

C. COLLINS.
FIREPROOF WALL OR PARTITION CONSTRUCTION.
APPLICATION FILED OCT. 16, 1916.

1,368,699.

Patented Feb. 15, 1921.
2 SHEETS—SHEET 1.

Fig. 1.

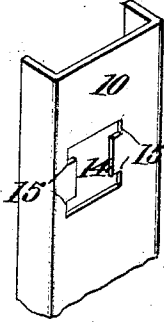


Fig. 2.

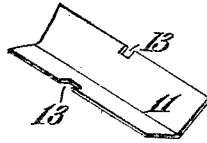


Fig. 4.

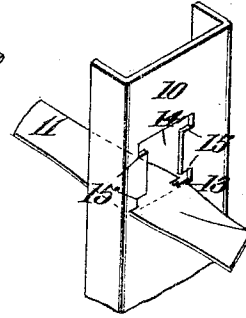


Fig. 13.

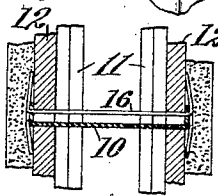


Fig. 3.

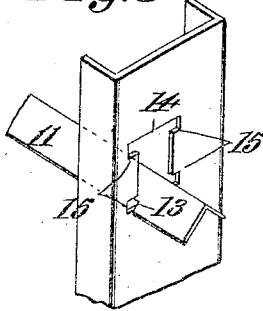


Fig. 8.

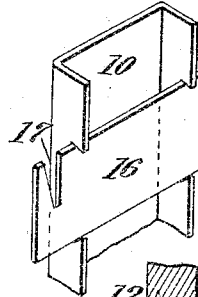


Fig. 5.

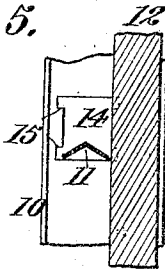


Fig. 9.

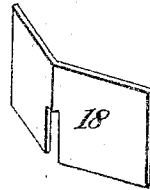


Fig. 6.

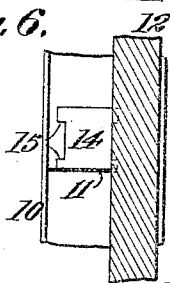


Fig. 7.

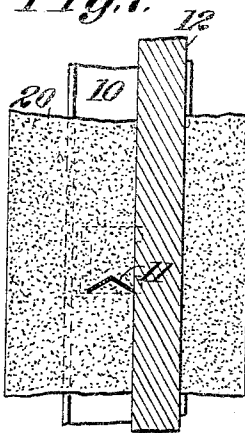


Fig. 10.

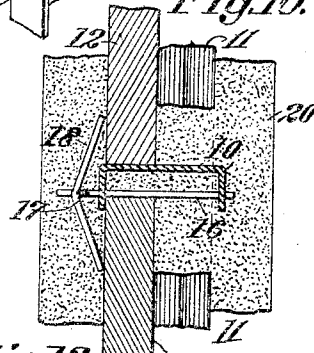


Fig. 11.

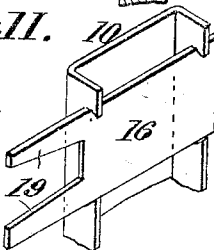
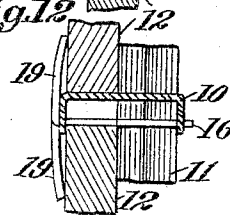


Fig. 12.



WITNESSES:

