or other similar appliances.

In the accompanying drawings I have shown the preferred embodiment of my invention in which—

Figure 1 shows an elevation of a cabinet section or unit constructed in accordance with my invention. Fig. 2 is a sectional elevation of a cabinet section or unit embodying my invention. Fig. 3 is a sectional view on the line 3—3 of Fig. 1. Fig. 4 is an elevation partly in section of the outer shell or frame of the structure shown in Fig. 1. Fig. 5 is a section on the line 5—5 of Fig. 4. Fig. 6 is a plan view of the back plate or wall of the structure shown in Fig. 1. Fig. 7 is a sectional view on the line 7—7 of Fig. 6. Fig. 8 is a plan view of one of the interior walls of the structure shown in Fig. 1. Fig. 9 is a section on the line 9—9 of Fig. 8. Fig. 10 is a plan view of the inner back section of the structure shown in Fig. 1. Fig. 11 is a sectional view on the line 11—11 of Fig. 10.

Similar figures of reference refer to similar parts throughout the several views.

The preferred embodiment of my invention as shown in the accompanying drawings consists of a frame 1 of sheet metal, preferably steel, which is rectilinear in form, and the four sides of which form four of the exterior walls of the cabinet section, namely the upper and lower outer walls and the two outer side walls of the section. This frame-work is also provided with flanges 2 and 3 which are turned inwardly at right angles to the walls of the frame and these

flanges 2 and 3 are provided with inwardly turned flanges 4 and 5 which as shown are projected substantially parallel to the side walls of the frame. This frame may be struck up from a single piece of metal or may be bent into shape and joined together as shown in Fig. 4 by over-turning the adjacent edges and securing them together by the clasp 6 or they may be welded or secured together in any other suitable manner.

The outer back or rear wall member as shown in Fig. 6 consists of a metallic plate 7 which is notched at the corners and is formed into a pan shape with flanges 8 as shown in Fig. 7. The back 7, which is a driving fit is then forced into the frame in the position shown in Fig. 3 and is retained in that position by frictional contact between the inwardly turned flanges 5 and the flanges 8 of the back 7.

As illustrated the preferred embodiment of my invention shows a structure with double walls. The upper and lower inner wall members 9—9 are provided with rectangular flanges 10—10 and double angular flanges 11—11 and are adapted to be forced into the position shown in Fig. 3, that is with the double angular flange interlocked under and back of the flange 4 on the frame, and the flange 10 forced in over the flange 8 into the position shown in Fig. 3 in which position it will be firmly held by frictional contact. The inner side wall members 12—12 are formed in the same manner as the upper and lower interior wall members 9—9 and are secured in position in the same manner after the walls 9—9 have been placed in position. The positions of these parts in plan when assembled are shown in Fig. 2.

The interior back wall member consists of a metallic plate 13 which is provided with four rectangular flanges and is adapted to be forced into the position shown in Fig. 3 after the bottom and top interior wall members and the interior side wall members have been placed in position, and when it has been forced into the position shown in Fig. 3 is securely locked in that position by means of lugs or catches 14 which are secured to or formed in the face of the members 9—9 and 12—12. The back wall member 13 is the locking member which secures all of the other members in position in the frame so that none of them can be removed without first removing the member

13 and the member 13 when forced into the position shown in Fig. 3 is securely locked against removal by the lugs or catches 14.

This construction possesses many advantages over structures heretofore in use because the members and the frame being elastic and the members and the frame being all under tension when the members are in position in the frame the parts adjust themselves to slight variations in the dimensions of the members or the frame thereby avoiding the necessity of accurately fitting the members to each other and the frame, and the members are locked in position in the frame instead of being secured thereto by rivets, bolts or like mechanisms and because the frame and all of the members are under tension the structure when assembled is exceedingly rigid and any strains to which it may be subjected will be distributed throughout the entire structure. I have also found in practice that the parts can be assembled by unskilled labor and at a very low cost. This structure is also particularly adapted for fire proof cabinets and safes and possesses many advantages over similar structures in which the parts are riveted or bolted together because when subjected to heat there are no rivets or bolts to be sheared by the expansion of the metal.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A metallic structure, comprising in combination a frame of sheet metal provided with interlocking flanges, wall members provided with flanges adapted to interlock with the flanges on the frame, and means for locking said wall members in position in said frame.

2. A metallic structure, comprising in combination a frame of sheet metal having a plurality of sides, each of which forms one of the walls of the structure, interlocking flanges on said frame, wall members provided with flanges adapted to interlock with the flanges on the frame; and means for locking said wall members in position in said frame.

3. A metallic structure, comprising a frame of sheet metal, interlocking flanges on said frame, a plurality of wall members, flanges on said wall members adapted to interlock with the flanges on the frame, said wall members when interlocked in position in said frame forming interior and exterior walls of said structure, and means for locking said wall members in position in said frame.

