

(No Model.)

A. McCARTNEY.
FIREPROOF PARTITION FOR BUILDINGS.

No. 552,539.

Patented Jan. 7, 1896.

FIG. 1.

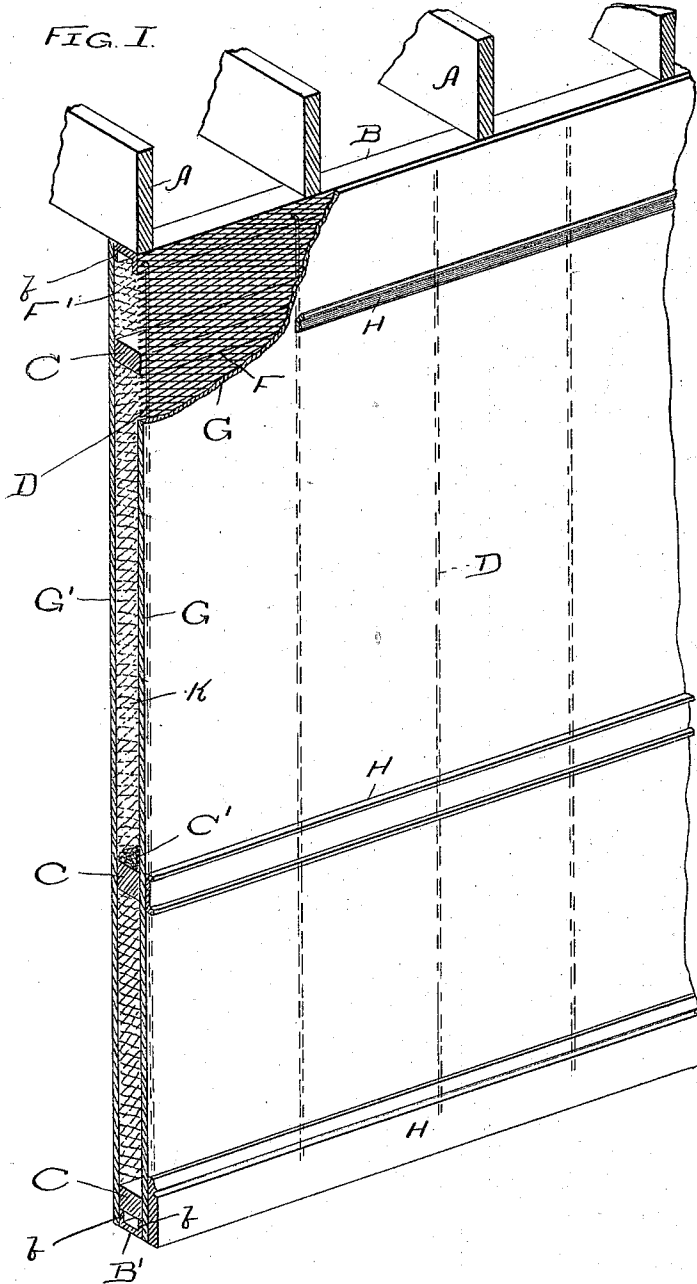


FIG. 2.

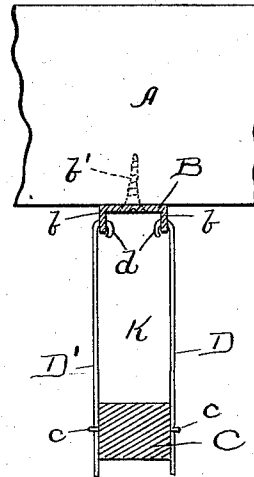
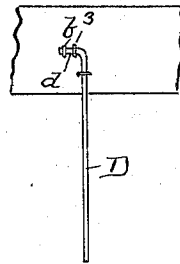


FIG. 3.



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UNITED STATES PATENT OFFICE.

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FIREPROOF PARTITION FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 552,539, dated January 7, 1896.

Application filed August 3, 1895. Serial No. 558,063. (No model.)

To all whom it may concern:

Be it known that I, ALBERT McCARTNEY, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Fireproof Partitions for Buildings, of which the following is a specification.

My invention relates to improvements in the construction of fireproof partitions for buildings.

In constructing the partition according to my invention I first secure to the floor along the line of the proposed partition a channel-bar with the flanges turned up, and then to the ceiling a similar channel-bar parallel to the first and with its flanges turned down, the flanges of the channel-bars being preferably about two inches apart, but may be wider or narrower according to the thickness desired for the partition. I next secure two sets or series of wire rods extending vertically between the flanges of the channel-bars, the ends of the rods being bent and inserted through holes formed in the flanges of the channel-bars, and after the ends of the rod are inserted through the holes in the channel-bars they are hammered or bent down so as to put the rods under tension. I next secure in place between the two parallel sets of upright rods strips or blocks of wood or other suitable material at the proper height or position for the chair-rail, picture-molding and base-board, one or more, as may be desired, so that after the plastering has been applied such trimmings may be properly nailed in place. These strips or blocks inserted between the two parallel sets of vertical rods also serve to stiffen and strengthen the partition. I next secure on each side of the partition metallic lathing of any well-known or suitable kind, such as wire-cloth or expanded metal, by wiring the same to the upright rods extending between the flanges of the channel-bars. I then apply the plastering upon each side of the partition. The partition thus formed is fireproof, comparatively light in weight, is strong and durable, is hollow and impervious to transmission of sound and may be cheaply constructed. The intermediate strips or blocks between the two sets of vertical rods also divide the hollow partition into

sections horizontally and thus prevent the hollow partition acting as a continuous vertical flue. These strips or blocks may be of wood, as the plaster forced through the metal interstices of the lathing to form the keys will, of course, to some extent drop down upon these intermediate horizontal strips and cover the same and give them a fireproof covering.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a partition embodying my invention. Fig. 2 is an enlarged detail end view of one of the channel-bars and the vertical rods. Fig. 3 is a modification in which a bar or strip of wood is substituted for the channel-bar.

