No. 893,131. PATENTED JULY 14, 1908.

F. BOGENBERGER.

FIREPROOF DOOR.

APPLICATION FILED AUG. 24, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

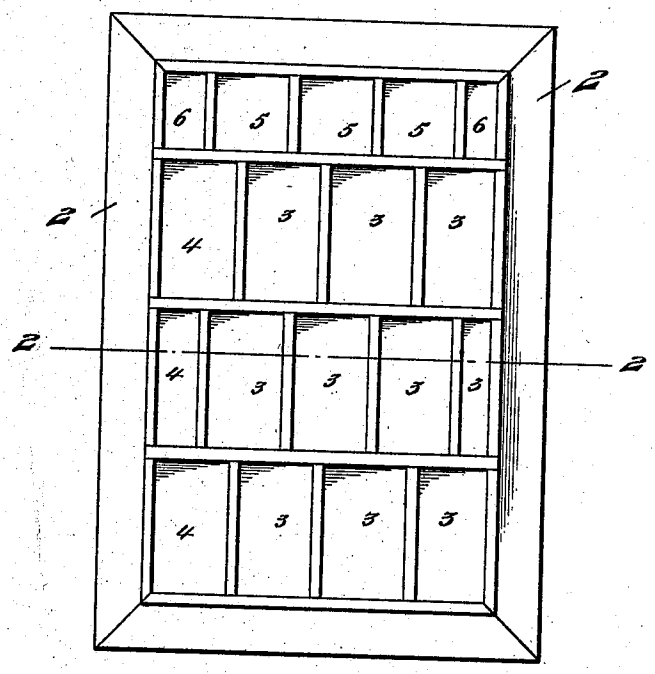


Fig. 2.

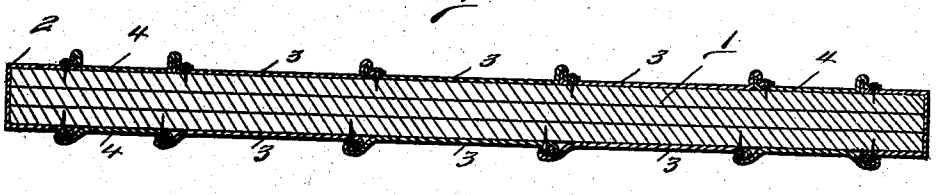
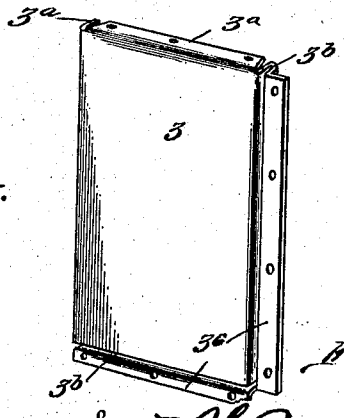


Fig. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

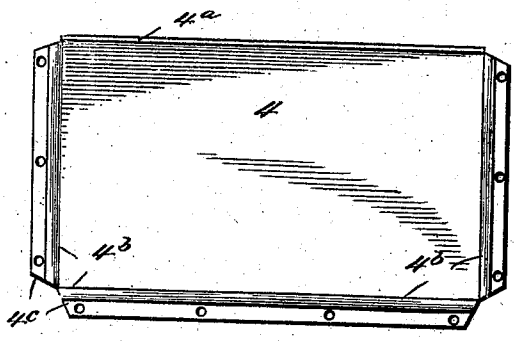


Fig. 5.

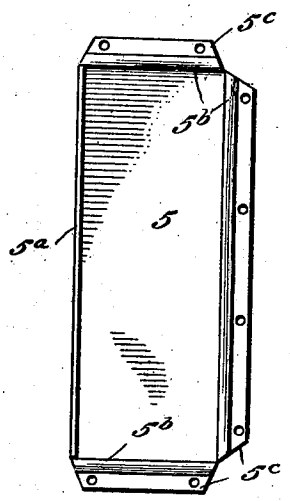


Fig. 6.

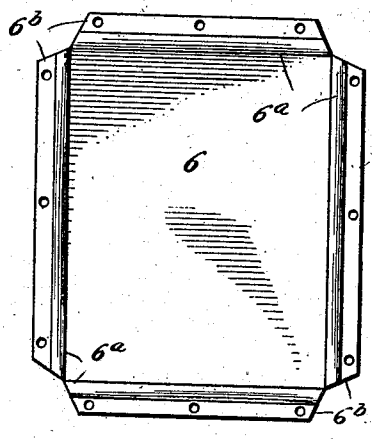
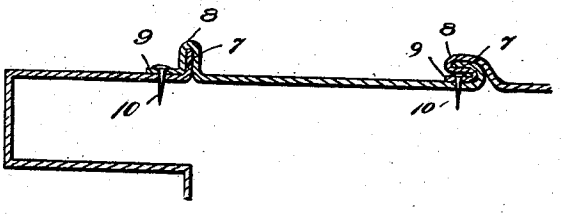


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

FRED BOGENBERGER, OF MILWAUKEE, WISCONSIN.

FIREPROOF DOOR.

No. 893,131. Specification of Letters Patent. Patented July 14, 1908.

Application filed August 24, 1907. Serial No. 390,056.

To all whom it may concern:

Be it known that I, FRED BOGENBERGER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Fireproof Doors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to fireproof doors and shutters.

