E. J. ZAHNER & S. W. SMITH.

PARTITION CONSTRUCTION.

APPLICATION FILED JUNE 17, 1915.

1,219,208.

Patented Mar. 13, 1917.

3 SHEETS—SHEET 1.

Fig. 1.

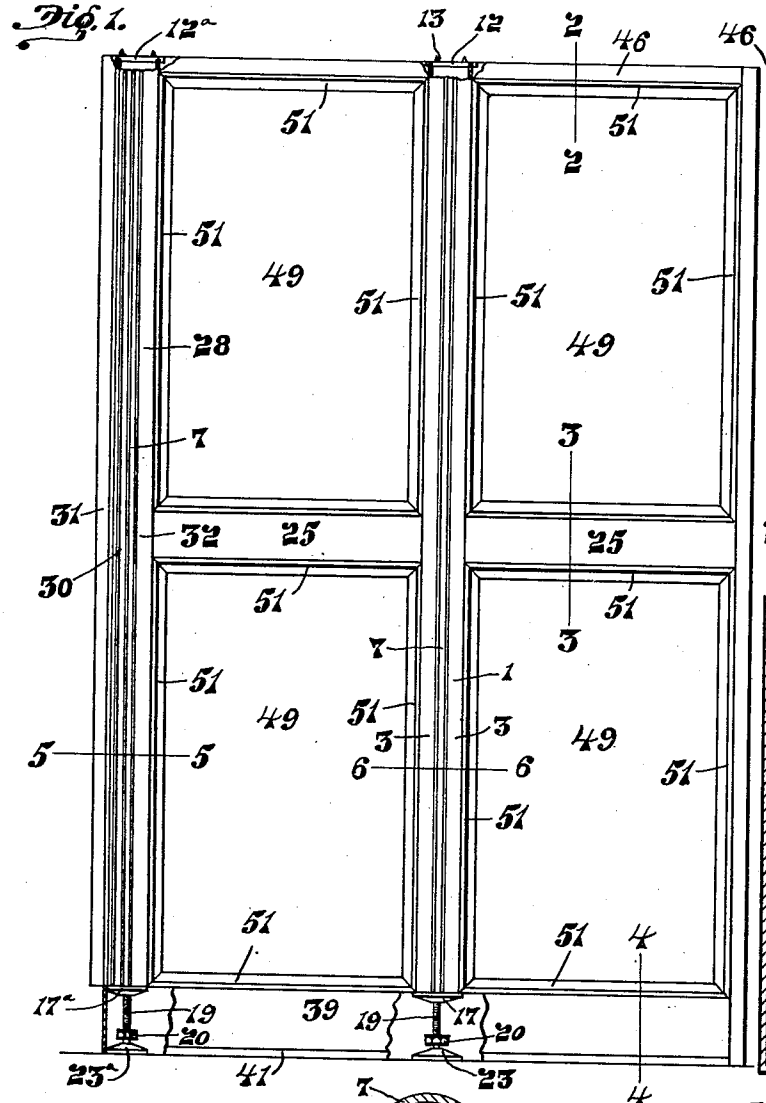


Fig. 2.

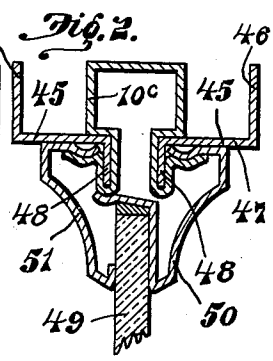


Fig. 3.

