Oct. 3, 1933. J. O. BARCE 1,928,924

SHOWER BATH CABINET

Filed Aug. 19, 1929 2 Sheets-Sheet 1

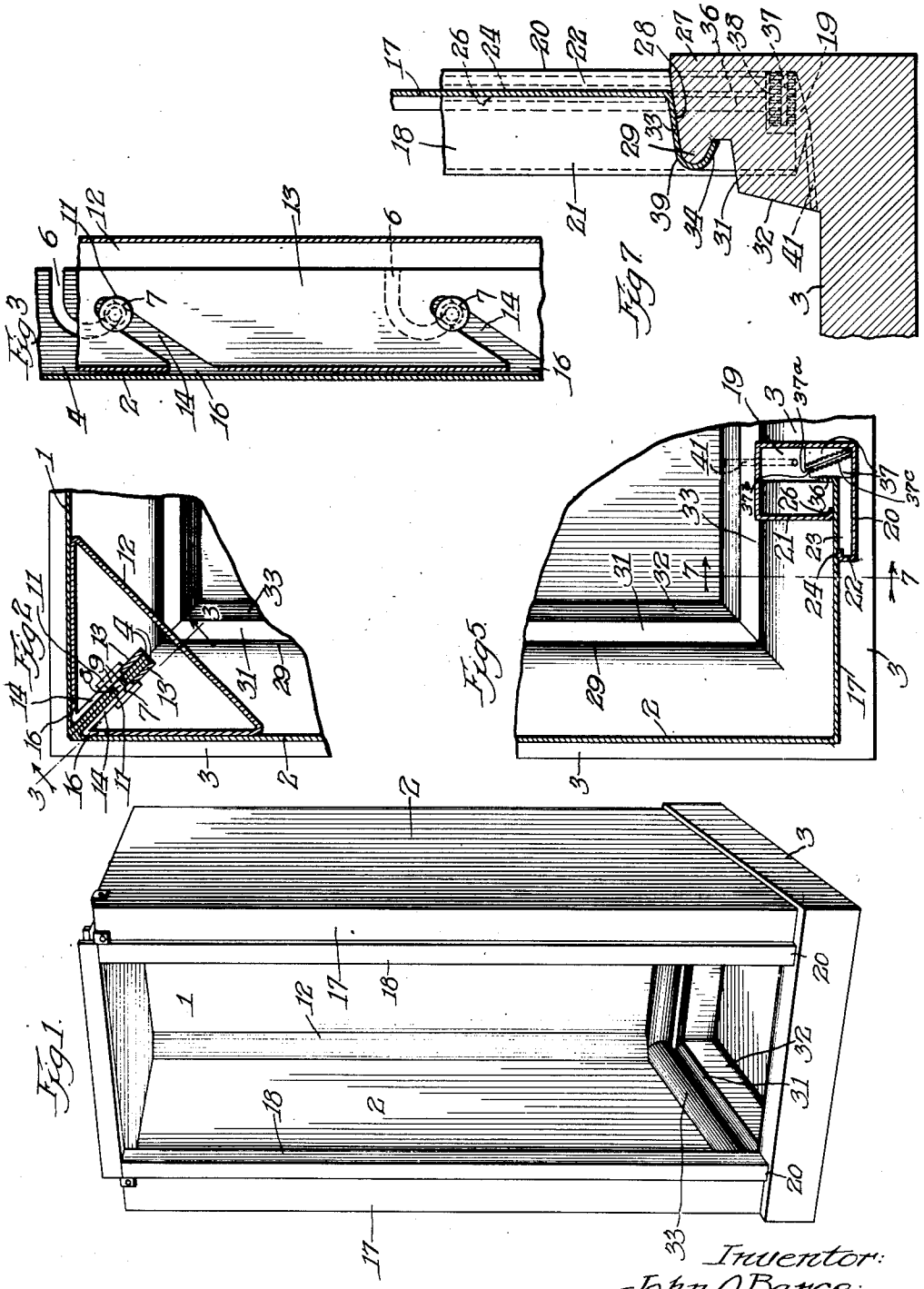


Fig 1.

