M. DAWSON.

FIREPROOF PARTITION.

APPLICATION FILED JULY 26, 1913.

Patented July 7, 1914.

1,102,883.

4 SHEETS—SHEET 1.

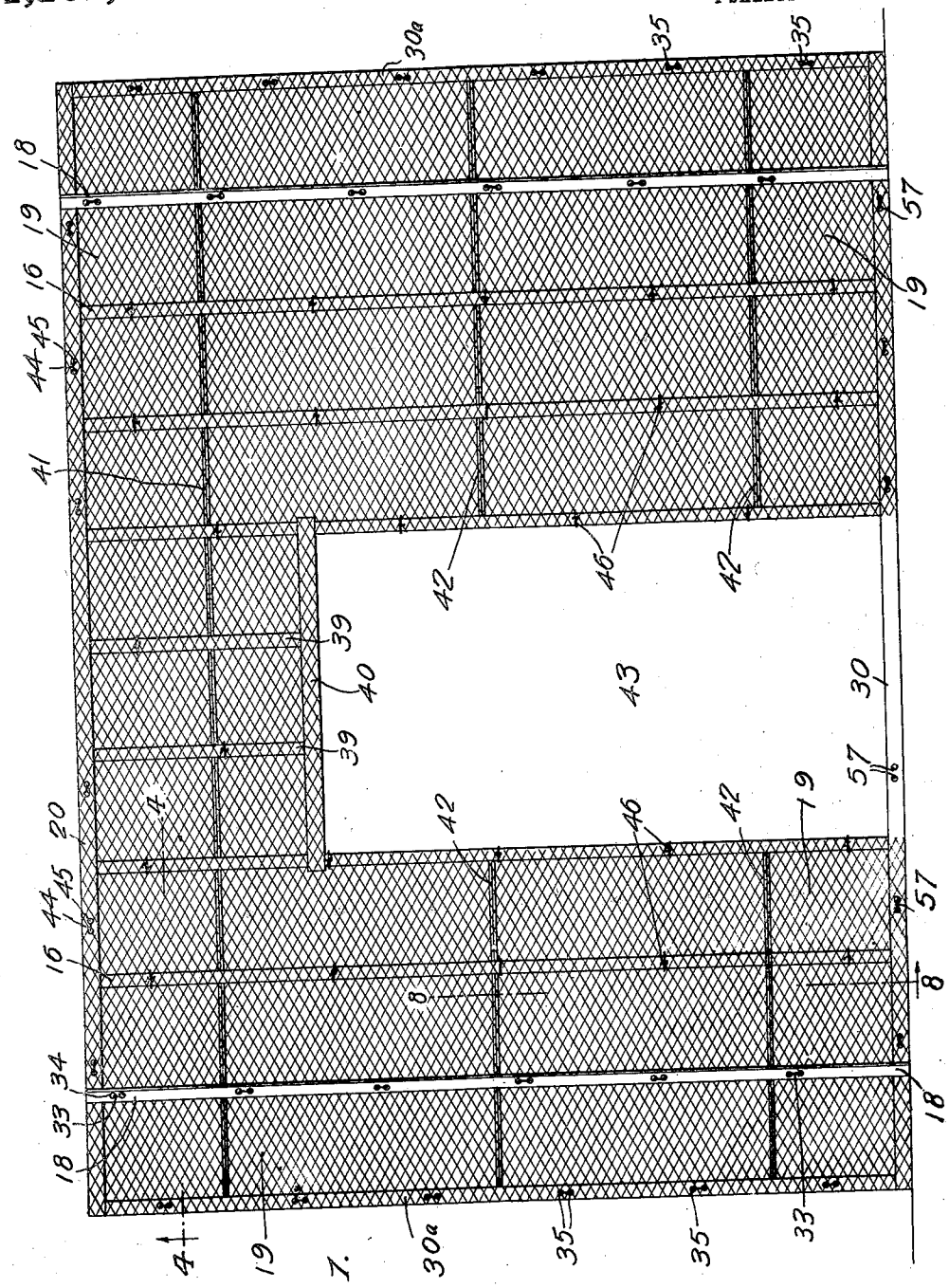


Fig. 1.

