

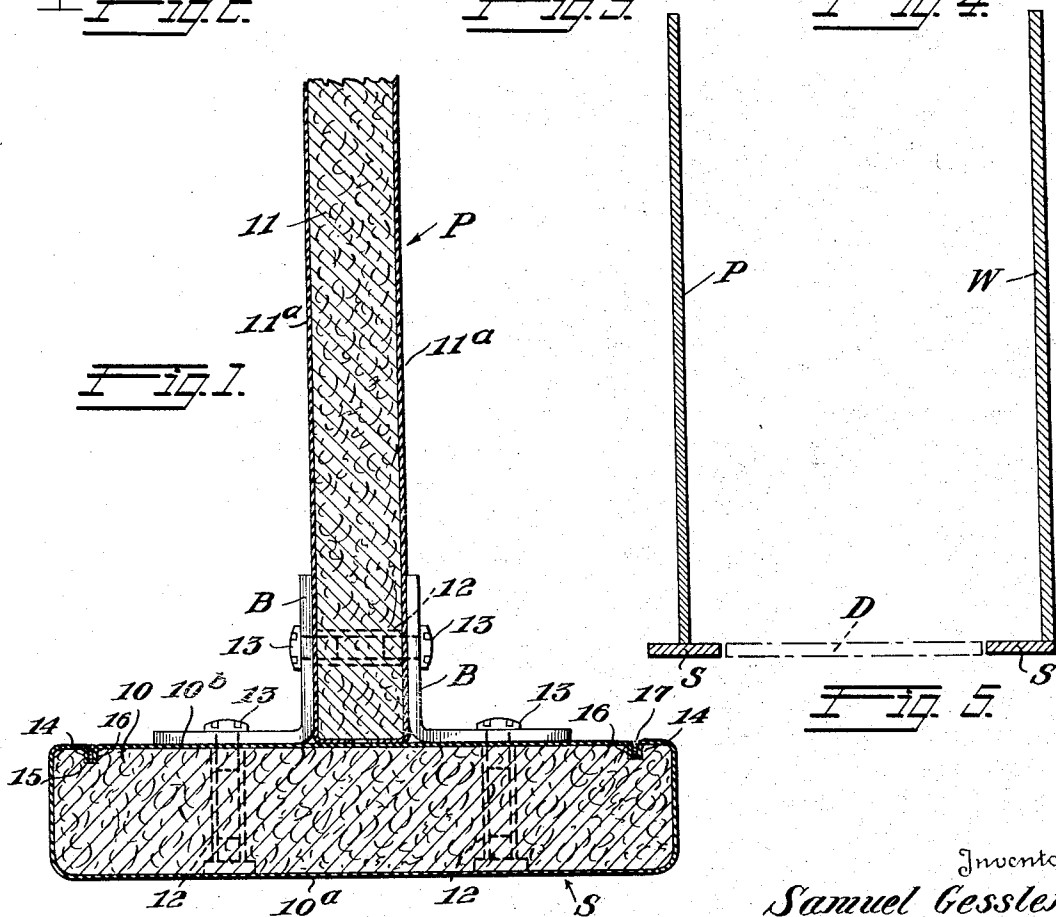
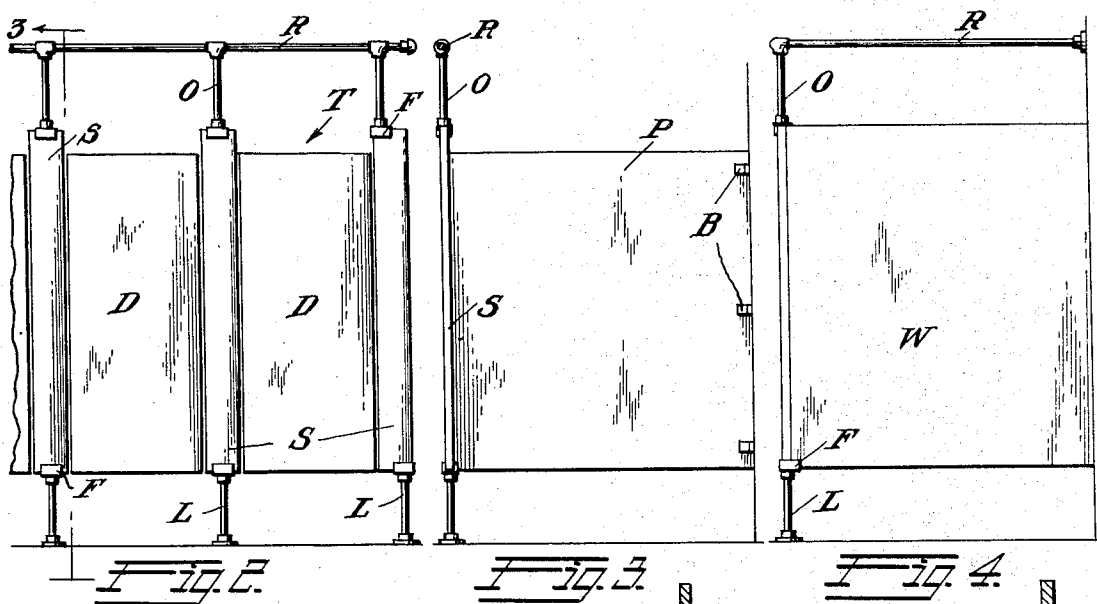
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WALL OR PANEL CONSTRUCTION

