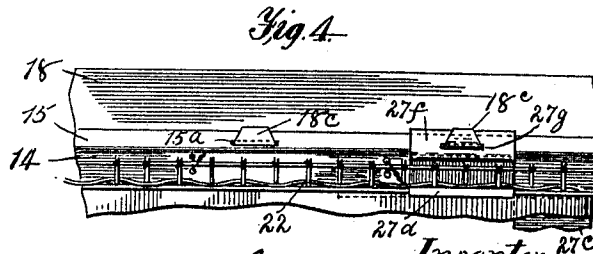
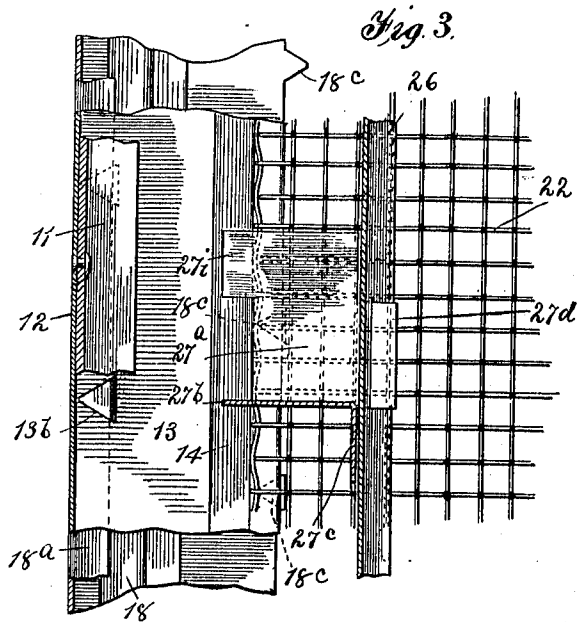
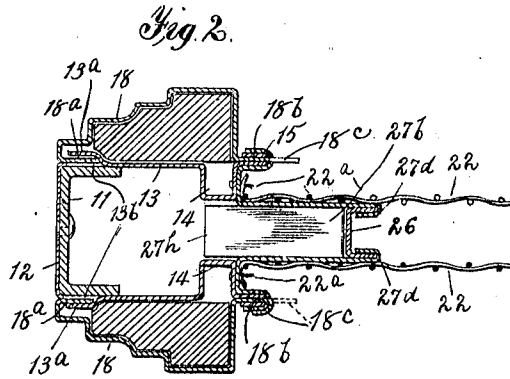
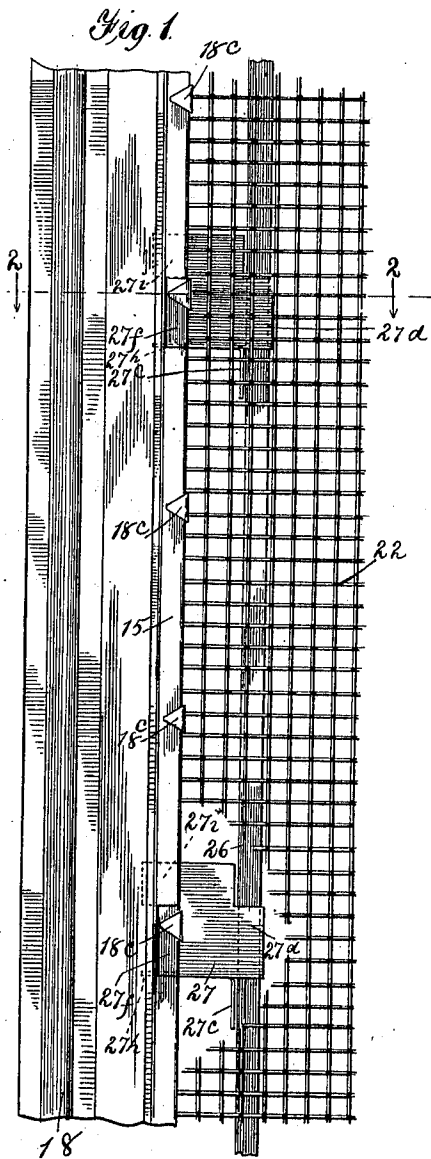


T. P. SHEAN.
PARTITION WALL TIE.
APPLICATION FILED FEB. 18, 1910.

980,132.