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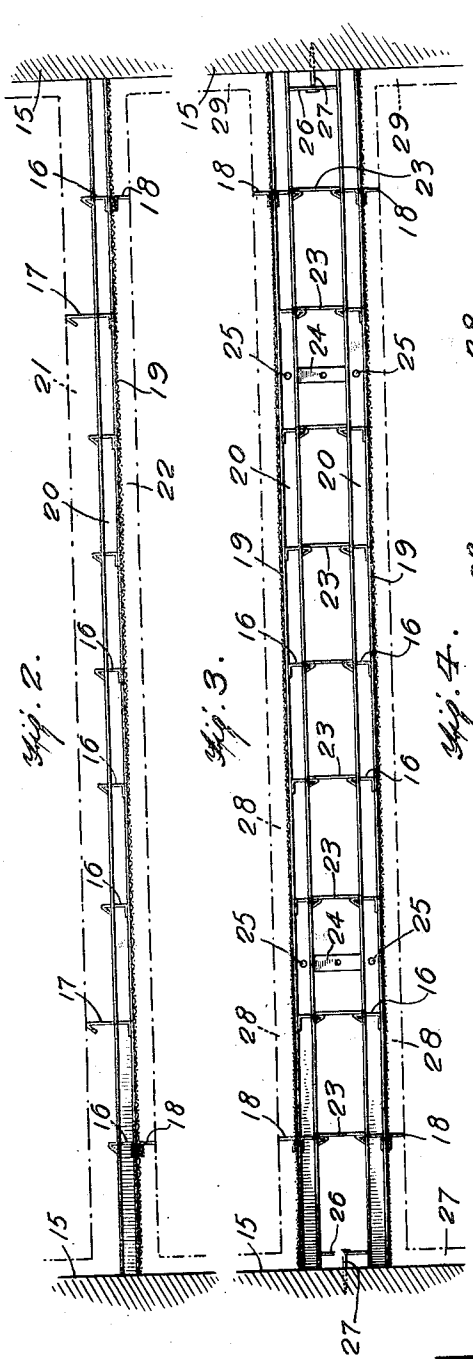


Fig. 2.

Fig. 3.