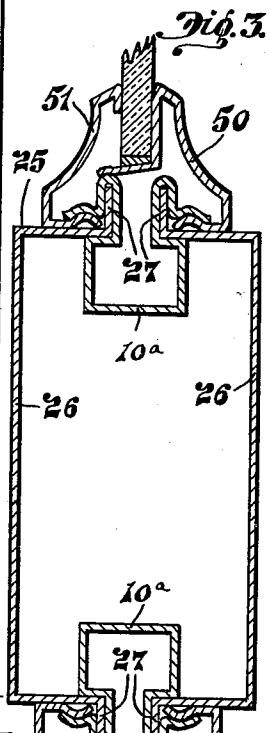
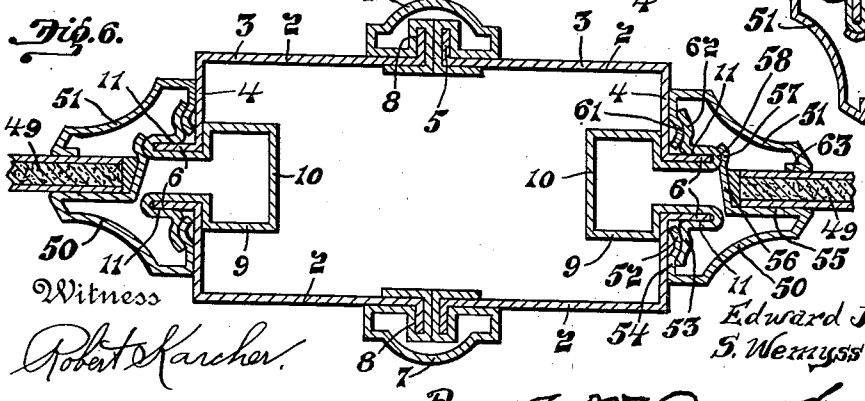


Fig. 6.



Witness

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3 SHEETS—SHEET 2.

Fig. 5.

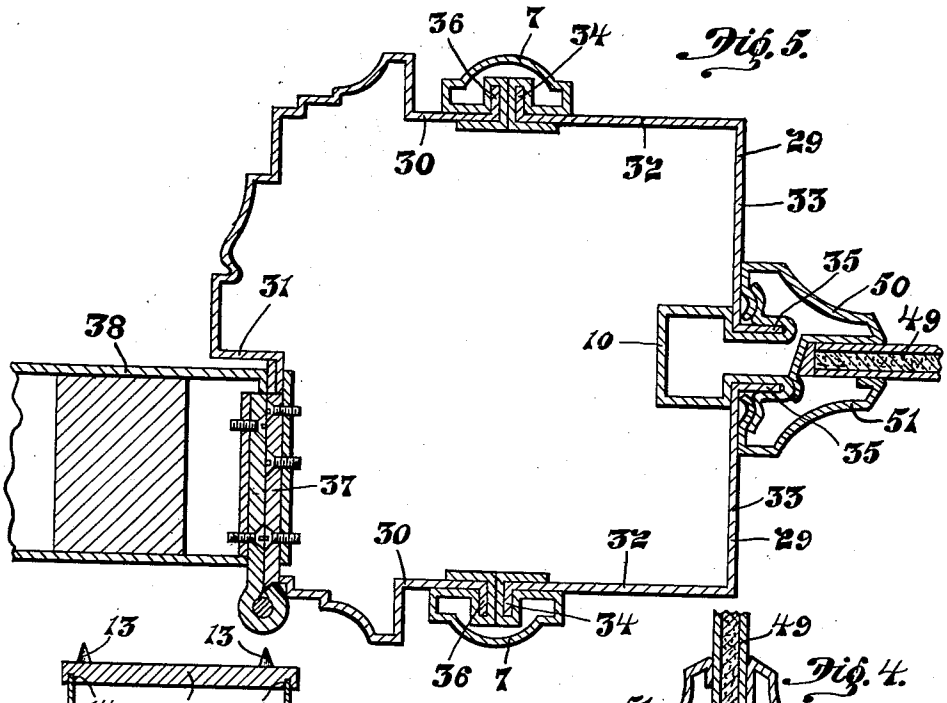


Fig. 4.

