

July 7, 1931.

J. BROGDEN

1,813,873

METALLIC PARTITIONING

Filed Dec. 28, 1926

5 Sheets-Sheet 2

FIG. II.

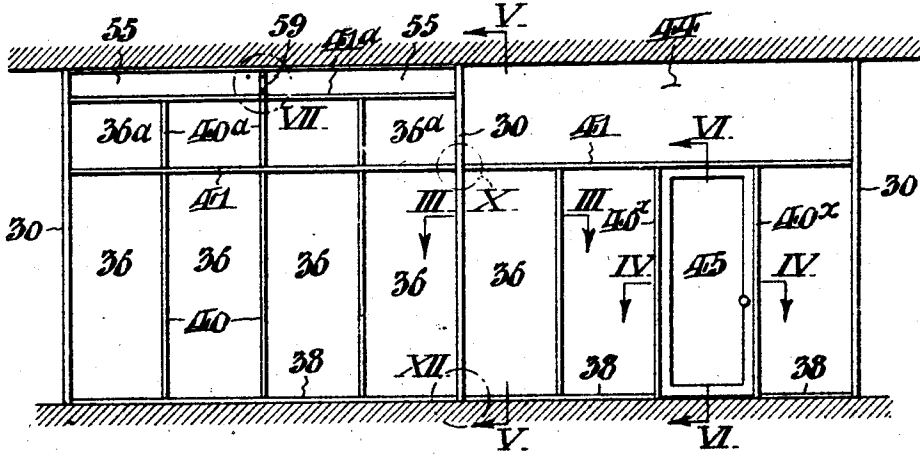


FIG. III.

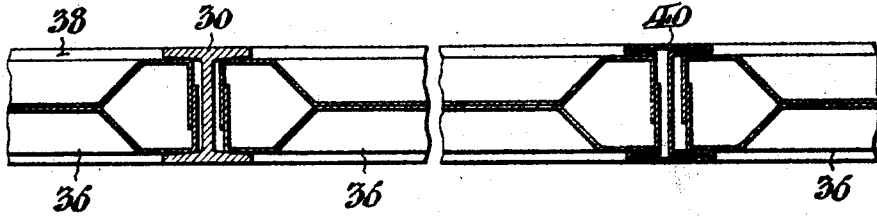
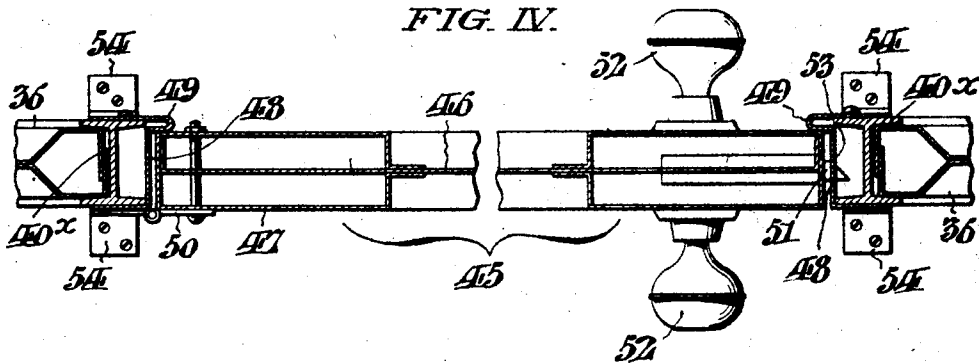


FIG. IV.



WITNESSES

John C. Beegner.
Frederick A. Kraus.

INVENTOR:

Joak Brogden,
BY *Foley Paul*
ATTORNEYS.