4. A metallic structure, comprising a frame of sheet metal having a plurality of sides, each forming sides of the structure, interlocking flanges on said frame, a plurality of wall members, flanges on said wall members adapted to interlock with the

flanges on the frame, said wall members when interlocked in position in said frame forming interior and exterior walls of said structure, and means for locking said wall members in position in said frame.

5. A metallic structure comprising in combination a frame with a plurality of sides, each of which forms one of the walls of the structure, wall members adapted to fit into said frame and having a tension engagement with said frame, and a locking wall member constituting means for locking the other wall members in the frame.

6. A metallic structure comprising in combination a frame with a plurality of sides, each of which forms one of the walls of the structure, wall members adapted to fit into said frame, said wall members having a tension engagement with said frame, and a locking wall member constituting means for locking the other wall members in the frame, and means for locking said locking wall member in position in the structure.

7. A metallic structure comprising in combination a frame of sheet metal having a plurality of sides, each side forming one of the exterior walls of the structure, flanges on said frame, a plurality of sheet metal wall members adapted to fit into said frame, flanges on said wall members adapted to contact with flanges on the frame and to be under tension when said wall members are forced into the frame; and a locking wall member constituting means for locking the other wall members in position in the frame.

8. A metallic structure comprising in combination a frame of sheet metal having a plurality of sides, each side forming one of the outer walls of the structure, flanges on said frame, a plurality of sheet metal wall members adapted to fit into said frame, flanges on said wall members adapted to contact with flanges on the frame and to be under tension when said wall members are forced into the frame, a locking wall member constituting means for locking the other wall members in position in the frame, and flanges on said locking wall member adapted to contact with other wall members under tension.

9. A metallic structure comprising in combination a frame of sheet metal having a plurality of sides, each side forming one of the outer walls of the structure, flanges on said frame, a plurality of sheet metal wall members adapted to fit into said frame, flanges on said wall members adapted to contact with flanges on the frame and to be under tension when said wall members are forced into the frame, and a locking wall member constituting means for locking the other wall members in position in the frame, flanges on said locking wall member adapted to contact with other wall members un-

der tension and means for locking said locking wall member in position in the structure.

10. A metallic structure comprising in
5 combination a frame of sheet metal having a plurality of sides, each of which forms one of the exterior walls of said structure, the edges of said frame being provided with rectangular and with inwardly turned
10 flanges, an exterior wall member provided with rectangular and outwardly extending flanges and adapted to fit into said frame with the rectangular flanges on the wall
15 member in contact with rectangular flanges on the frame and the outwardly extending flanges on said wall member resting against the lip of the adjacent inwardly turned
20 flanges on the frame, interior wall members provided with flanges adapted to interlock with flanges on the frame, and also provided with flanges adapted to contact with the outwardly extending flanges on said exterior wall member and an interior wall
25 member provided with rectangular flanges adapted to contact with the inner faces of the said other interior wall members and seat against the inner face of said exterior wall member.

11. A metallic structure comprising in
30 combination a frame of sheet metal provided with interlocking flanges, wall members provided with flanges adapted to interlock with the flanges on the frame and a wall member constituting means for locking
35 the other wall members in position in the frame.

12. A metallic structure comprising in
40 combination a frame of sheet metal having a plurality of sides, each of which forms one of the walls of the structure, interlocking flanges on said frame, wall members provided with flanges adapted to interlock with the flanges on the frame, and a wall mem-

ber constituting means for locking the other wall members in position in the frame.

13. A metallic structure comprising in
45 combination a frame of sheet metal having a plurality of sides, each side forming one of the walls of the structure, flanges on said frame, a plurality of sheet metal wall mem-
50 bers adapted to fit into said frame, flanges on said wall members adapted to contact with flanges on the frame and to be under tension when said wall members are forced into the frame, and means for locking said
55 wall members in position in the frame.

14. A metallic structure comprising a frame of sheet metal provided with interlocking flanges, a wall member provided with flanges adapted to interlock with the
60 flanges on the frame and form an exterior wall of said structure, a plurality of wall members provided with flanges adapted to interlock with the flanges on the frame and when interlocked in position with said
65 frame to form interior walls of said structure and means for locking said wall members in position in the frame.

15. A metallic structure comprising a frame of sheet metal having a plurality of
70 sides, each of which forms one of the exterior walls of the structure, provided with interlocking flanges, a wall member provided with flanges adapted to interlock with the flanges on the frame and form an ex-
75 terior wall of said structure, a plurality of wall members provided with flanges adapted to interlock with the flanges on the frame and when interlocked in position with said
80 frame to form interior walls of said structure and means for locking said wall members in position in the frame.

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