F. R. HENRY.

RIVETED STRUCTURE.

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1,026,674.

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Fig. I.

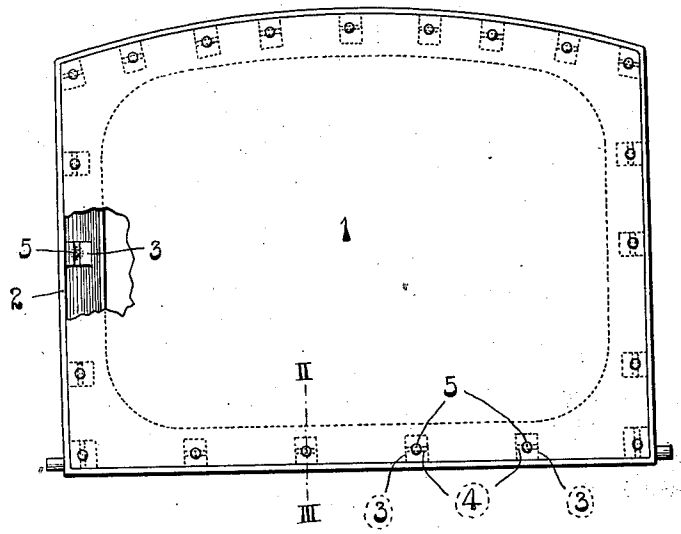


Fig. II.

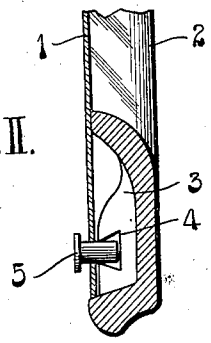
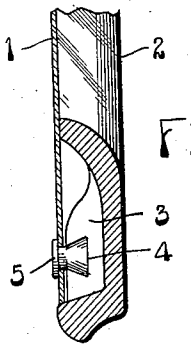


Fig. III.



Attest

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RIVETED STRUCTURE.

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To all whom it may concern:

Be it known that I, FRANK R. HENRY, a citizen of the United States of America, and a resident of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Riveted Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to riveted structures such as those comprising two metal plates or objects secured to each other through the medium of rivets, and it has for its object the production of a structure that permits a variance between the rivet receiving hole in one of the adjoining objects and the point of connection of the rivet to the other object.

One of the main purposes of my present invention is to furnish a structure including a door or door frame that is provided with rivet receiving members, and to which a lining plate is secured by rivets which extend through perforations in the lining plate and enter into the rivet receiving members of the door or door frame with provision in said members for latitude in the entrance of the rivets thereinto, thus avoiding necessity for accuracy in the positions of the holes in the lining plate relative to a particular point in the rivet receiving member.

As an example of a type of structure in which my improvement may be embodied, I mention oven doors of cooking ranges which very commonly comprise a metal door frame and a lining plate secured to said frame by rivets. It has been the common practice in making doors of this kind to produce rivet holes in both the door frame and the lining plate and to extend the rivets through both the frame and the plate. Where the doors are made by such process, the heads of the rivets are exposed at the exteriors of the doors and are unsightly; but, aside from this, it has been found difficult to secure alinement of the rivet holes in the lining plate with the rivet holes in the door frame, owing to the fact that when the rivet holes of the door frame are produced in casting the frame as they commonly are, they are not arranged with any regularity, due to variance in the shrinkage of the metal in the casting. By my improvement, I am enabled to set the rivets that extend through the lining plate into rivet receiving members at the back of the door frame, so that they are not exposed at the front of the door; and, furthermore, I provide rivet receiving members of such nature as to permit the seating of the rivets therein, even though the rivet receiving portions of the members may be slightly offset from the rivet holes in the lining plate.

Figure I is a rear elevation of a cooking range oven door with its lining plate partly broken out. Fig. II is an enlarged cross section taken on line II—III, Fig. I, with a rivet in position to be secured by upsetting it within a rivet receiving member of the oven door frame. Fig. III is a similar view to Fig. II, with the rivet shown in the last named view as it appears when upset.

In the drawings in which I have chosen to illustrate my improvement as applied to a range oven door, 1 designates a lining plate that is provided with rivet holes, and 2 is a metal door frame to which the lining plate is secured. The door frame 2 is provided with rivet receiving members or lugs 3 located at its rear face, and corresponding in number to the number of rivet holes in said lining plate. In the lugs 3 are undercut or dovetail grooves 4, positioned opposite the rivet holes in the lining plate, and adapted to receive the inner ends of rivets 5, which are inserted thereinto after passage through the rivet holes in the lining plate.

It will be very obvious that when the rivets have been inserted into the position seen in Fig. II, and are then driven forcibly against the base walls of the undercut grooves 4, they will be upset and caused to spread within said grooves so that they will eventually become wedged in the latter, as seen in Fig. III. The rivet receiving members 3, with their grooves, being located entirely at the back of the door frame, the rivets are not exposed at the front of the frame; and the grooves 4, being elongated, there is opportunity for the entrance of the rivets thereinto throughout the lengths of the grooves so that there is no necessity for

accuracy in positioning for the rivet holes in the lining plate relative to the length of the grooves.

I claim:—

A range oven door, comprising a door frame provided with rivet receiving members located at the back of the frame and having undercut grooves therein, a lining plate at the back of said frame provided with rivet holes, and rivets extending through the holes in said lining plate and upset in the undercut grooves in said rivet receiving members.

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In the presence of—
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