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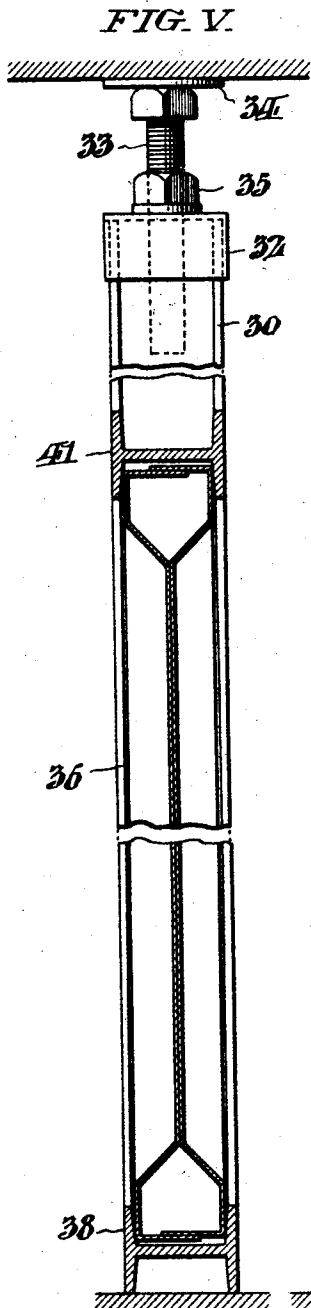


FIG. VI.

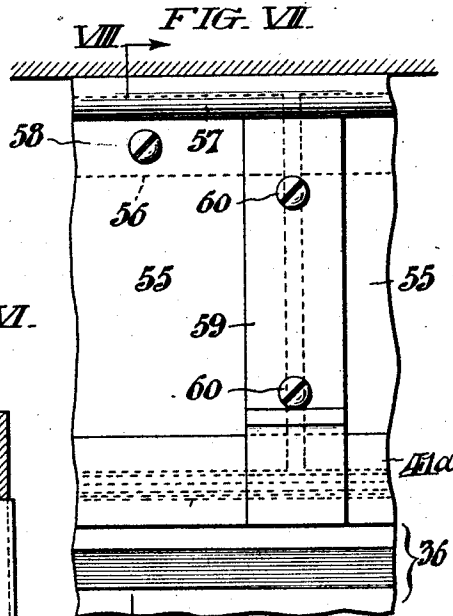
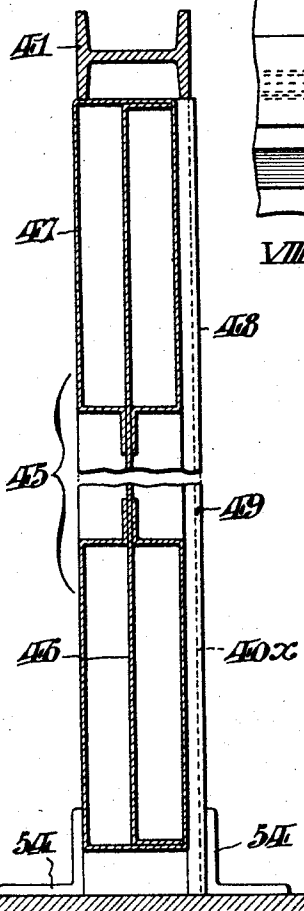
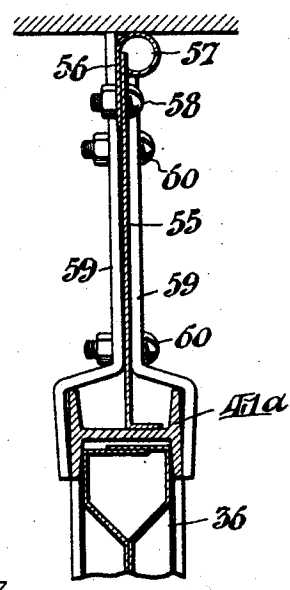


FIG. VIII.



WITNESSES

John C. Bergner
Frederick A. Kraus

INVENTOR:

Joah Brogden,
BY *Tracy Paul,*
ATTORNEYS.

July 7, 1931.

J. BROGDEN

1,813,873

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5 Sheets-Sheet 4

FIG. IX.