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WALL OR PANEL CONSTRUCTION

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This invention relates to improved wall or panel constructions.

More particularly, the invention relates to improved panel structures which are well adapted for use in the construction of toilet stalls, showers, etc., although the same is not limited to such use.

Toilet stalls and showers at present in use in the better classes of buildings, particularly public buildings, are so constructed that they not only present an artistic appearance, but also measurably fulfill the standards set for cleanliness and sanitation.

In order to satisfy the requirements of toilet stalls and showers from the standpoint of appearance and sanitation, they have heretofore been constructed of such material as glass and marble, each of which materials measurably satisfies the above noted requirements. These materials, however, offer several disadvantages in the construction of toilet stalls or showers, among which may be mentioned (a) brittle texture, subjecting same to easy breakage and corresponding reduction in sanitary efficiency as well as appearance; (b) sound transmitting, and (c) comparatively high cost.

It is a primary object of the present invention to provide panel constructions for use in toilet stalls and showers which measurably overcome the above noted objections to such structures now in use.

A further object of the present invention is the provision of panel constructions which are relatively light in weight, thus facilitating the transportation thereof as well as the handling, in the process of constructing therewith.

With the above objects in view as well as others that will become apparent in the course of the following disclosure, reference will be made to the accompanying drawing forming part of same, and wherein:

Figure 1 is a horizontal sectional view of a stile and a portion of a partition constructed in accordance with a preferred embodiment of the invention.

Fig. 2 is a fragmentary front elevation of toilet stalls disclosing the application of my invention in one of many possible arrangements thereof.

Fig. 3 is a vertical sectional view in the plane represented by line 3—3 in Fig. 2.

Fig. 4 is an end elevation of the stalls illustrated in Fig. 1.

Fig. 5 is a horizontal section through the end wall and an adjacent partition wall, the door being indicated in dot-and-dash lines.

Referring to the drawing by reference characters and wherein like characters designate like parts, the letter T designates an end portion of a series of toilet stalls in which is utilized panel structures formed in accordance with the present invention. While the form of construction of the stalls illustrated is preferred, nevertheless various other forms are possible in the utilization of the improved construction panels which can readily be constructed of varying dimensions to suit any required or desired form of stall construction.

The stalls comprise in their finished construction one or two (depending upon the location of the stalls) end walls W, intermediate partition walls P, front face walls or stiles S, doors D intermediate the stiles, supporting legs L, top standards O, tubing rail R, securing brackets B, together with door hinges (not illustrated), leg and standard securing fixtures F and may, in some installations, include back slabs which would provide the rear walls of the stalls instead of the wall of the room in which the stalls are installed.