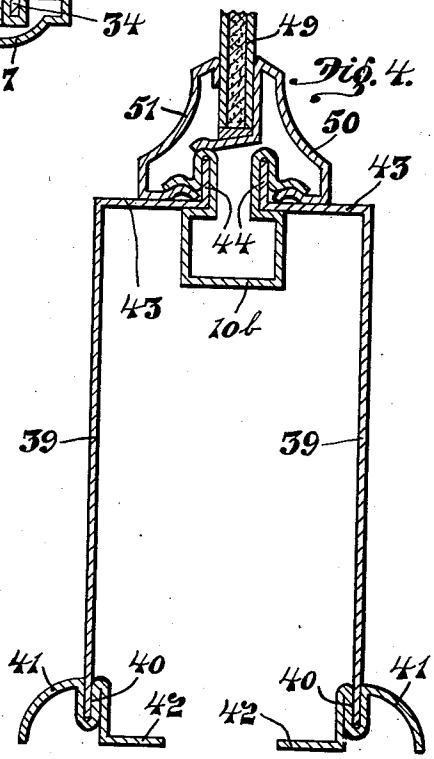
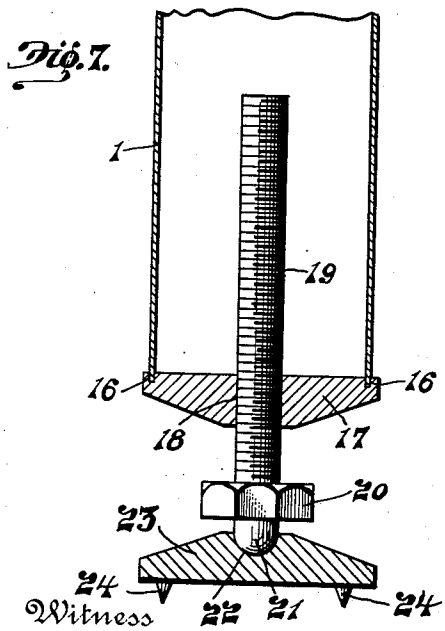


Fig. 7.



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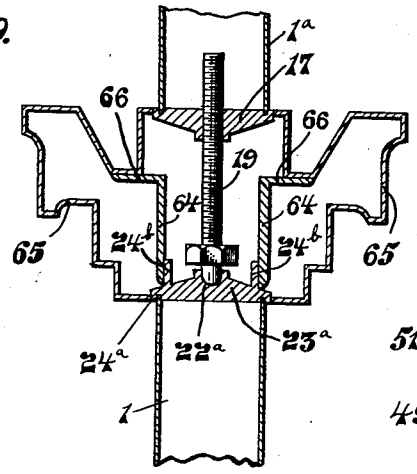
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3 SHEETS—SHEET 3.

Fig. 9.