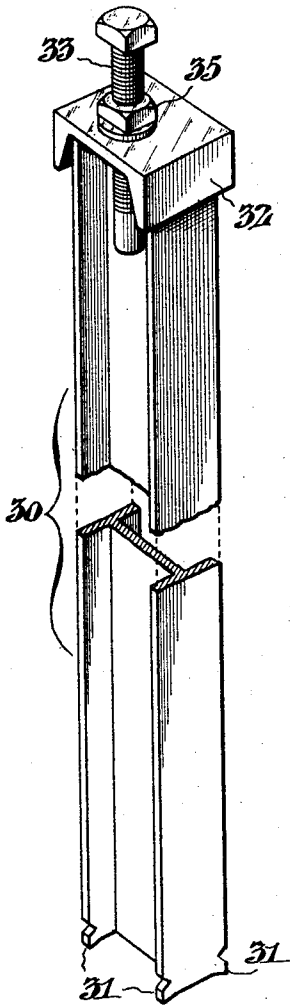


FIG. XI.

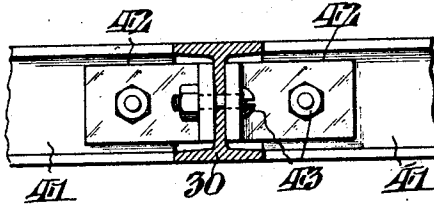


FIG. X.

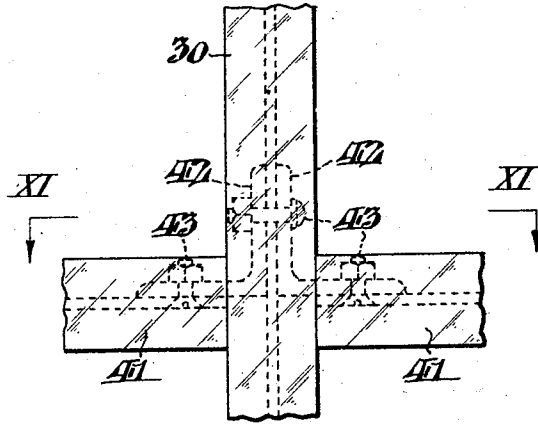
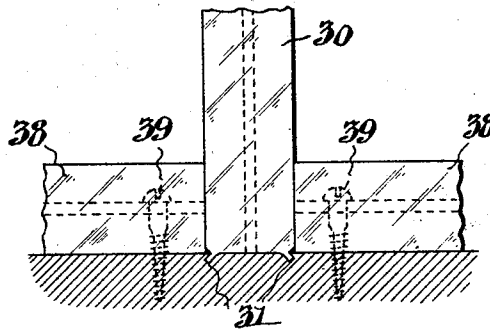


FIG. XII.



WITNESSES

John C. Bergner
Frederick A. Kraus

INVENTOR:

Joak Brogden
BY *Foley Paul*
ATTORNEYS.

July 7, 1931.