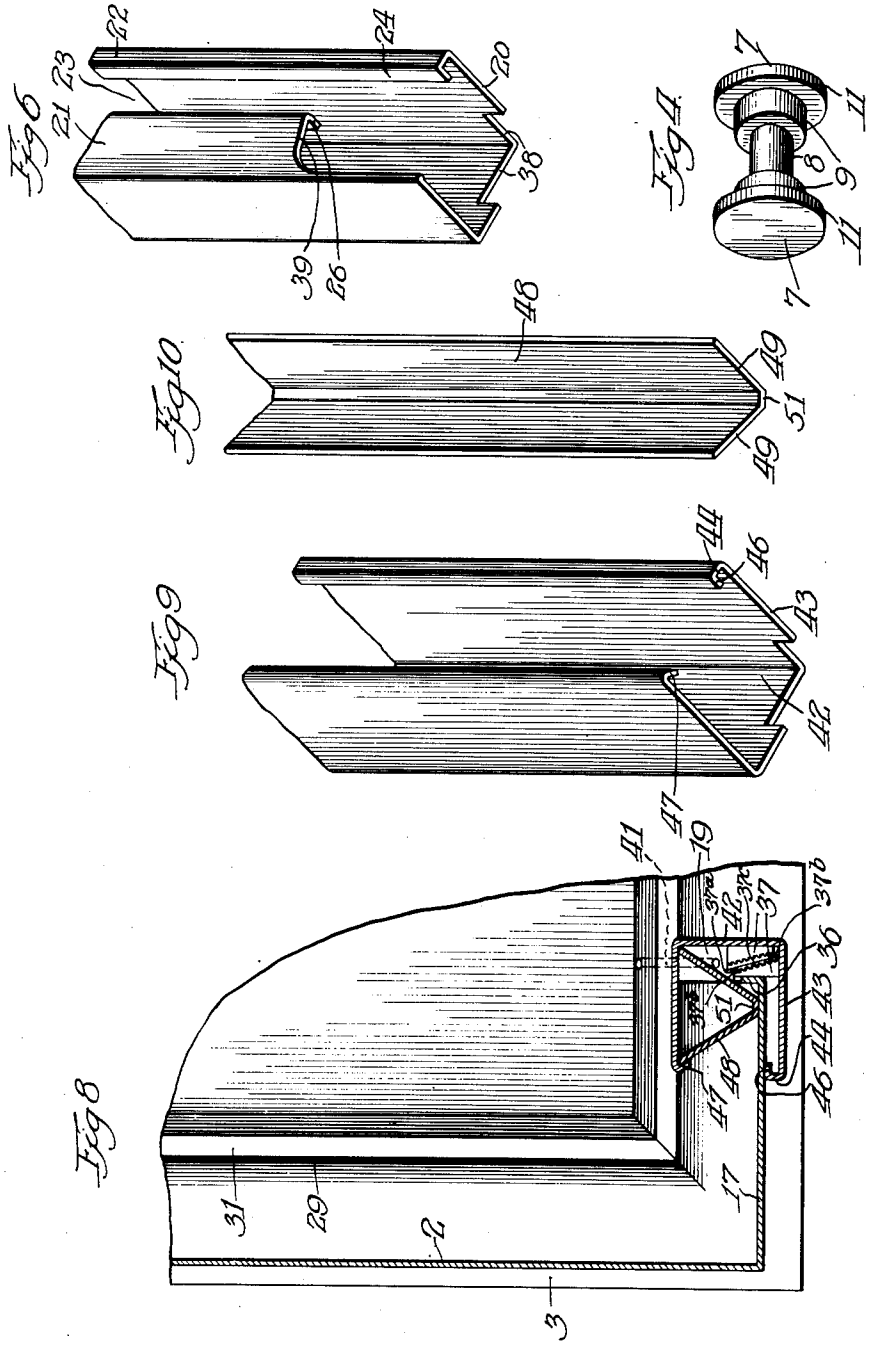
Witness
R. B. Davison.

Inventor:
John O. Barce:
By Jno. J. Wilson
Atty

Oct. 3, 1933. J. O. BARCE 1,928,924

SHOWER BATH CABINET

Filed Aug. 19, 1929 2 Sheets-Sheet 2



Witness:
R B Davison.

Inventor:
John O Barce
By Fra J. Wilson
Atty

Patented Oct. 3, 1933 1,928,924

UNITED STATES PATENT OFFICE

1,928,924

SHOWER BATH CABINET

John O. Barce, Chicago, Ill.

Application August 19, 1929. Serial No. 386,758

6 Claims. (Cl. 189—36)

My invention relates to cabinets and particularly to cabinets suitable as inclosures for shower baths.