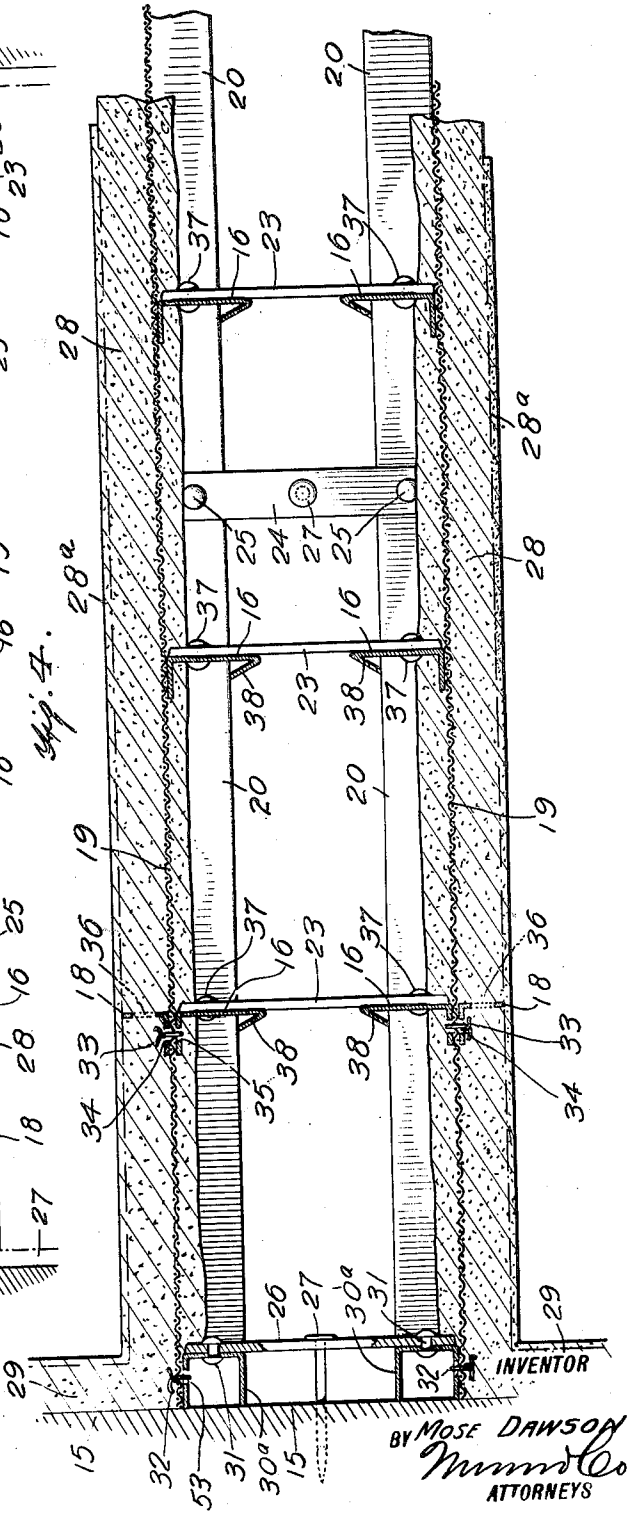


Fig. 4.

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4 SHEETS—SHEET 3.

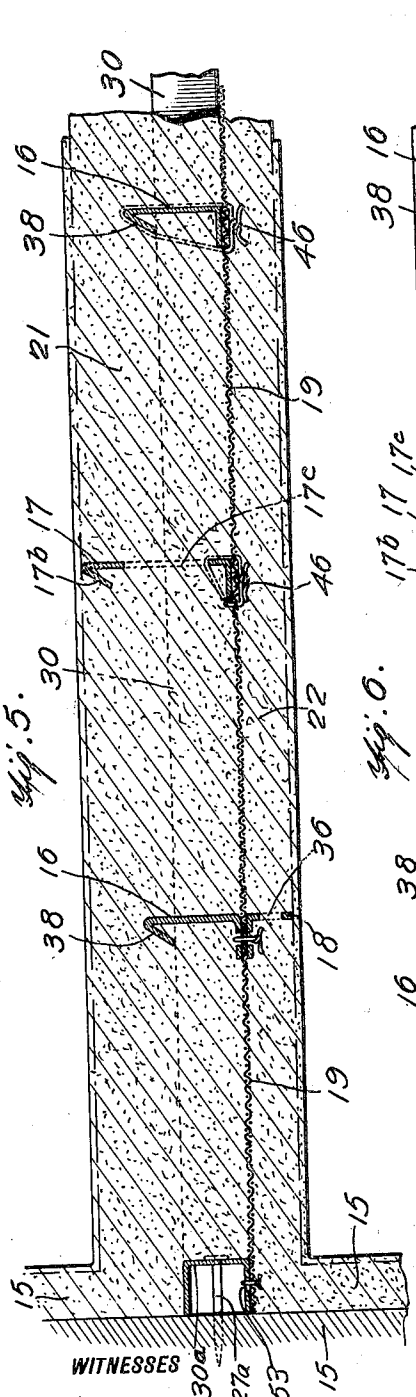


Fig. 5.

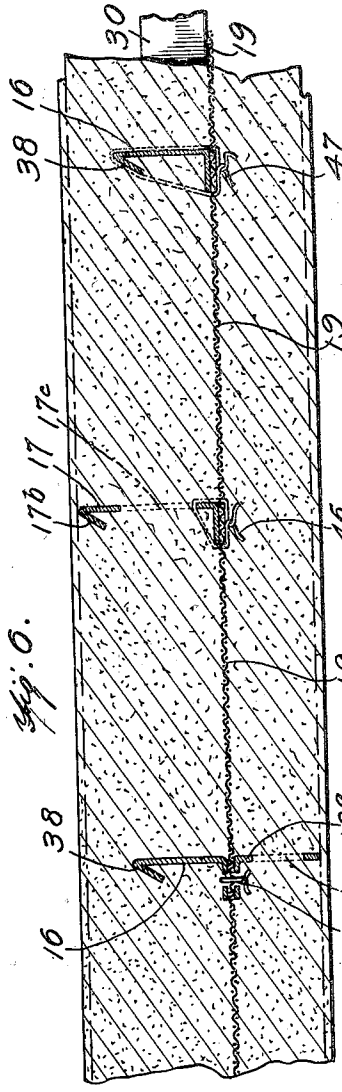


Fig. 6.