The end walls W, partition walls P and stiles S, together with the back slabs if used, are of an improved construction and form the essence of the present invention, such form of construction well adapting the walls and stiles to use in the construction of toilet stalls, showers, etc.

Referring now to Fig. 1 in which is illustrated in section one of the stiles and a portion of a partition wall secured thereto, the stile S and partition wall P are separately formed prior to their assemblage by the brackets B, and each comprises a tough fibrous core 10 and 11, respectively, which is preferably dense fibre board of sufficient thickness to provide the proper thickness of stile and partition wall desired, and the cores are enclosed in glass fused steel sheets or panels 10^a, 10^b, and 11^a, respectively.

In the construction of the stiles and partition walls the fibre cores 10 and 11 are first drilled at the required points and provided with internally threaded bushings 12 for the reception of attaching screws, such as those illustrated and designated as 13.

The steel sheets or panels are preferably of #20 gauge and are suitably treated to provide a durable and attractive finish, which consists in subjecting same to three coats of high grade fusing material which coats are consecutively subjected to a fusing heat of approximately 1500° for an effective interval of time, the last two coats embodying a suitable coloring material whereby the finished sheets may be of any desired permanent color. During the fusing process, decora-

tive work may be fused to the under fusible coats, if desired.

The glass fused steel panels as above treated are permanently adhered to the fibrous cores 10 and 11 by means of a high grade casein compound glue, being applied on the faces of the cores, after which the assembled cores and panels are subjected to a constant pressure of 150 pounds per square inch of core area for a period of eight hours, whereby the glass fused steel panels are bonded to the cores equal to the bonding between the fibres of the cores themselves.

It is to be noted that the glass fused steel sheet 10^a extends across the opposite vertical edges of the stile S and inward on the back face a short distance, at which points the opposite edges of the sheet 10^a are provided with flanges 14 normal to the back face and which are disposed within vertical channels 15 in the core 10. The glass fused steel sheet 10^b extends across the remainder of the back face of the core 10 and is provided with similar terminal flanges 16 which are nested in the channels 15 contiguous to the flanges 14.

In order to prevent access of the atmosphere to the core at these points, the relatively narrow spaces between the flanges 14 and 16 are caulked with a waterproof mastic compound, as is indicated at 17. This not only prevents admittance of moisture to the core but also provides a neat finish at the joints between the glass fused steel sheets 10^a and 10^b.

The glass fused steel sheets 11^a preferably extend throughout the depth of the opposite faces of the partition wall P and have their front edges turned inwardly over the end of the core 11 adjacent the core 10. It is, of course, to be understood that the opposite or rear edges of the sheets 11^a extend inwardly over the rear edge of the core 11.

While the above description has been confined only to a stile S and associated partition wall P, nevertheless it is to be understood that the end walls W and associated stiles S as well as the back slabs if utilized are of the same construction.

It will be seen from the foregoing disclosure that the wall and stile constructions are well adapted for use in the construction of toilet stalls and showers or in other installations where sanitation is highly important and where, due to frequency of use, the walls are subject to impacts which with marble or glass construction would not only produce undesirable noise but would be liable to crack or break the walls, resulting in crevices which are not only unsightly but provide lodgment for dirt, which results in less sanitary conditions.

With the construction herein disclosed the walls and stiles are fully as attractive as those formed from marble or glass, in fact more so in that the fusing process provides for ready variations in color and designs whereby any desired color effect to harmonize with surrounding walls can readily be produced.

Furthermore, it will be seen that this particular stile construction provides uninterrupted edges, thus eliminating the necessity of employing stainless steel strips as has heretofore been used for finishing the edges of former stile constructions. As the edges of the present stile provide a smooth continuation of the front face thereof, such arrangement greatly adds to the appearance of the finished article. Walls and

stiles made in accordance with the present invention are practically immune to breaking or cracking, whereby the appearance and sanitary condition will be permanent.

Also, the present invention provides a construction which, due to the relatively thick core, will absorb sound waves which may be set up by impacts on the walls, thus preventing the transmission of such waves with consequent undesirable noises.