In the drawings, A A represent the joists, of metal or wood, in the ceiling of a building.

B is a channel-bar secured to the ceiling with its flanges *b b* projecting downward. This channel-bar may be secured to the ceiling in any suitable manner, as by screws *b'*.

B' is a similar channel-bar secured to the floor or to the joist or frame-pieces of the floor, and having its flanges *b b* projecting upward.

D and D' are two sets or series of wire rods extending vertically between the opposite flanges of the channel-bars, each preferably of Bessemer steel, and about five-sixteenths of an inch in diameter. Each of these rods has a bent end *d* at each extremity, which is inserted through a hole formed in the flange of the channel-bar, and after these bent ends are inserted they are, with a hammer or other suitable instrument, clinched or bent at an angle, as indicated in Fig. 2, so as to put the rods under tension and render them stiff and taut.

C C C are strips or blocks of wood extending horizontally between the two parallel sets of vertical rods D D' and secured thereto by staples *c*, or other suitable means. These horizontal strips or blocks are, or should be, placed in proper position for nailing the picture-molding, chair-rail and base-board to the same, one or more, according as one or more of such trimmings are to be used.

F and F' represent metal lathing applied on each side of the partition to the two sets

of vertical rods D D', the metal lathing being applied in the usual way by wiring to the upright rods.

G G' represent the plastering applied to the metal lathing on each side of the partition. H H represent the trimmings applied to either side of the partition—such as picture-molding, chair-rail and base-board.

In the modification indicated in Fig. 3 instead of the channel-bars wooden joists or bars set edgewise are employed to secure the rods D D' at each end. In this construction instead of forming holes in the wooden bars B, I secure the rods D thereto by driving staples ^b astride the bent end *d* of the rod D.

The hollow space K between the two plaster walls G G' of the hollow partition is divided into sections horizontally by the strips C C, thus preventing the formation of any continuous vertical flues between the two walls of the hollow partition. The rigid strips C C also add materially to the stiffness and rigidity of the partition as a whole, in addition to forming a means for nailing the trimming-strips H H to the partition. As the horizontal bars B B' are removably secured to the ceiling and floor, and as the upright rods D D' are secured only to these bars B B', the partition is of a movable character and may be bodily removed and reset in another position if desired. This is a matter of some convenience in office or other buildings, which are frequently divided up into rooms to suit the desires of different tenants.

In the drawings, C' represents plastering covering the horizontal strips C C.

I claim—

1. The hollow fire proof partition for buildings, comprising in combination parallel channel bars B B' attached to the floor and ceiling, and having their flanges turned toward each other, two sets or series of upright rods D D', having bent ends inserted through holes in the flanges of said channel bars and extending between the same, rigid strips C C extending horizontally between the two sets of upright rods D D', metal lathing secured to each set of said upright rods, plaster walls G G' applied to said metal lathing, and trimming secured to said horizontal strips, substantially as specified.

2. The hollow partition, comprising in combination two parallel channel bars having their flanges turned toward each other, two sets of upright rods extending between the flanges of said channel bars and having their ends inserted through perforations in said

flanges and bent to put the rods under tension, metal lathing secured to each set of upright rods and plastering applied to the metal lathing on both sides of the partition, substantially as specified.

3. The hollow partition, comprising in combination two parallel channel bars having their flanges turned toward each other, two sets of upright rods extending between the flanges of said channel bars and having their ends inserted through perforations in said flanges and bent to put the rods under tension, metal lathing secured to each set of upright rods and plastering applied to the metal lathing on both sides of the partition, and rigid strips or blocks secured to the hollow partition between the two sets of upright rods, substantially as specified.

4. The hollow partitions for buildings, comprising in combination two parallel bars, one secured to the ceiling and one to the floor, two sets of upright rods extending between said bars and secured thereto, and two sets of sheet metal lathing secured one to each set of upright rods, and plastering applied to the metal lathing on both sides of the partition, there being an open space between the two lathing and plastering walls thus formed, substantially as specified.

5. The hollow partition for buildings, comprising in combination two parallel bars, one secured to the ceiling and one to the floor, two sets of upright rods extending between said bars and secured thereto, sheet metal lathing secured to each set of upright rods, and rigid blocks or strips secured between the two sets of upright rods, substantially as specified.

6. The hollow partition for buildings, comprising in combination two parallel bars or frame pieces, one secured to the ceiling and one to the floor, two sets of parallel upright rods extending between said bars or frame pieces, each of said upright rods having at each extremity a bent end or hook secured to the bar or frame piece, sheet metal lathing secured to each set of upright rods with an open space between the two sets of lathing, and plastering applied to each side of said partition on said metal lathing, there being an open space between the two plastering walls thus formed, substantially as specified.

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Witnesses:

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