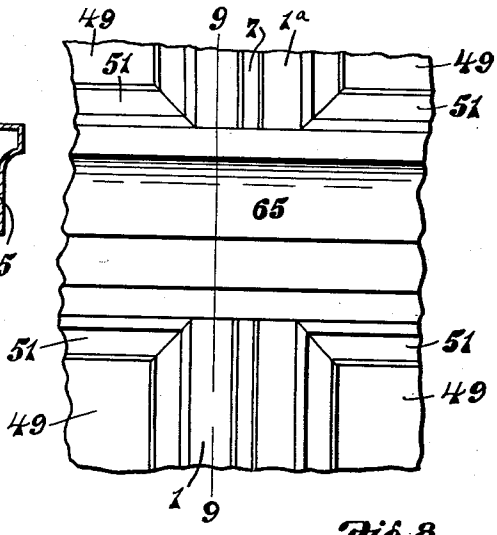
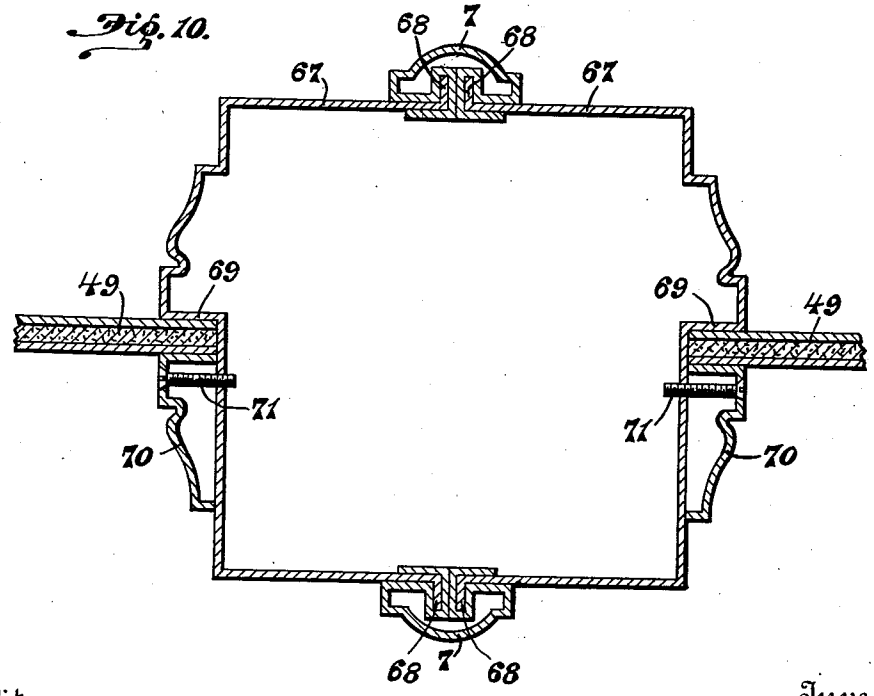


Fig. 8.

Fig. 10.



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PARTITION CONSTRUCTION.

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Application filed June 17, 1915. Serial No. 34,614.

To all whom it may concern:

Be it known that we, EDWARD J. ZAHNER and S. WEMYSS SMITH, both citizens of the United States, residing at Canton, Stark county, Ohio, and Oklahoma city, Oklahoma county, Oklahoma, respectively, have jointly invented a new and useful Partition Construction, of which the following is a specification.

Our invention relates to new and useful improvements in partition construction and has more especial reference to a portable partition composed of sheet metal.

The object of this invention is to provide a partition of the construction referred to which may be easily and readily assembled or knocked down.

A further object is to provide a partition of this character which may be located in any desirable position within a building, there being no permanent connection between any portion of the building and the partition.

A further object is the provision of such a partition, the arrangement of which may be easily and rapidly changed.

A further object is the provision of a novel clamping device by which the uprights are held firmly in position.

With these objects in view the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of construction may be made within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:

Figure 1 is a side elevation of a portion of a partition constructed in accordance with our invention, parts being broken away for the purpose of illustration.

Fig. 2 is a section on an enlarged scale line 2—2, Fig. 1.

Fig. 3 is a section on an enlarged scale line 3—3, Fig. 1.

Fig. 4 is a section on an enlarged scale line 4—4, Fig. 1.

Fig. 5 is a section on an enlarged scale on line 5—5, Fig. 1.

Fig. 6 is a section on line 6—6, Fig. 1.

Fig. 7 is a section through one of the uprights showing the clamping means.

Fig. 8 is a fragmentary view showing the manner of adding an upper tier of panels.

Fig. 9 is a section on line 8—8, Fig. 7.

Fig. 10 is a horizontal sectional view through a modified form of upright.

Similar numerals of reference indicate corresponding parts throughout the several figures of the drawings.

