

S. E. FAGERSTROM.
SHEET METAL DOOR.
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1,064,201..

Patented June 10, 1913.

Fig. 1.

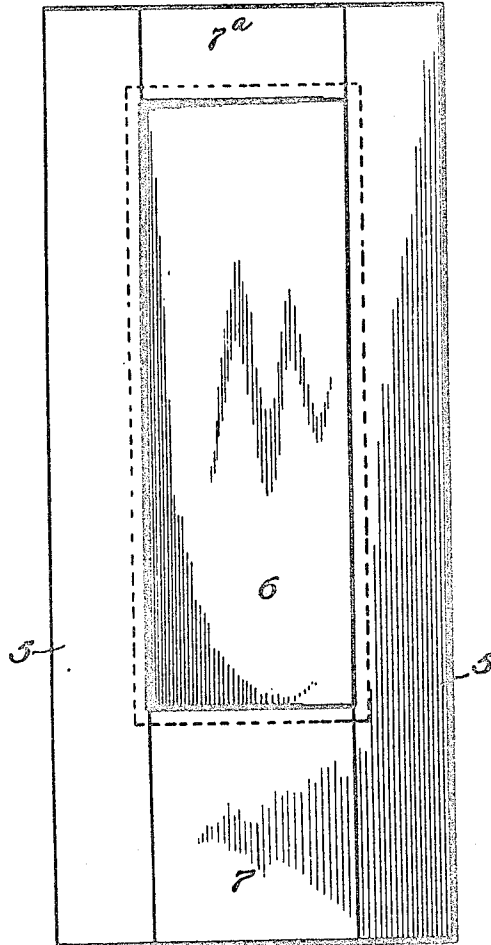
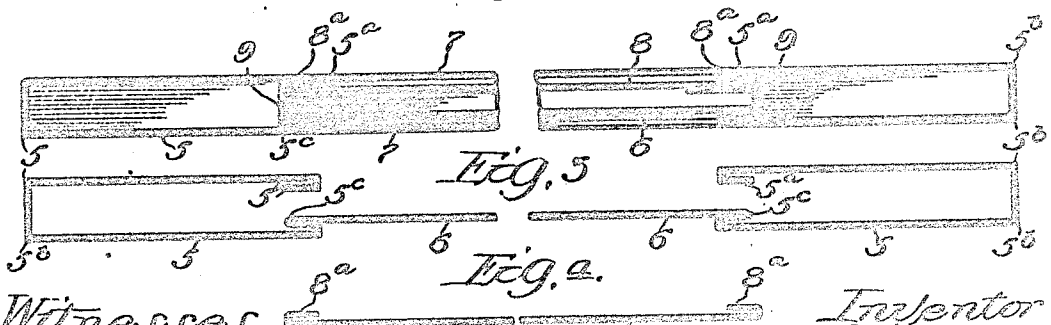


Fig. 2.



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SHEET-METAL DOOR.

1,064,201.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SIMON E. FAGERSTROM, a subject of the King of Sweden, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sheet-Metal Doors, of which the following is a specification.

This invention relates to improvements in doors constructed from sheet metal.

The especial object of the improvements embodied in this application for patent is to produce a door or similar structure from as few pieces of sheet metal as possible consistent with strength and appearance of the finished product and one in which no bolts or rivets are required to hold the parts together.

A further object is to produce a sheet metal door that can be cheaply manufactured and having but few joints to be closed.

In the accompanying drawing which forms a part of this application, I have shown so much of a sheet metal door as is necessary to illustrate the features of construction which enter into my invention in the following views.

Figure 1 is an elevation of a door constructed according to my invention; Fig. 2 is a cross section on an enlarged scale taken through the center of the door; Fig. 3 is a cross-section of one of the sheet metal plates forming a larger part of my improved door, and Fig. 4 is a cross-section of the complementary plate or separate panel member of my improved door.

Referring to the details of the drawing, 5—5 represent the stiles of my improved door the same extending from the top to the bottom of the door and being of identical construction.

6 represents the panel on one side of the door, 7 the bottom rail, 7^a the top rail, 8 the panel on the opposite side of the door, and 9 channel bars which extend from the top of the door to the bottom of same on opposite sides of the panels.

In forming the stiles 5 and the panel 6, I take a single sheet of metal of the desired size and bend the longitudinal edges to form the inwardly extending flanges 5^a. I then bend the sheet at 5^b to form the stiles 5 the

sides of which are spaced apart the distance required to provide the thickness of the finished door. The sheet is then doubled upon itself to form the inturned flanges 5^c which are opposite the flanges 5^a. The remaining portion of the sheet forms the panel 6 and is offset from the plane of the stiles 5 as clearly indicated in Fig. 3. The panel member 8 is formed from a single piece of sheet metal the longitudinal edges of which are bent inwardly to form the inturned flanges 8^a which when the parts are assembled interlock with the flanges 5^a.

The members 5, 6, and 8, are held in their assembled relation and the entire structure stiffened by two channel bars 9 which extend the full length of the door. One of the legs of the channel fits snugly between the flange 5^c and the opposite wall of the stile 5 while the other leg of the channel rests against the panel 8 with sufficient pressure to hold the panel 8 in close engagement with the inturned flange 5^a. The portions of sheet metal bearing on the channel are thus spot welded so as to maintain them in their assembled relation. The rails 7, 7^a, are formed from plain pieces of sheet metal which are arranged with their edges fitting the outer corners of the flanges 5^a, 5^c, and are welded in position. The openings at the top and bottom of the door may be filled in any desired manner known in the art such features forming no necessary part of my invention.

In assembling a door from the members described, the panel 8 will be slid into position with its flanges 8^a in close engagement with the flanges 5^a and the channel bars 9 will then be pushed into place endwise and when in position the contiguous parts will be welded together. The rail pieces 7, 7^a, will then be put on and welded in place. The manner of securing the rail members in place may be varied the same constituting no part of my invention proper.

It will be apparent that in a door constructed as described there can be no laterally relative expansion between the stiles and that the opposed walls of the panels and stiles will be rigidly maintained by the channels 9.

Having thus described my invention what I claim as new, is:—

5 A door composed of stiles and a single panel formed from a single piece of sheet metal, a second panel formed from a single piece of sheet metal having its edges in interlocking engagement with the edges of the stiles of the first member and channel bars having interlocking engagement with the

first member and secured to the inner surface of the second member, adjacent the interlocked portions of said members.

In testimony whereof I affix my signature in the presence of two witnesses.

SIMON E. FAGERSTROM.

Witnesses:

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