In this type of cabinet which is usually placed in a room after the walls thereof have been either totally or partially erected, it is desirable to employ a sectional or knock-down construction in order to permit the cabinet to be shipped in knocked down condition and assembled in the room in which it is to be used. The structure should include as few parts as possible and the construction thereof should be of such a nature that it is possible to quickly and readily assemble the sections into a rigid inclosure with a minimum number of workmen. It is also desirable to have a structure which will be of such formation and construction to allow the use of enameled or porcelain coated sheet metal of relatively thin gauge. It is therefore the purpose of my invention to provide a cabinet involving these features and to provide such a cabinet which may be cheaply made upon a commercial basis and yet which will be of high quality and rigid construction.

In accordance with my invention the cabinet is formed of separate intersecting wall sections which may be joined together at the corners by means of a locking strip which not only conceals the edges of the adjoining walls but eliminates the necessity of screws or bolts for holding the corners together. The walls are joined to and interlocked with the stiles outlining the entrance into the cabinet by a simple securing or clamping device, preferably formed integrally with the stile and comprising two spaced abutments on the stile between which the terminating marginal edge of the wall may be clamped, and which device also eliminates the necessity of separate means of attachment such as bolts or the like for securing the walls to the stiles. The lower extremities of the wall sections are flanged in such a manner as to securely engage and interlock with a complementary formed receptor by being urged laterally thereagainst, without the use of bolts or the like entering into the receptor. All marginal edges, where the porcelain or other coating may not be perfect, are concealed from view to enhance the appearance of the finished cabinet.

A detailed description of one embodiment of my invention will be given in connection with the drawings in which:

Fig. 1 is a perspective view of a cabinet constructed in accordance with my invention.

Fig. 2 is a horizontal section taken through one corner of a cabinet constructed as shown in Fig. 1.

Fig. 3 is a vertical section on line 3—3 of Fig. 2.

Fig. 4 is a perspective of the locking pin used in conjunction with the corner strip for securing the intersecting walls together.

Fig. 5 is a horizontal section through a stile showing the interior construction thereof.

Fig. 6 is a perspective detail of the lower end of a stile member.

Fig. 7 is a vertical section line 7—7 of Fig. 5.

Fig. 8 is a similar view to Fig. 5 illustrating a modified form of stile.

Fig. 9 is a perspective of the lower end of the modified form of stile shown in Fig. 8, and

Fig. 10 is a perspective of the abutment strip used in the modified form of stile construction.

As shown in the illustrated embodiment, the cabinet consists of rear wall 1 and side walls 2 supported on a base or receptor 3, the latter of which may be constructed of tile, terrazzo, cement or the like. The walls are preferably made of sheet metal, either enameled or coated with porcelain. Both edges of the rear wall are flanged inwardly at substantially 45° to form flanges 4, which meet with similar flanges formed on the rear edges of the side walls to form a mitered corner when placed together, the flanges 4 being in opposed abutting relation. In order to secure the flanges 4 together they are provided with a series of parallel opposed curved slots 6 extending inwardly from the edges thereof and then downwardly in a hook-like formation. The opposed slot of each flange is engaged by double headed pins 7 having a central shank portion 8 of a diameter approximately the same as the width of slots 6 and terminating in shoulders 9 and having enlarged heads 11. The shank portion 8 is substantially the length of the two thicknesses of the flanged portions 4. The pins 7 may be dropped into lots 6 of the flanges 4 when brought together and thus secure the flanges loosely together between shoulders 9. Cooperating with pins 7 is a corner or lock strip 12 formed of sheet metal bent into triangular formation with the ends at the apex being bent inwardly at approximately 45° to form opposed flanges 13 spaced apart approximately twice the thickness of the sheet metal of the walls of the cabinet. The flanges 13 have diagonal opposed slots 14 cut therein of a width equal to the diameter of shoulders 9 and adapted to slide over shoulders 9. Slots 14 extend from the apex of the locking strip where they are enlarged as at 16 to permit entry of head 7, upwardly and inwardly to approximately half the width of the flanges 13. The number of slots 14 correspond

to the number of slots 6 and are spaced the same distance apart along the length of flanges 13. It follows from the above that the corners of the intersecting walls having pins 7 in slots 6 will be forced tightly together as locking strip 12 is forced downwardly and inwardly forcing the apex thereof into the corner of the walls with slots 14 engaging pins 7.

The front edges of the side walls 2 may be bent inwardly at right angles to form front panels 17 if so desired, or the front panels may be separate sections and united by a corner joint as heretofore described.