The partition, the construction of which is herein disclosed, is portable and composed of a plurality of panels, preferably formed of sheet metal provided with fireproof lining, said panels being assembled within a suitable frame work composed of uprights and horizontal connecting members. This partition is especially adapted for use in large offices, factories and the like where it is often desirable to change the interior arrangement of a room such as the size or shape of the room or the arrangement of the doors therein. This change may be accomplished by the moving or rearranging of the partitions such as are herein described.

The frame work of the partition is built up of spaced uprights which are fixedly mounted between the floor and ceiling or a suitable horizontal beam, said uprights being connected at spaced intervals by horizontal members. The construction of the preferred form of the regular upright is best illustrated in Fig. 6. Each of said uprights designated by the numeral 1 in Fig. 1, is preferably formed of four identical angle irons 2. Each of the angle irons 2 comprises a comparatively wide flange 3, and a comparatively narrow flange 4. The free edge of each flange 3 is turned out as indicated at 5, and the free edge of each flange 4 is similarly out-turned as shown at 6, the reasons for this construction being hereinafter pointed out. The angle irons are arranged together as shown in Fig. 6, the flanges 3 of each pair of angle irons being located in alinement, the out-turned edges 5 of the flanges being spaced a slight distance from each other. The connecting strips 7, are then slidably located in position firmly connecting each pair of angles together as shown in Fig. 6. From an inspection of Fig. 6 it will be seen that each of the connecting strips 7, is formed of a single

sheet of metal provided with a pair of channels 8 arranged to receive the out-turned edge 5 of each adjacent flange 3. The connecting strips 9 are provided for the purpose of connecting adjacent angle irons together along the out-turned edges 6, said connecting strips being also arranged to be slidably located in position upon the angles. As shown in Fig. 6 each of the strips 9 is formed of a single sheet of metal comprising the inner portion 10, rectangular in cross-section, and the channel portions 11, arranged to receive the out-turned edges 6 of the flanges 4, the edges of the sheet forming said connecting strip being bent outwardly away from said channel portions and slightly concaved. Although the construction of upright above described is the preferable form it will be understood that the connecting strips 7 may, if desired, be eliminated and the upright formed of a pair of channel irons connected together by means of the connecting strips 8.

A cap 12 provided with spikes 13, is placed upon the top of each of the uprights, said cap being provided with channels 14 within which the upper edges of the upright are arranged to be located. The lower edges of the upright are placed within the grooves 16, formed in the clamping plate 17, said clamping plate being provided with an internally screw threaded aperture 18 through which is located the adjusting screw 19, a head 20 being provided upon said screw. The lower extremity of the adjusting screw is preferably formed semispherical as indicated at 21 and is located within the concave socket 22 formed in the floor plate 23, said floor plate being provided with suitable spikes 24 adapted to be embedded in the floor when the upright is erected. In erecting one of the uprights the parts are assembled as above described, the cap 12 being located adjacent the ceiling or a suitable horizontal beam provided for the occasion. The floor plate 23 is located at the proper point upon the floor and when the adjusting screw is rotated by applying a wrench or other suitable instrument to the head 20, the spikes 24 will be firmly embedded in the floor and the plate 17 will be raised carrying the upright therewith and moving the cap 12 thereof into juxtaposition with the ceiling causing the spikes 13 thereon to be forced into the ceiling, thus holding the upright firmly in position. The uprights are connected together at substantially a point half-way between the upper and lower extremities thereof by means of the horizontal members 25, said horizontal members each being of a length suitable to bridge the space between two adjacent uprights. Each of said horizontal members is composed of a pair of channel irons 26, the lateral edges of which are out-turned as at 27, said channels being connected together by means of connecting strips 10^a similar to the strips 10, it being understood, however, that the connecting strips 10^a should be of the same length as the horizontal members 25.