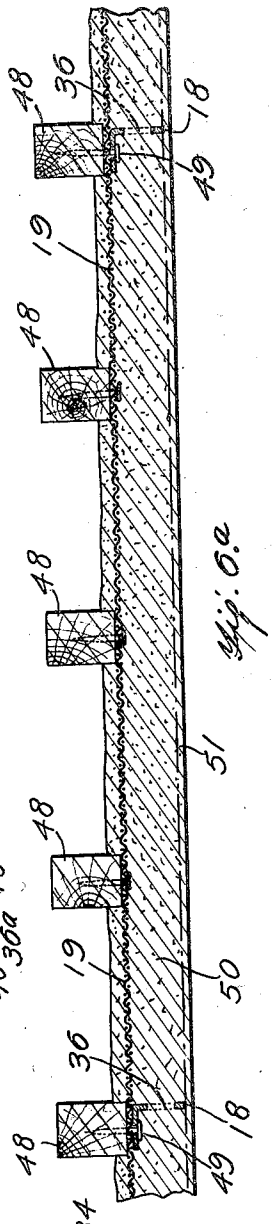


Fig. 6a.

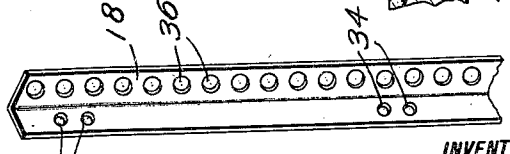


Fig. 7.

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4 SHEETS—SHEET 4.

Fig. 8.

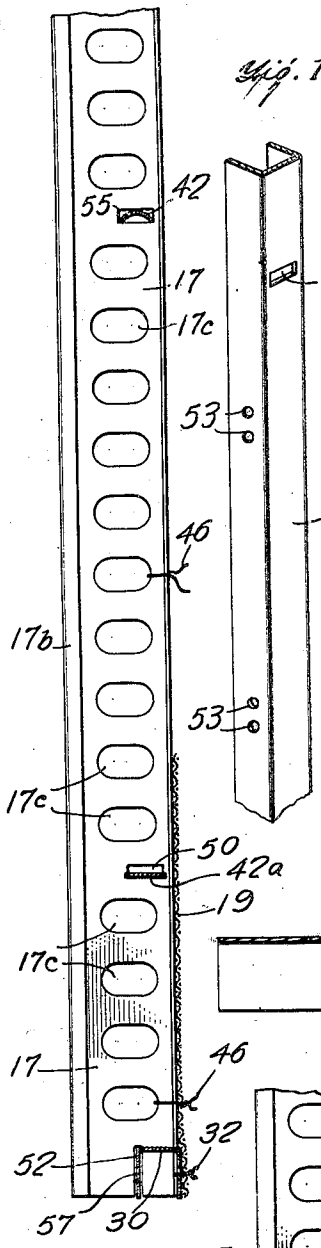


Fig. 12.

Fig. 13.

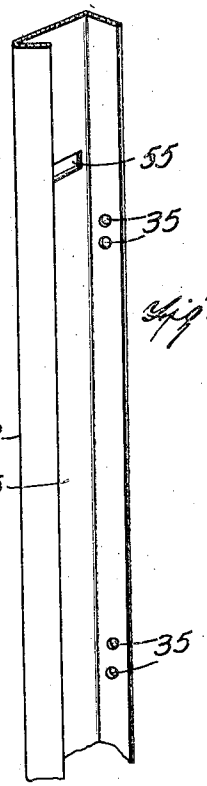


Fig. 14.

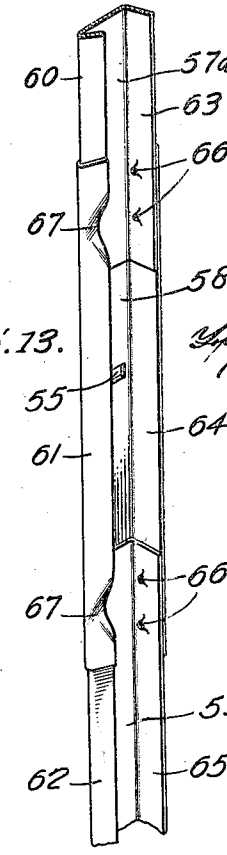


Fig. 15.

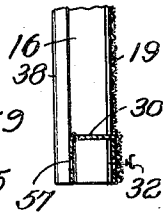


Fig. 11.