The object of the invention is to provide a suitable covering for wooden doors and shutters which will be simple in construction, easily applied, and which will come within the requirements of the fire insurance laws. These doors and shutters are constructed with a wooden body or filler covered with tin plate or other sheet metal attached in such manner that it will not come off during a fire. This covering has usually been applied in sheets nailed to the wood through two adjacent edges only of each sheet and the nails then covered by a seam formed by a turned-up portion of the nailed edges, and locks on the unnailed edges of the adjacent sheets. The present insurance laws require that these sheets shall be nailed through all four edges of each sheet, and that these nails be covered with a strong seam of the same sheets, and it is to provide for this requirement that applicant's invention is designed.

In the accompanying drawings,—Figure 1 represents a front elevation of a door constructed in accordance with this invention; Fig. 2 represents a transverse section taken on line 2—2 of Fig. 1, the upper side of the door shown in said figure showing the covering before the seams are flattened and the under side thereof showing the seams flattened over the nails; Figs. 3, 4, 5 and 6 show four styles of sheets made in four different sizes; Fig. 7 shows an enlarged detail of the seam before and after it is flattened.

In the embodiment illustrated a wooden door 1 is shown having an approximately U-shaped casing 2 of sheet metal around the edges thereof and with the faces of said door covered by sheets 3, 4, 5 and 6, as shown in Fig. 1. The casing 2 has an outwardly extending lateral flange 2^a projecting from each side thereof. The four styles of sheets 3, 4, 5 and 6 are each to be made in four different sizes, 3 representing the full sized sheet, 4 a half sized sheet cut crosswise, 5 a half sized sheet cut lengthwise, and 6 a quarter sized sheet. Thus it will be seen that the area within the casing can always be worked up to a size that is a multiple of the smallest width and breadth of these different sized sheets. The casing 2 may be made also in variable widths to meet the requirements of different sized doors.

In covering the door the casing is made in four pieces stamped and nailed at the four corners. The various sized sheets are then placed upon the door as indicated in Fig. 1. These sheets or panels are each provided with flanges extending laterally at right angles on one or more of its edges and on the other edges with U-shaped pockets having a laterally extending lip, the pockets of one sheet fitting over the flanges of the adjacent sheet with its lip overlapping said adjacent sheet and nailed all around through said lips. The pockets containing the flanges are hammered over covering all the nails and making a thoroughly fireproof door, as shown in Fig. 7, in which one of the plates is shown having an upwardly projecting flange 7, over which extends a U-shaped pocket 8 formed in the adjacent plate and having a laterally extending lip 9, which overlaps the outer face of the plate carrying the flange 7 and through which, and said plate is passed a securing nail, as 10. The pocket 8 with the flange 7 therein is then bent down over the head of the nail 10 and hammered into position as shown at the right in Fig. 7.

As shown the top row of plates or panels is formed of the sheets 5 and 6. The corner sheet 6 has pockets 6^a arranged around all of its edges and said pockets are provided with lips 6^b. The pockets at one side and the top of this sheet 6 fit over the flanges 2^a on the casing 2 at the corner of the door and those on the other side and bottom fit over the flanges on the adjacent sheets 4 and 5, the pockets and flanges of the adjacent panels thus coact to securely unite their respective panels against the entrance of flame in case of fire. The sheets 5 are formed as shown in Fig. 6 with a flange 5^a on one side edge and with the pockets 5^b having laterally extending lips 5^c. The top pocket 5^b of the sheet 5 fits over the flange 2^a of the casing 2 and side pocket thereof fits over the flange 5^a of the adjacent sheet 5 and the bottom pocket over

the top flange of the sheet 4 in the row below. The sheets 4 have a top flange 4^a and pockets 4^b arranged on its sides and bottom, said pockets each having a lip 4^c, as shown in Fig. 4. The sheets 3 have flanges 3^a on its top and left side and pockets 3^b on its bottom and right side, said pockets having lips 3^c. The second row is composed of one sheet 4 arranged at the left thereof and three sheets 3. The third row consists of one plate or sheet 4 at the left and four sheets 3 connected therewith. The bottom or fourth row is formed the same as the second, of one sheet 4 and three sheets 3.

I claim as my invention:

1. In a fire door, the combination of a core or filler, a metallic casing for the edges thereof seamed and nailed at the corners and having a laterally extending flange arranged around its inner edge, a plurality of metal sheets arranged on the faces of said filler within said edge casing, and having laterally extending flanges and pockets at their respective meeting edges for engagement with each other, each pocket having a lip extending in a plane parallel with the body of the pocket-carrying sheet and overlapping the body of the adjacent flange-carrying sheet, and fastenings passing through said lip and flange-carrying sheet.

2. A fire door sheathing composed of a plurality of metallic sheets, each having a laterally extending flange on one edge and another edge having a pocket provided with a lip extending in a plane parallel with the body of the sheet, said lip overlapping the face of the adjacent sheet, the edge of said adjacent sheet being provided with a laterally extending flange for projection into the pocket of the first mentioned sheet.

3. A fire door sheathing composed of an approximately U-shaped edge casing, having lateral flanges extending outwardly from its free edges, and a plurality of metal sheets or panels arranged in said casing and having coacting laterally extending flanges and lip-carrying pockets respectively on the adjacent edges of the sheets for engagement with said casing and with each other.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRED BOGENBERGER.

Witnesses:

THEO. ERNST,

F. BOGENBERGER, Jr.