Where it is necessary to provide doors in the partition a special form of upright must necessarily be used, said upright being best shown in cross section in Fig. 5, being made in the form of a door jamb, which is generally designated by the numeral 28. Each of these door jambs is composed of two equivalent angle irons 29, a hanging member 30 which is shaped as shown in Fig. 5 to receive the hinges of a door, and provided with a stop portion 31, all of said members being constructed as will be hereinafter described. Each of the angle irons 29 is composed of substantially equal flanges 32 and 33, the flanges 32 being provided along their free edges with the out-turned portions 34 and the flanges 33 being provided along their free edges with the out-turned portions 35. The hanging member 30 is provided along its free edges with the out-turned edges 36 similar to the flanges 34 and said angle irons are connected to said hanging member by means of connecting strips 7 of the usual form. A connecting strip 10 is used to connect the edges of the two angle irons 29 together along the out-turned flanges 35.

Hinges 37 are attached to the door jamb in the usual manner, said hinges carrying a door 38 of any suitable construction. A cap 12^a of suitable dimensions to accommodate the door post but otherwise similar in construction to the cap 12 is placed upon the top of the door post, the bottom of the door post resting upon a clamping plate 17^a which is adjusted by means of an adjusting screw 19, the lower extremity of which rests upon a floor plate 23^a.

A base board is provided along the lower edge of the framework of the partition, said base board being arranged to cover the clamping device upon the different uprights. Each base board member comprising a strip 39, the lower edge of which is adapted to be mounted within a channel 40 provided in a suitable molding 41, said molding being provided with an in-turned horizontally disposed flange 42 by means of which it may be connected to the floor. At the upper extremity of each of the strips 39 is located an in-turned horizontally disposed flange 43 having an up-turned vertical flange 44 located around the inner edge thereof. The base boards are connected together by means of connecting strips 10^b of a suitable length, said connecting strips being applied to the up-turned flanges 44 in the manner hereinbefore described.

The upper horizontal members of the

frame are composed of angle irons 45, each of said angle irons comprising the vertically disposed flange 46, the upper edge of which is arranged to contact with the ceiling, and the inwardly disposed horizontal flange 47, the inner edge of which is bent downwardly and at right angles forming a connecting flange 48. A connecting strip 10^c of suitable length is provided for properly spacing and connecting the angle irons 45 forming a suitable upper horizontal member for the frame.

For the purpose of retaining the panels 49 within the frame work of the partition retaining strips 50 and 51 formed in suitable lengths are connected to the framework by means of the connecting strips 10, 10^a, 10^b and 10^c as will be hereinafter described. As the connection of these retaining strips to each of the connecting strips is the same in each case it is only thought necessary to describe the manner of connecting the retaining strips to the horizontal uprights 1 by means of the connecting strips 10. The retaining strip 50 is placed in position as shown in Fig. 6, the rib 52 upon said retaining strip 50 being sprung beneath the out-turned concaved flange 53 provided upon the connecting strip 10, the flat portion 54 of said retaining strip 50 lying against the flange 4 of the upright. The strip 50 is provided with the in-turned portion 55, the angular flange 56 being formed upon said in-turned portion, said flange provided with an annular groove 57 adapted to be seated upon the rib 58 of the connecting strip 10. After the retaining strips 50 have thus been placed in position, the panel 49 which is preferably made up of spaced metal sheets 59 provided with a filling 60 of asbestos or similar material is then placed in position against the portions 58 of the retaining strips 50, the outer edges of said panel abutting the angular flanges 56. Each retaining strip 51 is then sprung into place, the ribs 61 thereof being located beneath the out-turned concaved flange 62 upon the connecting strip 10, the inturned flange 63 of the retaining strip 51 bearing against the panel 49 retaining said panel within the framework of the partition. If desired, the upper panels in each partition may be formed of glass as best shown in Figs. 2 and 3.