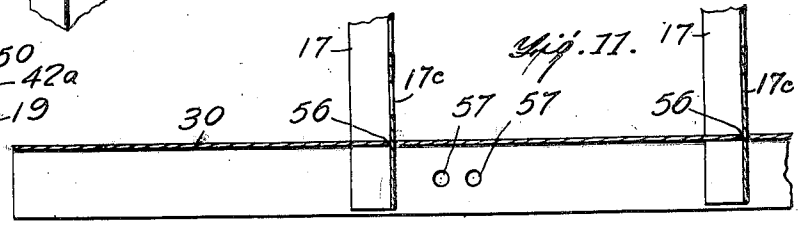


Fig. 9.

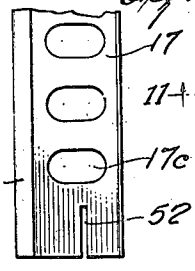
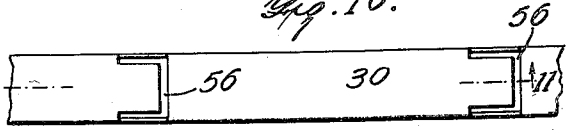


Fig. 10.



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FIREPROOF PARTITION.

1,102,883. Specification of Letters Patent. Patented July 7, 1914.

Application filed July 26, 1913. Serial No. 781,385.

To all whom it may concern:

Be it known that I, MOSE DAWSON, a citizen of the United States, and a resident of Los Angeles, in the county of Los Angeles and State of California, have invented a new and Improved Fireproof Partition, of which the following is a specification.

My invention relates to fire proof partitions, my more particular purpose being to produce a device of this character suitable for assuming a large number of different forms, and in which lightness, durability and strength are combined with cheapness, and in which the partition may be rendered comparatively thin, other things being equal.

More particularly stated my invention is a fire proof partition especially adapted for use in crowded office buildings where the space requirements are exceedingly severe so that the partition must be made very thin, without undue sacrifice of other desirable characteristics.

Reference is made to the accompanying drawings forming a part of this specification, and in which like letters indicate like parts.

Figure 1 is a front view of the skeleton frame work for one form of my improved fire proof partition having in this instance a double wall. Fig. 2 is a top plan view of the frame work of another form of my improved partition, which in this instance is provided with a single wall. Fig. 3 is a plan view of the partition shown in Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 1 looking in the direction of the arrow. Fig. 5 is a fragmentary horizontal section through the form of my invention in which a single wall is used. Fig. 6 is a fragmentary horizontal section through the form using the single wall, but in which the proportions of the filling material are somewhat different from those disclosed in Fig. 5. Fig. 6^a is a fragmentary horizontal section showing another form of my invention. Fig. 7 is a detail showing one of the screeds for supporting mortar and gaging thickness thereof over the metal roof as well as forming the lines to work to for straightening the work. Fig. 8 is a fragmentary view showing partly in section and partly in elevation a screed of a form different from that in Fig. 7. Fig. 9 is a fragmentary elevation showing the lower end of the screed shown in Fig. 8. Fig. 10 is a fragmentary plan view of one of the floor plates. Fig. 11 is a section on the line 11—11 of Fig. 10, looking in the direction of the arrow. Fig. 12 is a detail showing in fragmentary perspective one of the wall plates. Fig. 13 is a fragmentary perspective showing still another form of screed, and Fig. 14 is a detail showing in fragmentary elevation an extension screed, that is, one which may be practically lengthened or shortened, and Fig. 15 is a cross section through one of the floor plates adjacent to one of the screeds, and illustrating the engagement of the latter therewith.

The building walls, that is the permanent walls of the edifice, are shown at 15. At 16 are a number of screeds which are spaced apart and disposed vertically. At 17 are screeds each of somewhat greater width than one of the screeds 16, as may be understood from Fig. 2. At 18 are two screeds of a somewhat different type from the screeds 16—17. At 19 is a metallic lath, that is a reticulated metallic member serving the purposes of a set of laths and connected with all of the screeds and certain other parts as hereinafter described.

A ceiling plate is shown at 20 and is substantially U-shaped in cross section. A body of mortar is filled in at 22 and allowed to set or harden. The back 21 is next filled flush with the screeds. Then after all the mortar has set, the finish coat is put over the face of the mortar and adjacent edges of the screeds.

