H. R. GOGAY.

SHEET METAL DOOR.

APPLICATION FILED MAR. 17, 1917.

1,391,949. **Patented Sept. 27, 1921.**

Fig. 1.

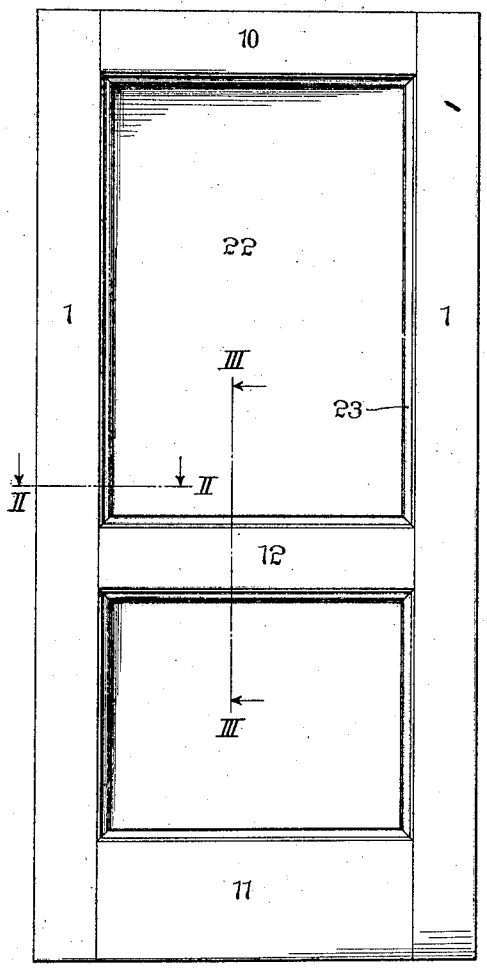


Fig. 2.

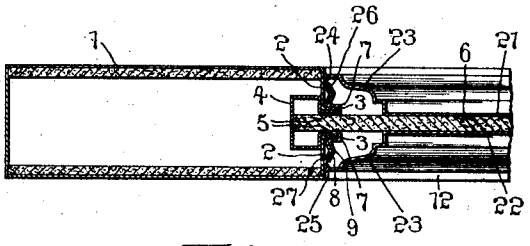


Fig. 3.

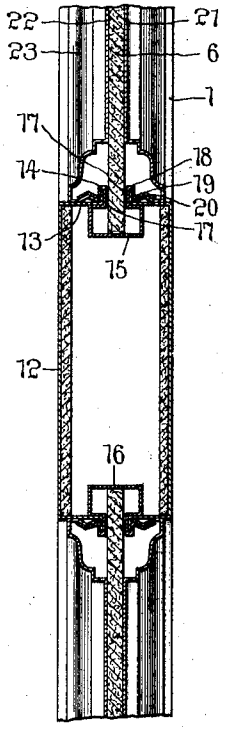
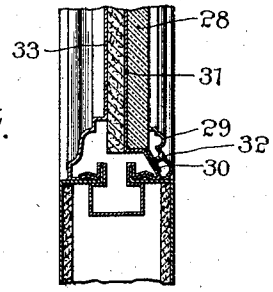


Fig. 4.



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SHEET-METAL DOOR.

1,391,949. Specification of Letters Patent. Patented Sept. 27, 1921.

Application filed March 17, 1917. Serial No. 155,501.

To all whom it may concern:

Be it known that I, HENRY R. GOGAY, a citizen of the United States, and resident of Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Sheet-Metal Doors, of which the following is a specification.

This invention relates to improvements in sheet metal doors and method of assembling the same, with the object in view of providing a door having panel section or sections formed with peripheral moldings integral therewith and so constructed as to receive in interlocked engagement the stile and rail sections. A further object is to provide a sheet metal door structure which will be light, durable and economical in the manufacture.

A practical embodiment of my invention is represented in the accompanying drawing in which—

Figure 1 represents an elevation of a sheet metal door embodying my invention.

Fig. 2 represents a detail horizontal section on an enlarged scale taken in the plane of the line II II of Fig. 1.

Fig. 3 represents a detail vertical section on an enlarged scale taken in the plane of the line III III of Fig. 1, and

Fig. 4 represents a detail section on an enlarged scale of a modified form of panel and molding having a separate and supplemental molding applied thereto.