J. BROGDEN

1,813,873

METALLIC PARTITIONING

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5 Sheets-Sheet 5

FIG. XVI

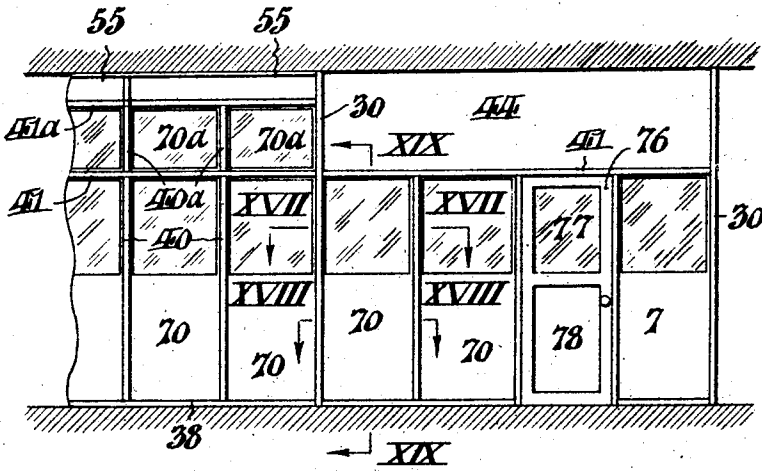


FIG. XIX

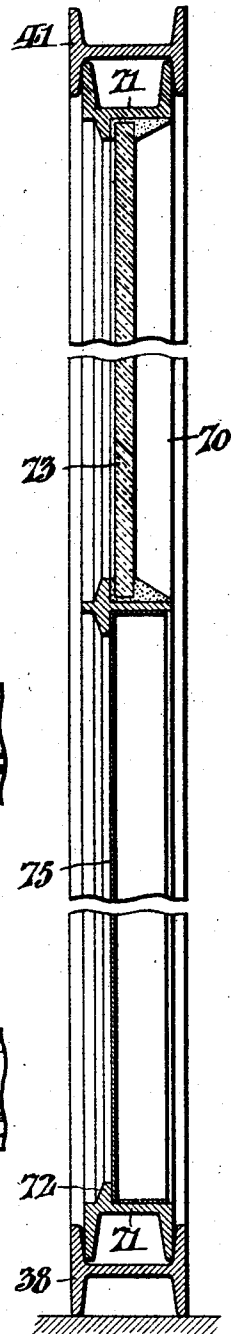


FIG. XVII

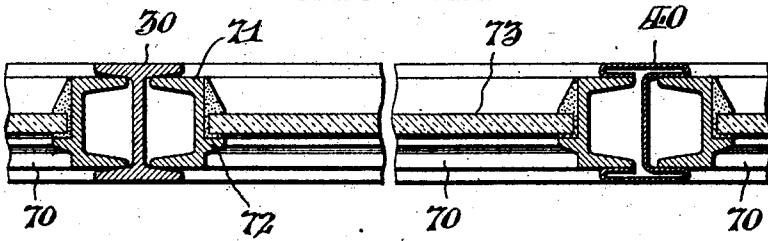
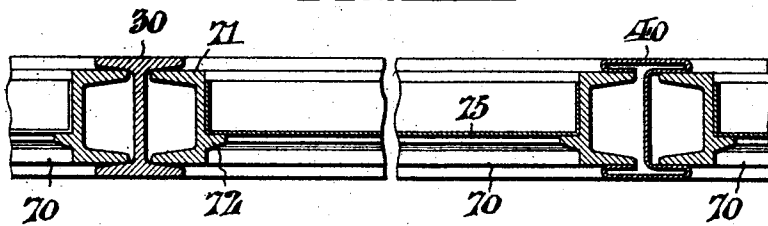


FIG. XVIII



WITNESSES

John C. Bergner
Frederick A. Kraus

INVENTOR:

Joak Brogden,
BY *Tracy Paul,*
ATTORNEYS.

UNITED STATES PATENT OFFICE

JOAH BROGDEN, OF MELROSE PARK, PENNSYLVANIA, ASSIGNOR TO DAVID LUPTON'S
SONS COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENN-
SYLVANIA

METALLIC PARTITIONING

Application filed December 28, 1926. Serial No. 157,445.

This invention relates to metallic partitioning useful in subdividing a floor area into any desired number of separate chambers or compartments of different sizes.

The main object of my invention is to provide partitioning of the character described capable of easy fitment and quick erection, notwithstanding variations in floor to ceiling and wall to wall dimensions of buildings; which can be secured in place without injuring or marring ceilings, floors, or building walls; and which can as readily be re-arranged subsequently or added to at any time to suit any changing conditions or requirements.

The foregoing advantages, together with others which will be readily apparent from the detailed description which follows of the typical embodiment of my invention shown in the drawings, I seek to attain with partitioning whereof all the required parts, both as regards a skeleton supporting structure and the partitioning units adapted to be supported thereby are conducive to mass production in standardized sizes, so that by proper choice of such parts from an amassed stock, a partition of any length or height may be erected without recourse to individual designing or fitting, or the use of special tools in erection.