Patented Dec. 27, 1910.

2 SHEETS-SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

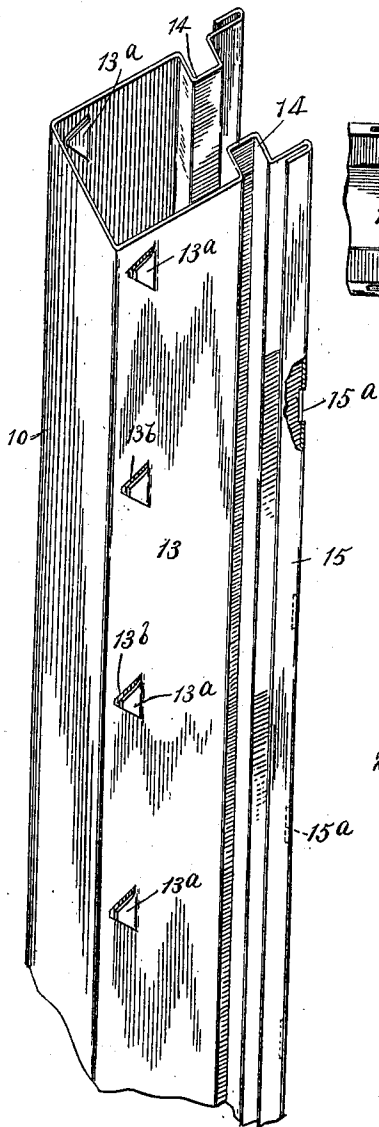


Fig. 6.

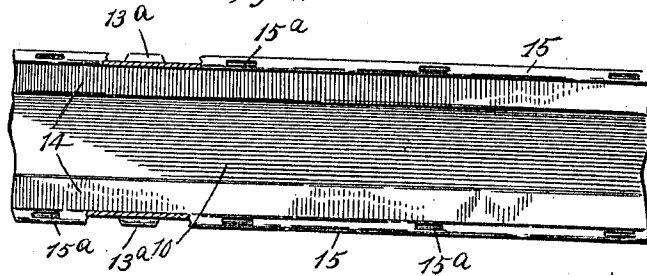


Fig. 7.

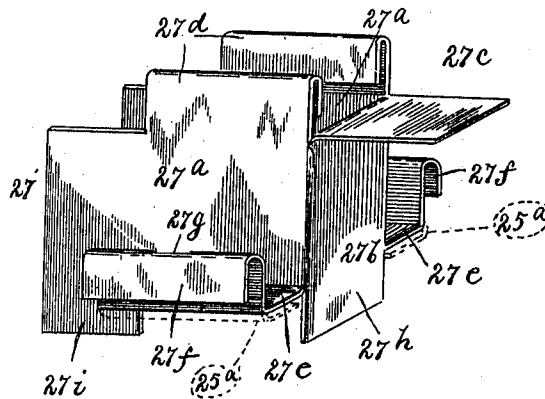
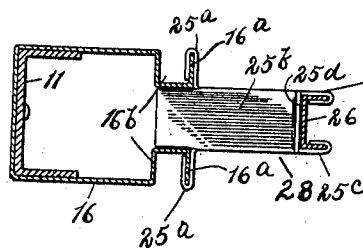


Fig. 8.



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UNITED STATES PATENT OFFICE.

THOMAS P. SHEAN, OF CHICAGO, ILLINOIS.

PARTITION-WALL TIE.

980,132.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed February 18, 1910. Serial No. 544,532.

To all whom it may concern:

Be it known that I, THOMAS P. SHEAN, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Partition-Wall Ties, of which the following is a specification.

My invention relates to wall construction and has especial reference to the formation of inside walls or partitions designed to have fire resisting qualities, being particularly directed to the manner of constructing and assembling the frames surrounding the door and other openings and to means for anchoring said frames to the adjacent walls.