The design of door which I have shown in the drawing is well known in that it is paneled alike on both sides, the stile sections being formed to present in one body both sides of the door. The particular structure of the stile shown is described and claimed in the Patent No. 986013 dated March 7, 1911, and I do not deem it necessary to describe its construction only so far as it is used in connection with my invention. The stiles are substantially identical in construction and a specific description of one will be sufficient for both.

Each of the stiles is formed substantially U-shaped in cross section and has a length equal to the desired height of the door. Each stile, denoted by 1, is provided with two longitudinal transversely disposed portions 2 which extend toward each other at the panel side of the stile, said portions having vertical laterally extending parallel flanges 3.

A clamping member 4, preferably in the form of a rectangular tube, is disposed vertically in the stile and has one side resting against the inner sides of the portions 2. This side of the clamping member 4 is provided with two longitudinal laterally extending parallel portions 5 between which may be placed a filling piece 6 of asbestos or other suitable material. The outer edges of the portions 5 have return bends 7 between which are respectively clamped the flanges 3 of the stile 1. The return bend portions 7 are provided with vertical flanges 8, disposed adjacent to and substantially parallel with the portions 2 respectively of the stile. Each flange 8 has a longitudinal corrugation 9, the purpose of which will be hereinafter explained.

The top and bottom rails denoted by 10 and 11, respectively, are preferably formed U shaped in cross section and correspond to the similar parts of the stile previously described.

The middle rail 12 may be composed of two members each having upper and lower horizontal portions 13 and flanges 14. The rail 12 is also provided with two horizontal clamping members 15, 16, disposed one above the other and each provided with portions 17 and return bends 18 having flanges 19 provided with corrugations 20, all of which have been previously described with respect to the stiles.

The panel sections are composed of two panel members 21, 22, which are formed with peripheral moldings 23, integral therewith.

The moldings 23 are provided with inwardly turned flanges 24, 25, having corrugations 26, 27, which are adapted to coact with the corrugations of the stiles and rails.

In Fig. 4, I have shown a modified form of panel and molding, the construction of which provides for the insertion of a mirror 28 to be placed upon one side of the panel, which mirror is held in position by a separate and supplemental molding 29 secured to the integral molding 30 of the panel member 31, by means of screws 32, threaded into said molding. The other panel member 33 in this form is the same construction as disclosed in the previous figures. While I

have shown and described the insertion of a mirror, it will be understood that a pane of glass may be substituted and the panel members 31, 33, and filling piece cut away to admit light therethrough.

In constructing the panel, the panel members with their integral moldings are secured together with the filling piece 6 interposed therebetween in any well known and approved manner. These panel members when assembled will have the flanges of the moldings turned inwardly, the upper panel having its upper pair of flanges in position to receive the upper rail, the lower pair of flanges in position to receive the upper side of the middle rail and the two pairs of side flanges in position to receive the stiles.

In like manner, the lower panel has its upper pair of flanges adapted to receive the lower side of the middle rail, the lower pair of flanges, the lower rail, and the two pairs of side flanges, the stiles. To assemble the door, the rails are first slid endwise on the flanges so that the corrugation on the rails will interlock with the corrugations on the flanges of the molding and thus prevent any lateral movement of either the panels or rails. Likewise, the stiles are slid lengthwise on the side flanges of the molding adjacent thereto, thereby locking the rails on the panels. It will be also understood that the longitudinal corrugations 9 on the stiles will interlock with the corrugations 26, 27, on the flanges of the molding in both the upper and lower panels and thereby prevent any outward movement of the stiles.

What I claim is:

1. A sheet metal door comprising, a panel member having moldings formed integral therewith, said moldings being connected to form a continuous molding surrounding the periphery of said panel member and provided with inwardly turned flanges, stile and rail sections having longitudinal flanges, clamping members interposed between said flanges and arranged to slidably engage the flanges of the panel member to interlock the stile and rail sections to the panel member.

2. A sheet metal door comprising, panel members having moldings formed integral therewith, said moldings being connected to form a continuous molding surrounding the periphery of each panel member and provided with inwardly turned flanges, stile and rail sections having longitudinal flanges, clamping members interposed between said flanges and arranged to slidably engage the flanges of the panel members to interlock the stile and rail sections to the panel members.

In testimony, that I claim the foregoing as my invention, I have signed my name this 13th day of March, 1917.

HENRY R. GOGAY.