In the drawings herewith, Fig. I is a diagrammatic plan view of a typical partitioning layout in accordance with my invention.

Fig. II is an elevation of that side of the partitioning lowermost in Fig. I showing the use of solid panel units.

Figs. III, IV, V and VI are sectional views taken, respectively, as indicated by correspondingly identified arrows in Fig. II.

Fig. VII is a detail view, within the boundary indicated at VII in Fig. II, showing structural features at the junctures between filler sections used to close in places too small to accommodate stock panel units of standardized dimensions.

Fig. VIII is a fragmentary sectional view taken in accordance with the arrows VIII—VIII in Fig. VII.

Fig. IX is a broken perspective view illustrating the details of one of the main or

floor to ceiling verticals of the skeleton framework which supports the partitioning units.

Fig. X is a detail view at the region X in Fig. II showing the method of connecting the verticals and horizontals of the skeleton frame work aforesaid.

Fig. XI is a sectional view taken in accordance with the arrows XI—XI in Fig. X.

Fig. XII shows the detail at the region XII in Fig. II.

Figs. XIII, XIV and XV are local sections, respectively, at XIII, XIV and XV in Fig. I, showing the treatment accorded the filler sections at the designated regions.

Fig. XVI is a view similar to Fig. II showing a structure embodying glazed partitioning units instead of solid panel type units.

Figs. XVII, XVIII and XIX are sectional views taken as indicated by the correspondingly numbered arrows in Fig. XVI.

In carrying out my invention, I employ in connection with the skeleton supporting structure of the partitioning, main floor to ceiling verticals 30 (Fig. IX) which are cut to suitable standardized lengths preferably from rolled bar sections characterized by longitudinal channels along opposite sides. As a result of edge indentation adjacent the lower ends of the bar flanges, the verticals 30 are provided with corner spurs 31 (Fig. IX) adapted to engage into the floor of the building in which the partitioning is to be placed.

To fasten the main verticals 30 at their upper ends, use is made of extensible securing devices embodying cap pieces 32 that are cut from channel sections and tapped to take jack screws 33. Incidental to drawing up these jack screws, protective washers 34 are placed between their heads and the ceiling as shown in Fig. V, while jamb nuts 35 associated with said screws are tightened up to hold the latter in the final adjusted positions.

In erecting a partitioning layout such as exemplified in Figs. I and II, the main floor to ceiling verticals 30 are first placed in aligned relation at predetermined standardized intervals so as to accommodate—between them—a definite number of partitioning units such as shown at 36. After the

main verticals 30 are secured in place in the manner above explained, basal horizontals 38—also preferably of corresponding cross lengths and selectable from suitable stock lengths are laid along the floor between the feet of said main verticals and secured near their ends, as shown in Fig. XII, by screws 39 passing through their medial webs and taking into the floor. The partitioning units 36 are next inserted in such manner as to engage the channels of the main verticals 30 and basal horizontals 38, with supplemental verticals 40 of the same height (Fig. III) incidentally placed between them. Although such supplemental verticals 40 may be cut from channeled bar sections such as used for the main verticals, for the sake of lightness, I prefer to bend them to form from sheet metal with provision of appropriate parallel flanges to overlap the edges of contiguous partitioning units 36, as shown in Fig. III. With a row of the partitioning units 36 inserted between each pair of the main verticals 30 in the manner just described, I next place upon such groups additional channeled horizontals 41, see Figs. II and V, and secure them to the main verticals 30—at the ends—by angle clips 42 and bolts 43, that are inserted through apertures initially provided in said verticals and horizontals. In this way, it will be seen that the partitioning units 36 are perimetrically engaged in continuous grooves, jointly afforded by the verticals and horizontals, of the skeleton supporting structure and thereby retained against the possibility of subsequent displacement. In instances where the floor to ceiling dimensions permit, a second row of identical partitioning units 36 may be superimposed upon the first row between successive pairs of the main verticals 30. In other cases, where not so much upper space is available, I use units such as shown at 36a in Fig. II, of the same width but of smaller vertical dimensions. In order to properly hold the upper row of panels 36a, together with intervening supplemental verticals 40a, in place, I install a second course of horizontals 41a and secure the latter to the main verticals 30 with aid of clips 42 and screws 43, in precisely the same manner as described in connection with attachment of the horizontals 41. A like procedure is of course followed in erecting transverse walls of a layout such as shown in Fig. I. When desired or required, the upper row of the partitioning units 36a may be omitted from between certain main verticals 30, thereby leaving, as shown in Fig. II, an open space 44 at such regions.