In Figs. 8 and 9 is shown a construction by means of which an addition may be placed upon the top of a partition such as shown in Fig. 1. In this instance a plate 23^a similar to the floor plate, with the exception that it is provided with channels 24^a arranged to receive the upper edge of an upright 1, is placed upon the top of the upright. The plate 23^a is provided with flanges 24^b against which are abutted the relatively wide flanges 64 of a pair of angle irons. The usual adjusting screw 19 is supported within the socket 22^a, a clamping plate 17 of the ordinary construction being carried by said adjusting screw. An upright 1^a of the necessary length is carried upon the plate 17. A suitable cornice 65 is located upon each side of the uprights, said cornice being supported upon the narrow flanges 66 of the angle irons. The remainder of the construction will be the same as has been hereinbefore described.

In Fig. 10 is shown a modification of upright which is made interchangeable and may be used either as a door jamb or as the ordinary upright. In this construction the upright is formed of a pair of channel members 67, each provided with out-turned flanges 68 at its edges, said members being connected by means of the usual connecting strips 7. Each of the channel members is provided with a shoulder 69 which may be utilized as a stop for the door in the event that the upright is used as a door post. If it is desired to mount the panels 49 upon this upright it is only necessary to place the panels in the proper position abutting the shoulders 69 and to attach retaining strips 70 in the position shown in Fig. 10, by means of screws or their equivalents 71, thus similarly holding the panels in place.

We claim:

1. An upright for a knock-down partition comprising a hollow upright member, a cap located upon the upper extremity of said hollow upright member and provided with grooves adapted to receive the edges thereof, spikes formed upon the upper face of said cap and adapted to be embedded in a ceiling, a clamping plate located at the lower extremity of said hollow upright member and provided with grooves within which said upright member is seated, said clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said aperture, a head provided upon said adjusting screw intermediate the ends thereof, and a floor plate provided with a socket adapted to receive the lower extremity of said adjusting screw.

2. An upright for a knock-down partition, comprising a hollow upright member, a cap located upon the upper extremity of said hollow upright member and provided with grooves adapted to receive the edges thereof, spikes formed upon the upper face of said cap and adapted to be embedded in a ceiling, a clamping plate located at the lower extremity of said hollow upright member and provided with grooves within which said upright member is seated, said clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said aperture, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremities of said adjusting screw being rounded and

a floor plate provided with a socket arranged to receive the rounded extremity of said adjusting screw.

3. An upright for a knock-down partition, comprising a hollow upright member, a cap located upon the upper extremity of said hollow upright member and provided with grooves adapted to receive the edges thereof, spikes formed upon the upper face of said cap and adapted to be embedded in a ceiling, a clamping plate located at the lower extremity of said hollow upright member and provided with grooves within which said upright member is seated, said clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said aperture, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremities of said adjusting screw being rounded, a floor plate provided with a socket arranged to receive the rounded extremity of said adjusting screw, and downwardly disposed prongs provided upon said floor plate and adapted to engage a floor.

4. A knock-down partition, comprising hollow uprights, caps carried upon the upper extremities of said uprights, spikes provided upon the upper faces of said caps and adapted to be embedded in a ceiling, a clamping plate provided with grooves which receive the lower extremities of said hollow uprights, said clamping plates being provided with internally screw threaded apertures, an adjusting screw located through each of said apertures, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremity of each adjusting screw being rounded, a floor plate provided with a socket arranged to receive the rounded extremity of each adjusting screw, horizontal panels mounted between said uprights, and base boards located beneath said panels and adapted to cover said adjusting screws.

5. In a partition of the character described, a clamping device comprising a clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said internally screw threaded aperture, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremity of said adjusting screw being rounded and a floor plate provided with a socket arranged to receive the rounded extremity of said adjusting screw.

6. In a partition of the character described, a clamping device comprising a clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said internally screw threaded aperture, the lower extremity of said adjusting screw being rounded, a floor plate provided with a socket arranged to receive the rounded extremity of said adjusting screw and downwardly disposed prongs provided upon said floor plate.

In testimony that we claim the above, we have hereunto subscribed our names.

EDWARD J. ZAHNER.
S. WEMYSS SMITH.