Where the wall is to be made double, as indicated, in Figs. 3 and 4, the filling 22 of mortar is omitted and two single walls are virtually formed, these single walls being spaced apart by tie plates 23—24. The aggregate thickness of the double wall thus formed may be controlled within reasonable limits by the length of the tie plates 23—24 thus employed. These tie plates are held in position by fastenings 25—26, the latter in turn being held in position by nails 27 or other appropriate fastenings. The fillings of the double wall are shown at 28—28 and may be provided with facings 28^a—28^a for the purpose of improving the appearance of the partition. The fillings 28 may be extended along the permanent wall 15 of the building as indicated at 29 in Fig. 4. At the bottom of the partition, I employ floor plates 30 each having in cross-section substantially the form of an inverted U. I also employ wall plates 30^a at the vertical edges of the partition, the wall plates 30^a carrying

the brackets 26 which are secured thereto by rivets 31. Similarly the tie plates 24 are connected with the ceiling plates 20 by rivets 25, as may be understood from Fig. 4. The floor plates 30 are connected in the same manner.

The wall plates 30ª are provided with holes 53 (see left of Fig. 4) for facilitating the application of tie wires 32 in order to hold the metal lath 19 in position. The screeds 18 and 16 are provided with holes 34—35 for accommodating tie wires 33 which extend through these holes and through the metal lath 19 in order to support the latter. The screeds 18 are provided with holes 36 which not only serve as anchorages for the filling 28, but also render this filling practically continuous.

Rivets 37 connect the tie plates with the screeds 16. The screeds 16 are provided with reverting edges 38 for holding other parts in position as hereinafter described.

For some purposes I use short screeds 39, as shown in Fig. 1, these screeds aside from their length, being of substantially the same form as the screeds 16. At the bottoms of the short screeds 39 I use a door plate 40. At 41—42 are tie strips for the purpose of strengthening the partition. These tie strips are of especial service around a door such as 43 in Fig. 1.

Tie wires are shown at 44 and are used for holding the metal lath upon the ceiling plate 20, which for this purpose is provided with holes 45. Tie wires 46 are also used for holding the metal laths upon the screeds 16. In some instances tie wires completely encircle the screeds 16 as shown at 47, right of Fig. 6. In other instances the tie wires 46 are merely passed through the holes 34 and 25 as above explained with reference to Fig. 4.

In the form shown in Fig. 6ª I apply the screeds 18 to a wall or a group of posts 48 already in position. For this purpose the screeds 18 and the metal lath 19 are placed against the posts and are held in position by nails 49. The filling 50 is next placed in position and a facing 51 is then formed upon the filling 50.

Each screed 16—17 is provided at its end with a slot 52 of the form shown in Figs. 8 and 9, for facilitating the mounting of the screed in position. Each wall plate 30ª is provided with holes 53 to facilitate the application of the tie wires 46. Each wall plate 30ª is also provided with a horizontally disposed slot 54. The screeds 16—17 are each provided with horizontally disposed slots 55 for holding the binding strip 42. This binding strip when first placed in position has an arcuate form in cross-section, as indicated in the upper portion of Fig. 8. When, however, the binding strip is flattened out by the aid of a hammer or mallet as appears at 42ª in Fig. 8, the binding strip, thus flattened is clenched in position and firmly holds itself in position relatively to the screeds through which it extends.

Each ceiling plate 20 and floor plate 30 is provided with U-shaped slots 56, as indicated in Fig. 10, these slots being adapted to facilitate the connection of lower ends of the screeds 16—17, as will be understood from the lower portion of Fig. 8. Each floor plate and ceiling plate is further provided with holes 57 for facilitating the application of tie wires 32 to hold the metal lath in position, as indicated at the bottom of Fig. 8.

In Fig. 14 I show an extensible screed. This screed is made of a plurality of sections 57ª, 58, 59, fitted telescopically together and severally provided with reverting portions 60, 61, 62, and with base portions 63, 64, 65. By aid of rivets 66 the telescopic sections are secured firmly together, after which the reverting portions 61 are bent or crimped at 67, thus further securing and steadying the composite screed thus formed.

I find it convenient, in building the partition above described, to place the ceiling plate 20 and the floor plate 30 in predetermined arbitrary positions indicated by measurement and preferably by bringing each of them to a line marked on the floor or ceiling. By doing this and applying a temporary prop, serving as a gage, to locate the middle or intervening portion of the partition, or rather in building the middle or intervening portion of the partition against the prop just mentioned, the partition as a whole is rendered perfectly true and accurate. The temporary top, however, is not necessary unless the partition exceeds a height of 12 or 14 feet.