At any desired point in the partitioning doors, such as shown at 45 in Figs. I, II and VI, may be installed in lieu of the units 36. Such doors 45 may be of any convenient construction. In the present instance they are

formed entirely from sheet metal with a central panel plate 46 whereof the edge margins are engaged within an appropriate hollow border molding 47. The door openings are finished off with jamb strips 48 which are bent from sheet metal to hollow configuration so as to fit over the verticals 40x—of the species 40 but preferably formed from rolled bar section—of the skeleton framework constituting the jambs. Incidental to bending, the jamb strips 48 are provided with longitudinal flanges 49 that serve as stops against which the doors 45 are adapted to close. The doors 45 are hung to the jambs by suitable hinges 50 secured to the verticals 40x, and, as shown in Fig. IV, are equipped with latches 51 operable by knobs 52 of the usual type which engage latch openings 53 in the jamb strip 48 at the corresponding side of the door opening. To offset the possibility of displacement of the verticals 40x when the doors 45 are slammed, I secure them to the floor at their bottoms with aid of angle clips 54, see Figs. IV and VI.

Any odd head spaces remaining above the upper course of the partitioning units 36a too narrow to accommodate the smallest of the stock size units, are closed in by filler sections 55—Figs. VII and VIII—formed from sheet metal plates, that are of standard stock lengths, but otherwise cut roughly to suit the special requirements of each particular installation. With the filler sections 55 are associated longitudinal edge finishing strips 56 formed with rolled beads 57 to abut against the ceiling as shown in Fig. VII. After proper placement, the longitudinal edge strips 56 may be secured to the plates 55 in any convenient manner as for example by bolts 58, see Fig. VII. To support the fillers 55 I employ, at opposite sides of the junctures of contiguous component plate sections, narrow vertical overlap strips 59, which are connected by bolts 60 and complementarily bent at their lower ends to engage over the uppermost skeleton frame horizontal 41a after the manner of clamps. At the ends, the auxiliary filler sections 55 are provided with angularly-bent vertical edge finishing strips 61 which jointly form box moldings to fit around the skeleton frame verticals 30, as shown in Figs. XIII, XIV and XV, at the various partitioning junctures correspondingly designated in Fig. I.

In Fig. XVI is shown a partitioning wall in which glazed units 70, 70a, are used instead of partitioning units 36, of the type shown in Fig. II. In this connection let it be assumed that the method of erecting the skeleton supporting structure and the insertion of the partitioning units is precisely the same as that previously described, the same reference numerals being therefore employed to designate all corresponding parts. As shown in Figs. XVII, XVIII and XIX, the peri-

metric rails 71 of the glazed units 70, are formed from rolled channel iron with inwardly projecting flanges 72 affording seats for the glass lights 73, which, in the present instance occupy the upper portion of the units; while the lower portions of said units are closed in by panel plates 75 of sheet metal in the conventional manner clearly illustrated in the drawings. The doors 76 may be given a similar treatment with their upper halves glazed as shown at 77 in Fig. XVI and the lower halves closed in by sheet metal panel plates 78. In the case of the upper partitioning units 70a, only glass is used, the metallic paneling being omitted for obvious reasons.