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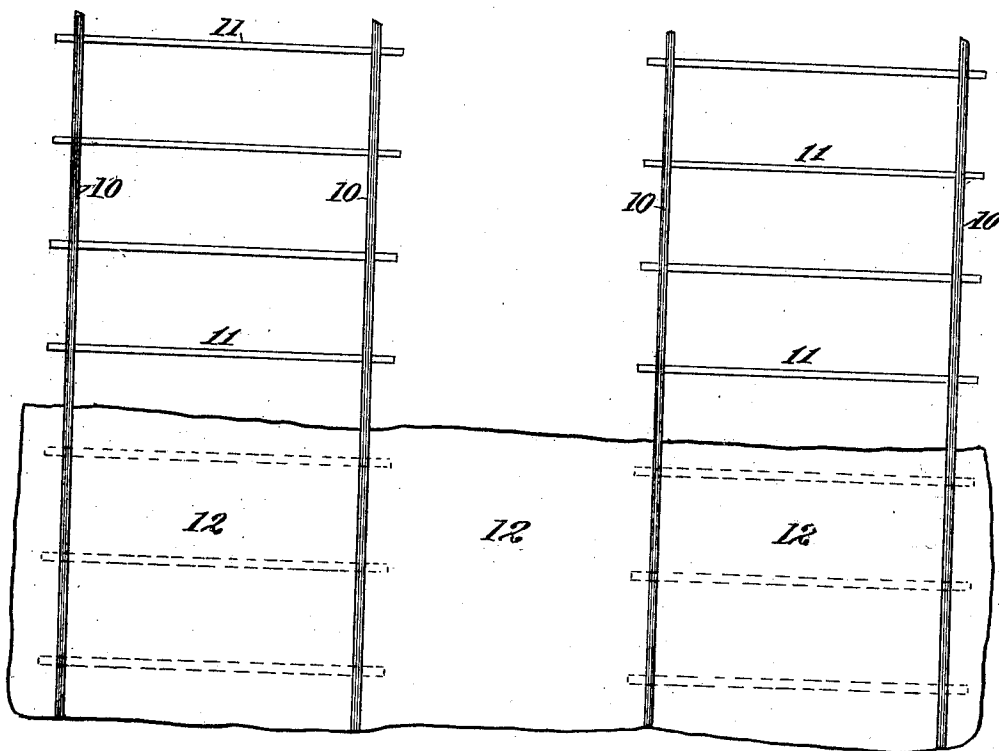
ATTORNEYS

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Fig. 14.



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UNITED STATES PATENT OFFICE.

CORNELIUS COLLINS, OF BURLINGAME, CALIFORNIA.

FIREPROOF WALL OR PARTITION CONSTRUCTION.

1,368,699.

Specification of Letters Patent. Patented Feb. 15, 1921.

Application filed October 16, 1916. Serial No. 125,836.

To all whom it may concern:

Be it known that I, CORNELIUS COLLINS, a citizen of the United States, residing at Burlingame, in the county of San Mateo and State of California, have invented new and useful Improvements in Fireproof Wall or Partition Construction, of which the following is a specification.

This invention relates to fireproof walls or partitions; and has for its object to simplify and improve the construction and operation of means for receiving sections, such as plaster-board, metal lath, and the like, in place upon the studding.

The invention in its simplest form consists of a metal stud having a part passing transversely between the adjacent edges of the sections of plaster-board, or the like, and a series of bars intermediate the longitudinal edges of the stud extending in opposite directions, whereby to receive and support the plaster-receiving sections at one side, with suitable means in connection with the stud for engaging and supporting the plaster-receiving sections on the opposite side.

Several forms which my invention may assume are exemplified in the following description and illustrated in the accompanying drawings, in which—

Figure 1 shows a perspective view of a portion of a stud.

Fig. 2 shows a perspective view of one of the bars employed in connection with the stud for receiving and supporting the plaster-board at one side.

Fig. 3 shows a perspective view of the stud with the bars in initial position.

Fig. 4 shows a similar view, with the bar expanded in its final position.

Figs. 5 and 6 show vertical, sectional views corresponding to Figs. 3 and 4, respectively, with the plaster-board sections in place on the studding.

Fig. 7 shows a similar view of the completed wall.

Figs. 8 and 9 show perspective views of one form of clip for the front side of the plaster-receiving members.

Fig. 10 shows a horizontal, sectional view of a portion of a wall constructed in accordance with my invention.

Fig. 11 shows a perspective view of a modified form of clip for the front side of the plaster-receiving members.

Fig. 12 shows a horizontal, sectional view

of a stud provided with a modified form of my fastening and supporting means.

Fig. 13 shows a horizontal sectional view of a hollow wall construction embodying my invention.

Fig. 14 shows a side elevation of a portion of a wall or partition embodying my invention.

Referring in detail to the accompanying drawings, the wall or partition there shown comprises a series of spaced uprights or studding members 10, preferably formed of channel bars and having their central or web portions extending transversely of the wall or partition, expansible bars 11 are fitted upon the web portion of the studs intermediate the longitudinal edges thereof and spaced apart in a vertical direction, said bars extending in opposite directions and forming supports for the back surfaces of plaster-receiving members 12, such as plaster-board, metal lath, wire mesh, and the like, commonly employed in fireproof construction. The wall or partition may be either solid or hollow, and in the case of the latter I preferably employ a studding element, such as shown in Fig. 13, wherein the web portion is made considerably wider and two sets of bars 11 are employed, one at either side to receive each a series of sectional members 12.