The entry into the cabinet is outlined by two stile members 18 which, in the modification shown in Figs. 1 to 7 inclusive, are formed of a single piece of sheet material bent into a substantially rectangular form, to form an elongated tubular stile member, it being understood that the receptor is provided with sockets 19 in the usual manner to receive the lowermost ends of the stile members. Instead of the stile being of the usual substantially closed rectangular formation, the the front wall 20 is extended laterally beyond one side wall 21 and is then flanged inwardly, as at 22, toward the rear wall 1. The side wall adjacent flange 22 is shortened so as not to extend entirely to the front wall 20. This construction leaves an opening 23 into the interior of the stile, the opening being defined by the two spaced free edges of the front and side walls, which edges may be flanged inwardly as at 24 and 26 respectively to form substantially parallel abutment surfaces. The side wall 21 is brought forwardly and the front wall flanged rearwardly at 22 sufficiently so that the two inturned flanges 24 and 26 are almost in alignment and are displaced therefrom a distance slightly less than the thickness of the panels 17.

It follows from the above that the free edge of panel 17 may be securely gripped by the stile 18 by inserting the free end of panel 17 into the opening in the stile and then rotating the stile to bring the front wall 20 thereof substantially parallel with the panel 17. The direction of rotation of the stile would be clockwise as shown in Fig. 5.

In order to secure the entire wall assembly to the receptor, the receptor is formed as usual, with an upstanding rim 27 (see Fig. 7) the upper surface of which is inclined downwardly toward the inside thereof as at 28 and is curved inwardly around its inner peripheral edge to form a curved undercut ledge 29 around the inside of rim 27 below which the rim is stepped downwardly and inwardly as at 31 and 32 to the bottom of the receptor. The lower ends of walls 1 and 2 and panels 17 are flanged inwardly and downwardly as at 33 and the lowermost edges thereof curved downwardly and again outwardly as at 34, the curvature of this edge portion being complementary to the curvature of the ledge 29 in order to snugly fit the ledge 29. Due to the curved ledge and the curved flange upon the end of the walls, the walls of the cabinet will be securely held against vertical movement in either direction and against horizontal movement in one direction when the walls are assembled and positioned with the lower flanged ends engaging the ledge. When assembled the back wall and the outer ends of the front panels are held against inward movement and in contact with the receptor by the two side walls at the same time the rear wall serves to hold the rear ends of the side walls in contact with the receptor. The front ends of the side walls are held against inward movement by the panels. Therefore, vertical and horizontal movement in all directions of the walls is prevented. To retain the side walls and consequently all walls, tightly against the receptor, the free or inner ends of the panels 17 are flanged inwardly as at 36 to form abutting surfaces to be engaged by one of a pair of wedge blocks 37. These blocks are similar in all respects to the usual form of locking blocks familiar in the printing art and comprise generally a pair of wedges arranged with their inclined surfaces 37^a contacting with each other and being rabbeted back as at 37^b at the top of their meeting faces to provide spaced surfaces which are formed with parallel pinion racks 37^c. In the present instance, these blocks are inserted between the inturned flanges 36 and the interior of the socket 19 in the receptor in which the stile is set and are used to urge the panel portion 17 outwardly and cause the lower flanged end of the side wall to be forced tightly against the ledge 29. To wedge the blocks tightly, a pinion key is meshed with the racks 37^c and turned to slide the wedges longitudinally relative to each other until adequate pressure is exerted against the flange 36 to hold the side walls in place as aforesaid. In order to accommodate the wedge blocks 37, the lowermost portions of one corner of the stile members are cut away as at 38 in order to make room for the blocks. The lower end of the side wall 21 of the stile is also cut away as is indicated at 39 to accommodate that portion of the flange 33 which passes thereunder. If desirable, the sockets into which the stile members are fitted may be drained by a duct 41.