In applying the mortar it is a good idea to first place the filling 22 in position, bringing the mortar to the face of the screeds on the thin side first. Then after the mortar has set the heavy side 21 may be filled, to the face of the screeds.

Where the wall is to be single, as indicated in Fig. 5, I preferably apply the filling 21 of mortar so as to bring the outer surface of the same flush with the outermost portions of the screeds 17 and then apply the facing so as to cover up the screeds and hide the same. The thickness of the single wall may be controlled by using screeds 16—17 of appropriate width for the purpose, or by using screeds 18 which may be narrow or wide according to the thickness desired.

Where the screeds are employed as shown in Fig. 6ª the width of the screeds determines virtually the thickness of the wall.

Where double walls are used, as indicated in Figs. 3 and 4, the thickness of each of the wall members may be made always the same if desired, the aggregate thickness of the wall being controlled by the distance the wall members are spaced apart, in other words, by the length of the tie plates used.

The U form of the slots 56 enables the ceiling plates and tie plates to be used interchangeably and also to be used in a variety of different relations. This form for the slot enables the screeds 16—17 to be readily connected with the ceiling plates or floor plates and that too independent of whether said plates be for the one or the other of their two interchangeable uses.

I do not limit myself to the precise construction shown as variations may be made therein without departing from the spirit of my invention the scope of which is commensurate with my claims.

I claim:

1. A fire proof partition comprising floor plates and ceiling plates, a plurality of screeds connected with a floor plate and a ceiling plate, each of said screeds being provided with a longitudinal reverting edge engaging the adjacent side surface of the floor plate and the ceiling plate, a plurality of tie plates each extending from one of said screeds to another, and a metallic lath mounted upon said screeds, and supported thereby.

2. A device of the character described, comprising a ceiling plate, a screed connected with the ceiling plate, said screed being substantially L-shaped in cross section and having a longitudinal reverting edge along one angular portion thereof engaging the adjacent side of the ceiling plate, a tie plate engaging said screed, and a metallic lath connected with the other angular portion of the screed, substantially as described.

3. In a fire proof partition, the combination of a pair of ceiling plates each having a substantial U-form in cross section, a tie plate extending from one of said ceiling plates to another, means for securing said tie plate to said ceiling plates, screeds having longitudinal reverting edges engaging the inner side surfaces of said ceiling plates, and metal laths mounted upon said screeds.

4. In a fire proof partition, the combination of a screed substantially L-shaped in cross section and one angular portion of which has a free angular reverting edge extending longitudinally therealong for engagement with a floor or ceiling plate, a metallic lath engaging the other angular portion of the screed, a second screed, and means for connecting the said second screed with said lath and with the first mentioned screed.

5. In a fire proof partition, the combination of a pair of ceiling plates each having a substantial U-form in cross section, a tie plate extending from one of said ceiling plates to another, for connecting the ceiling plates, screeds having inner longitudinal reverting edges engaging the inner side surfaces of the ceiling plates, and having outer L-shaped portions, and metal laths mounted upon the L-shaped portions of the screeds.

6. In a fire proof partition, the combination of a pair of ceiling plates each having a substantial U-form in cross section, a tie plate extending from one of the ceiling plates to another for connecting the same, screeds having inner longitudinal reverting edges engaging the inner side surfaces of the ceiling plates and having outer L-shaped portions, tie plates connecting the screeds, and metal laths mounted upon the L-shaped portions of the screeds.

7. A fire proof partition comprising floor plates and ceiling plates having angular slots, screeds substantially L-shaped in cross section, each having slotted ends for engagement within the slots of the floor and ceiling plates and a longitudinal reverting edge along one portion which engages the adjacent side surfaces of the floor and ceiling plates, and a metallic lath mounted upon the other portion of the screeds.

8. In a fire proof partition, a screed substantially L-shaped in cross section and one angular portion of which has a free angular reverting edge extending longitudinally therealong for engagement with a floor or ceiling plate, and a metallic lath secured to the other angular portion of the screed, all for the purpose described.

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Witnesses:
VIOLA DAWSON,
W. N. CRANDALL.