The chief objects of the improvements which constitute the subject matter of this application for patent are to provide novel means for constructing hollow metal door frames with a view to facilitate the assembling of the members which coöperate to form the complete casing; to produce a fire proof frame that can be economically constructed, and to furnish an improved manner of securing the frames to the plastic foundation, the latter being of woven wire expanded metal or other material commonly used in fireproof walls.

Another object is to produce a construction of the character stated, that will be strong and rigid, the novel construction preventing the separation of the connected members when subjected to an unusual degree of heat, thus providing a structure that will be especially advantageous in fireproof construction.

I accomplish the above objects and other results of importance by employing the devices illustrated in the accompanying drawing, which forms a part of this application, the details of construction being disclosed in the following views:—

Figure 1 is a side elevation of a fragment of a door jamb embodying my invention, with a portion of the adjacent plaster foundation attached thereto; Fig. 2 is a sectional view on the line 2—2 of Fig. 1 on an enlarged scale; Fig. 3 is a fragmentary view showing a portion of the jamb and adjacent structure in vertical section; Fig. 4 is a partial view showing the lateral half of a portion of the structure, seen from the direction of the adjacent wall; Fig. 5 is a

perspective view of a portion of the central member of the jamb; Fig. 6 is another view of the member shown in Fig. 5; Fig. 7 is a perspective view of one form of the interlocking tie members, and Fig. 8 is a view of another form of interlocking tie and frame construction.

Referring to the details of the drawing Figs. 1 to 7 inclusive, the numeral 10 indicates a door jamb or casing formed of sheet material bent to form a hollow structure, the main portion being rectangular in cross section, and reinforced by a suitable channel iron 11, placed within the cavity of the jamb and secured to the face wall 12. The side walls 13 are bent inwardly and then outwardly to form longitudinal rectangular offset portions 14 the margins of the walls being then again bent so as to aline with the side walls 13, and the edges of the sheet then turned outwardly and then forward to form sockets or clips 15, which extend the entire length of the member. The bent edges of the said clips are provided with spaced slots 15^a, and the side walls 13 are furnished with spaced tongues 13^a, arranged in a line parallel with the face wall 12. These tongues 13^a are formed by triangular cuts 13^b, and the resulting flap bent outwardly so as to lie parallel with the metal from which it is cut but spaced therefrom to receive the margin 18^a of a hollow sheet metal molding or trim 18 which is applied to the outer side faces of the jamb. The general form of this molding is triangular in cross section, open on one side, as clearly disclosed in Fig. 2, the open side being closed by the wall 13 when the parts are assembled. One margin of the molding is turned upon itself to form a flange 18^a and the other margin is bent and shaped to form the flange 18^b which lies in the same plane as the flange 18^a and is furnished with spaced ears or tongues 18^c which are adapted to engage the slots 15^a in the clips 14, and each tongue is then bent outwardly over the wall of the clip, as shown in Figs. 1, 2, and 4, thus forming a clench which holds the parts securely together.

The particular foundation for the plaster shown comprises two sheets of woven wire fabric 22 having the margins adjacent to the jamb or other portion of the frame bent at a right angle as indicated in Fig. 2 and