In the modification shown in Figs. 8 to 10, the construction is generally the same as that shown in Figs. 1 to 7, the difference being a slight modification of the stile structure. In this modification the stile member, instead of being of one piece, is constructed of two pieces. As shown the stile member is constructed of a main U-shaped member 42 which constitutes the external member and an inner abutment member. As in the prior illustration, the front wall 43 of the stile is flanged rearwardly as at 44 and then bent inwardly as at 46 to provide an abutment surface. The rear wall, instead of being continued forwardly to provide a side wall, as in the prior instance, is merely curled inwardly to provide a hook 47. Thus one side of the main member is entirely open. To substantially close the stile and form a second spaced abutment, a V-shaped abutment member 48 is provided having two inclined side walls 49 and a flat relatively narrow end wall 51. The side walls are inclined to each other, being widely spaced at their free ends, and terminate in the narrow end wall 51. Thus the abutment in cross section, as shown in Fig. 8, will appear as a truncated prism. In use the abutment member is inserted in the main member with the bottom of the side walls 49 sprung between hook 47 and the corner between the side and rear walls, bringing the end wall 51 substantially in alignment with the inturned flange 46, but spaced therefrom. The width of the side walls 49 and the depth of the flange 44 are so chosen that the end wall 51 lacks being in alignment with flange 46 by an amount substantially equal to the thickness of the panels 17. It follows from the above that, as in the modification shown in Figs. 1 to 7, the panel 17 will be gripped between the abutment surface 46 and the end wall 51 after insertion of this panel therebetween

and rotation of the stile to bring the front wall 43 thereof substantially parallel with the panel 17.

From the above description of my invention, it is apparent that I have provided a cabinet involving a minimum number of parts and which may be assembled by a minimum number of workmen. It will be observed that there are practically no sharp corners and that all marginal edges where the enameling or other coating may be thin or partly chipped are concealed.

In assembling the cabinet constructed as above described, the wall members are inserted in place from the inside rather than from the outside and the corners secured together as is usually the custom. The side walls will be held in position at the rear end by the rear wall. The front ends are held in place by the panels which are urged against the ledge of the receptor by the action of the wedge members forcing the ends of the panels outwardly. With the walls thus secured in place, the stiles may be set in position in their sockets to engage the inner ends of the panels. It will be noted that no bolts are used to secure the corners together, nor are any bolts or screws used to secure the lower ends of the walls to the receptor.

It is obvious that minor changes may be made in the details of construction without departing from the spirit and scope of my invention as defined in the claims appended hereto.

I claim:

1. A sheet metal cabinet comprising upright walls disposed at an angle to form a corner, the abutting marginal edges of the side walls being bent inwardly to form opposed flanges, said flanges having aligned slots therein extending from the edges of said flanges inwardly toward the corner, means engageable in said slots for retaining said flanges and said walls together, and a corner strip for engaging said means for concealing said flanges.

2. A sheet metal cabinet comprising upright walls disposed at an angle to form a corner, the abutting marginal edges of the side walls being bent inwardly to form opposed flanges, said flanges having aligned slots therein extending from the edges of said flanges inwardly toward the corner, means engageable in said slots for retaining said flanges and said walls together, and a corner strip having a portion thereof engaging said means and adapted to draw said flanges and said walls closely together.

3. A sheet metal cabinet comprising upright walls disposed at an angle to form a corner, the abutting marginal edges of the side walls being bent inwardly to form opposed flanges, said flanges having aligned slots therein extending from the edges of said flanges inwardly toward the corner, means engageable in said slots for retaining said flanges and said walls together, and a corner strip having an inclined portion adapted to engage said means and draw said strip toward said corner upon longitudinal movement thereof to draw said flanges and said walls together.

4. A sheet metal cabinet comprising upright walls disposed at an angle to form a corner, the abutting marginal edges of the side walls being bent inwardly to form opposed flanges, said flanges having aligned slots therein extending from the edges of said flanges inwardly toward the corner, means engageable in said slots for retaining said flanges and said walls together, and a corner strip having inclined slots therein adapted to engage said means and draw said strip into said corner to draw said walls and strip tightly together upon longitudinal movement thereof.

5. A shower bath of the character described comprising in combination a receptor, upright flexible sheet metal walls supported on said receptor and disposed at an angle to form a corner, the adjacent marginal edges of said side walls being bent inwardly to form parallel flanges projecting into the interior of the cabinet and lying within the area of the receptor, said flanges having aligned slots therein extending from their free edges inwardly toward the corner, and means engageable in said slots for retaining said flanges and said side walls together.

6. A shower bath of the character described comprising in combination a receptor, upright flexible sheet metal walls supported on said receptor and disposed at an angle to form a corner, the adjacent marginal edges of said side walls being bent inwardly to form parallel flanges projecting into the interior of the cabinet and lying within the area of the receptor, said flanges having aligned slots therein extending from the free edges of said flanges inwardly toward the corner and thence outwardly toward said free edges, and means engageable in said slots and seated in the extremity thereof for retaining said flanges and side walls together, said slots being shaped to permit an outward pull on said means without dislodging the same from said slot.

JOHN O. BARCE.