It will also be appreciated that the wall constructions can be produced at substantially less cost than the relatively thick glass or marble which has heretofore been used in the construction of toilet stalls, showers, etc.

The particular construction disclosed is also comparatively light in weight, thus reducing the expense of transportation and facilitating the handling thereof during the process of construction.

The walls and stiles can readily be formed of any desired dimensions whereby stalls may be formed in which such walls and stiles extend to the floor. However, it is preferred to support the lower edges of such walls and stiles above the floor by the legs L, as indicated. Also, the walls may be made of varying thicknesses, thus, as indicated in Fig. 5, the end walls W are preferably thicker than the partition walls P, the stiles S preferably being of the same thickness as the end walls W.

The walls and stiles being formed as above disclosed with the threaded holes provided by the bushings 12 the stalls or showers can be expeditiously constructed by securing the stiles S to the partition walls P and end walls W by the brackets B, supporting the lower ends of the stiles on the legs L and securing the rear edges of the walls to the wall of the room or back slabs by the rear brackets B.

While I have illustrated the tops of the stalls as being provided with standards O and tubing rail R carried thereby, nevertheless it is to be understood that, in practice, various other forms of construction can be employed the top arrangement of the stalls depending more or less upon the character of the building in which they are being installed. For instance, a four inch stile similar to the vertical stiles indicated at S may be used instead of the standard and tubing rail, wherein the four inch stile would extend longitudinally with the lower edge thereof in abutting relation with the upper ends of the vertical stiles S.

It is to be particularly noted that due to the effective bonding between the cores and glass fused steel sheets, together with the caulking at the joints, there is no likelihood of the steel sheets coming loose from the cores, and the union between the cores and steel sheets is further strengthened when the stalls are constructed, due to the binding action of the securing brackets B and caulking of the angles which is preferably resorted to between such brackets B at the joints between the angularly disposed steel sheets.

While I have disclosed the improved wall constructions as being utilized in toilet stall constructions as a preferable adaptation, nevertheless it is to be understood that such wall constructions are not limited to this use but may find desirable application in various other fabricated structures.

What I claim as my invention and desire to secure by U. S. Letters Patent is:—

1. A stile or panel comprising a core, a pair of facing sheets secured to and surrounding said core, the ends of said sheets terminating adjacent each of the opposite ends of said core and at the same side thereof, the said ends each being provided with a flange imbedded within the core, and a filler between said flanges for providing a smooth, uninterrupted surface at the ends of the facing sheets.

2. In a toilet stall, a partition wall, a front wall or stile extending equally beyond opposite sides of the partition wall and disposed at right angles thereto, each of said walls comprising a core of dense fibrous material and sheets of glass fused steel adhesively secured to opposed faces of the cores, the cores being provided with internally threaded bushings aligned with holes in the steel sheets, and perforated brackets engaging the opposite corners between the walls and secured thereto by screws engaging the screwthreaded bushings, the glass fused steel sheets engaging the stile core being provided with right-angularly disposed terminal flanges, the engaged core being provided with vertical channels in the rear and adjacent to opposite

edges thereof for receiving the flanges in contiguous relation, and mastic compound filling the spaces between said flanges.

3. Toilet stalls comprising equally spaced, parallel, and vertically disposed partition walls, and a vertically disposed relatively narrow front wall or stile engaged with the front edge of each partition wall and extending equal distances on opposite sides thereof; the partition walls and stiles each comprising a core of dense fibrous material and a relatively thin sheet of glass fused steel engaging each of the opposite sides thereof, the glass fused steel sheets engaging the stile core having contiguous inturned flanges engaged in channels in the engaged core of the rear side of the stile for providing a smooth uninterrupted surface, and the glass fused steel sheets engaging the partition core having their forward edges inturned over the front edge of the engaged core and disposed between said edge of the core and the adjacent glass fused steel sheet of the stile fore providing smooth, tight joints between the partition wall and stile, and means for securing the partition wall and stile in fixed relation.

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