As best shown in Fig. 3 the bars 11 comprise V-shaped sheets, notched at 13 and adapted to be inserted in a slot or opening 14 in the web portion of the stud, said opening 14 having shouldered extensions 15 forming recesses at the bottom of the opening, wherein the V-shaped bar is received, and flattened out so that the notches 13 in the bar engage the sides of the slot and the shoulders 15 retain the bar against vertical movement. Preferably, the bars are of such length as to pass between two studding elements and project a slight distance from the opposite sides thereof in order to secure a better anchoring and support for the bars. It is obvious, however, that the bars may be made even shorter and supported merely upon one stud.

For securing the plaster-receiving sections 12 in place at their front surfaces, any suitable means may be employed; and in the present case I have illustrated two forms, one of which is represented by Figs. 8, 9 and 10 and the other by Figs. 11 and 12. The former comprises a plate 16 extending

transversely of the channel bar studding and secured detachably in place thereon by means of dove-tailed notches cut in the flanges of the channel bar. The outer front end of the plate 16 has a deep notch 17 into which the notched portion of a hipped plate 18 is fitted, the opposite ends of said hipped plate being bent down to rest against and supporting adjacent edges of the plaster-receiving members 12.

In the other form shown the transverse plate 16 has a bifurcated outer end forming prongs or clips 19, which prongs are adapted to be bent in opposite directions, as shown in Fig. 12, to engage the adjacent plaster-receiving sections.

It is evident that the metal stud carrying or provided with bars 11 extending from the web portion thereof, which occupies a transverse position with reference to the plaster-receiving sections, is the primary or fundamental idea of the invention, since various other means or devices may be employed for securing the plaster-receiving sections in place on the side opposite to that engaged by the said bars 11. By having these bars carried on the transverse portion of the stud and spaced inwardly from the edge thereof it becomes compulsory to apply a thick layer of plaster coating upon the adjacent surface of the plaster-receiving sections in order to cover up the marginal edge of the stud. On the opposite edge of the stud the clip 18 may be projected outwardly as far as desired and a flange of the channel bar may also extend beyond the surface of the members 12 so as to necessitate a corresponding increase in the thickness of the plaster coating.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A wall construction comprising vertically disposed metal studs, the sectional formation of which is channel-shaped, and the main web of which extends transversely to the partition to be formed, I-shaped perforations through the web of the stud, recesses formed in the flanges of the stud, clip members adapted to be positioned within the recesses and extending in a plane parallel to the wall of the stud for securing plaster board in place, and angle-shaped connecting members secured through the perforations in the wall of the studding for the support of the same and expansible

transversely to engage the web perforations. to become immovable.

2. A wall construction comprising vertically spaced studs, formed of channel section, and disposed with their webs transversely to a partition to be formed, I-shaped perforations through the webs of said studs, angle-shaped supporting members extending through the perforations and having edge notches which inter-lock therewith to form a backing, for plaster board resting thereagainst, recesses formed in the edges of the flanges of the studs and clips extending through the said recesses and secured therein in a manner to extend between and to engage the outer faces of the plaster boards and to hold them against the angle shaped supporting members.

3. A wall construction comprising channel sections disposed with their webs transversely of a partition, I-shaped perforations through the webs of said studs, partition-supporting members adapted to extend through said perforations, and to interlock the notches thereof with spaced relation to the flanges of the stud equal to the thickness of a plaster board to be used, recesses formed in the flanges of said stud, clip members adapted to seat within said recesses and formed with prongs at their opposite ends for securing the plaster boards against the supporting members extending through the perforations in the studs.

4. A wall and partition of the character described including a vertically disposed line of studding formed of channel bars having the intermediate webs transverse to the wall, I-shaped slots made through said webs, thin sheet metal hipped bars having notched edges to interlock with the slots, and extending between adjacent studs, plaster board disposed in line with the flanges of the channel bars and supported from within by the hipped bars, said channel bar studding flanges, having notches formed in the edges, and transverse plates supported in the notches and having foldable ends, to engage the opposite side of the wall members and hold them against the interior hipped bars.

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

CORNELIUS COLLINS.

Witnesses:

JOHN H. HERRING,
W. W. HEALEY.