secured to the rectangular offsets 14 by tie wires 22^a which pass through suitable holes in said offset. The wire fabric sheets extend parallel to form the wall, as shown in Fig. 2, and are spaced apart and stiffened by a channel iron or bar 26, placed a short distance from the jamb and secured thereto at desirable intervals by sheet metal tie plates 25 or 27. The form of tie shown in Fig. 7 is composed of side members 27^a lying parallel to each other and connected by a transverse plate 27^b. The upper portion of this connecting plate is severed from the side plates and bent outwardly at a right angle to form a tongue 27^c as shown in Fig. 7. The upper margins of the side plates 27^a are bent to form clips or clasps 27^d adapted to engage the edges of the channel bar 26. The side plates adjacent the connecting plate 27^b are formed with outwardly extending portions 27^e which are in contact with the offsets 14, the edges of these portions being bent to form clips 27^f which are adapted to engage the reversely turned clips 15, said clips 27^f having slots 27^g which align with the slots 15^a when assembled so that the tongues 18^c will also pass through the slots 27^g and bind the tie piece firmly to the structure when clenched. The lower end 27^h of the transverse plate 27^b extends between the offsets 14 to hold them properly spaced apart, and the side plates at the other end have projections 27ⁱ which are in engagement with the inner faces of said offsets 14. The tie member 27 thus described forms an effective interlocking device whereby the channel bar 26 is firmly anchored to the main and trim members forming the jamb. When assembling the structure the tie pieces 27 are mounted upon the channel bar by slipping the clips 27^a upon the end of the bar and sliding the member along to the proper position or may be bent over the edges of said bar wherever it is desired to apply them. The moldings are assembled by pushing the tongues 18^c through the slots 15^a in the clips 14 and sliding the turned margin 18^a beneath the tongues 13^a after which the tongues 18^c are bent outwardly and clenched in the manner described.

Where no trim or molding is desired, I modify the construction of my interlocking jamb and tie as shown in Fig. 8. In this form of my invention, 16 represents a sheet metal jamb having outwardly turned flanges 16^a along its edges. These flanges are interlocked with the inwardly turned clips 25^a which form the side members of the tie which locks the jamb to the channel-bar 26. The other members of this tie are the tongue 25^b, the edges of which extend between the offsets 16^b, the clips 25^c which embrace the channel-bar 26, and the tongue 25^d which is at right angles to the tongue 25^b. The only difference in shape between

the clip illustrated in Fig. 8 and the one shown in Fig. 7 is in the form of the clips 25^a, and I have indicated this by showing in dotted lines in Fig. 7 the form the clips 25^a would take if added to the portions 27^e, it being understood, that if this form was used the part 27^f with the slots 27^g would be omitted.

Having thus described my invention what I claim is:—

1. In the construction of walls, a hollow metal frame having projecting marginal flanges, a metal bar set in the wall, and a sheet metal tie having portions interlocking with the frame and with said bar.
2. In the construction of walls, a hollow metal frame having projecting free edges, a metal stiffening bar adapted to be set in the wall, and a metal tie adjustably arranged on said bar and frame and interlocking therewith.
3. In the construction of walls, a metal frame or jamb having its edges bent to form clips, a metal stiffening bar adapted to be secured in the wall, a metal tie having clips interlocking with said bar and other clips interlocking with said frame or jamb.
4. In the construction of walls, a hollow metal frame, a metal molding secured to said frame, a metal bar set in the wall, and a metal tie, said frame, molding, tie and bar having interengaging portions detachably connecting them together.
5. In the construction of walls, a hollow metal frame, a metal molding removably connected to said frame, a metal bar set in the wall and an adjustable metal tie adapted to interlock with said frame, molding and bar.
6. In wall construction the combination of a metal frame, and wall foundation members, a sheet metal device having integral portions adapted to interlock with the frame and wall foundation members, and other portions adapted to maintain said members in their relative positions.
7. In combination with a hollow metal frame and a member arranged in the wall adjacent said frame, means for connecting said frame and wall member, said means consisting of a metal member having portions interlocking with the frame, portions interlocking with the wall member, and a portion adapted to hold the frame sides in their spaced relation.
8. In combination with a hollow metal frame and a bar arranged in the wall adjacent said frame, means for connecting said frame and bar, said means consisting of a sheet metal member having bent tongues interlocking with the frame, bent tongues interlocking with the bar and a portion extending between the sides of the frame and adapted to hold said sides spaced apart.
9. In combination, a hollow metal frame having bent flanges and openings in said

flanges, and having tongues projecting from its sides, and a hollow metal molding adapted to interlock with said tongues and openings.

- 5 10. In combination, a hollow metal frame, a wall, a metal bar set in said wall, and means for tying said frame and bar together against relative expansion, said means also

adapted to prevent the separation of the frame and the bar from the wall.

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

THOMAS P. SHEAN.

Witnesses:

M. A. MILORD,

F. BENJAMIN.