Having thus described my invention, I claim:

1. Metallic partitioning comprising interchangeable partitioning units; and a skeleton supporting structure embodying main floor to ceiling uprights of I-bar sections, basal horizontals of like section resting on the floor between the feet of such main uprights, additional horizontals of the same section between said main uprights at different elevations, and supplemental verticals of corresponding section extending between the horizontals in the spaces intervening the main uprights, said uprights and the horizontals jointly affording continuous channels for perimetrically engaging and retaining a multiplicity of the partitioning units and filler sections in superposed rows.

2. Metallic partitioning comprising interchangeable partitioning units; and a skeleton supporting structure with spaced verticals and horizontals of I-bar sections affording support for the partitioning units, said verticals having integral corner spurs at their lower ends to engage into the floor on which the partitioning is to be erected and extensible securing means interposed between their tops and the ceiling.

3. Metallic partitioning comprising interchangeable partitioning units, and a skeleton supporting structure with spaced verticals and horizontals of I-bar sections affording support for the partitioning units, said verticals having integral spur projections at their lower ends afforded by edge indentation to engage into the floor on which the partitioning is to be erected, and securing jack screws with jamb nuts at their tops adapted to be adjusted into firm pressure contact with the ceiling.

4. Metallic partitioning comprising interchangeable partitioning units; and a skeleton supporting structure with verticals and horizontals of I-bar section affording continuous grooves for perimetrically engaging and retaining the partitioning units, the verticals having integral spur projections afforded by edge indentations adjacent their lower ends to engage into the floor on which

the partitioning is to be erected and their tops capped by cover pieces to take securing jack screws with capacity for adjustment into firm pressure contact with the ceiling.

5. Metallic partitioning comprising interchangeable partitioning units standardized as to dimensions; a skeleton supporting structure with verticals and horizontals of I-bar sections correspondingly spaced to predetermined dimensions and affording continuous channels to perimetrically engage a multiplicity of the partitioning units in superposed rows between floor and ceiling; and panel fillers with means adapted to engage the verticals to close in any odd intervals remaining between the uppermost horizontals and the ceiling.

6. Metallic partitioning comprising interchangeable partitioning units standardized as to dimensions; a skeleton structure with verticals and horizontals of I-bar sections to support a multiplicity of the partitioning units in superposed rows; and panel fillers to close in any odd intervals remaining above the upper most horizontals, said panel fillers being fashioned from sheet metal with box moldings along opposite edges to fit around the verticals of the skeleton structure.

7. Metallic partitioning comprising interchangeable partitioning units standardized as to dimensions; a skeleton structure with verticals and horizontals of I-bar sections to support a multiplicity of the partitioning units in superposed rows; sheet metal filler sections to close in any odd intervals above the uppermost horizontals of the supporting structure; and opposing strip brackets to overlap and support abutting ends of the filler sections at opposite sides, said brackets having clamping engagement at the bottom with said uppermost horizontals.

8. Metallic partitioning comprising interchangeable partitioning units standardized as to dimensions; a skeleton structure with verticals and horizontals of I-bar sections to support a multiplicity of the partitioning units in superposed rows; and sheet metal fillers to close in any odd intervals remaining above the uppermost horizontals, said fillers comprising main plates cut to approximately fit the openings, and supplemental extension strips with longitudinal beads to contact with the ceiling.

9. Metallic partitioning comprising a skeleton supporting structure with verticals and horizontals of I-bar sections providing openings to take interchangeable partitioning units as well as openings to take doors; and jamb finishing strips fashioned from sheet metal to fit over the members of the supporting structure at the door openings, said strips embodying retroverted portions that afford T-section stop flanges against the inner lateral bar portion of which the doors close.

10. Metallic partitioning comprising a

skeleton supporting structure with verticals and horizontals of I-bar sections providing openings to take interchangeable partitioning units as well as openings to take doors; and jamb strips fashioned to channel section
5 from sheet metal to fit over and enclose the channels in the members of the supporting structure at the door openings, said stops having retroverted portions co-planar with one of the section flanges that afford inwardly
10 direct stop flanges against which the door closes.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this 22nd day of December, 1926.

15 JOAH BROGDEN.

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