J. CLIFFORD.

ENAMELED IRON BATH TUB.

APPLICATION FILED MAR. 23, 1911.

1,116,015.

Patented Nov. 3, 1914.

3 SHEETS—SHEET 1.

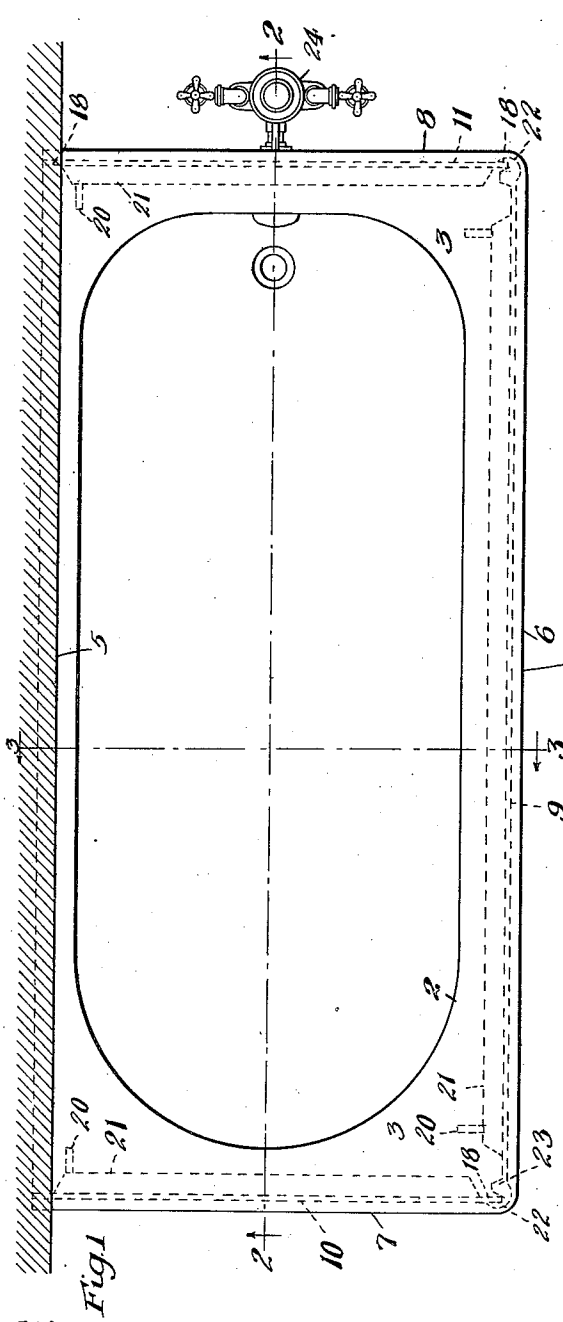


Fig. 1

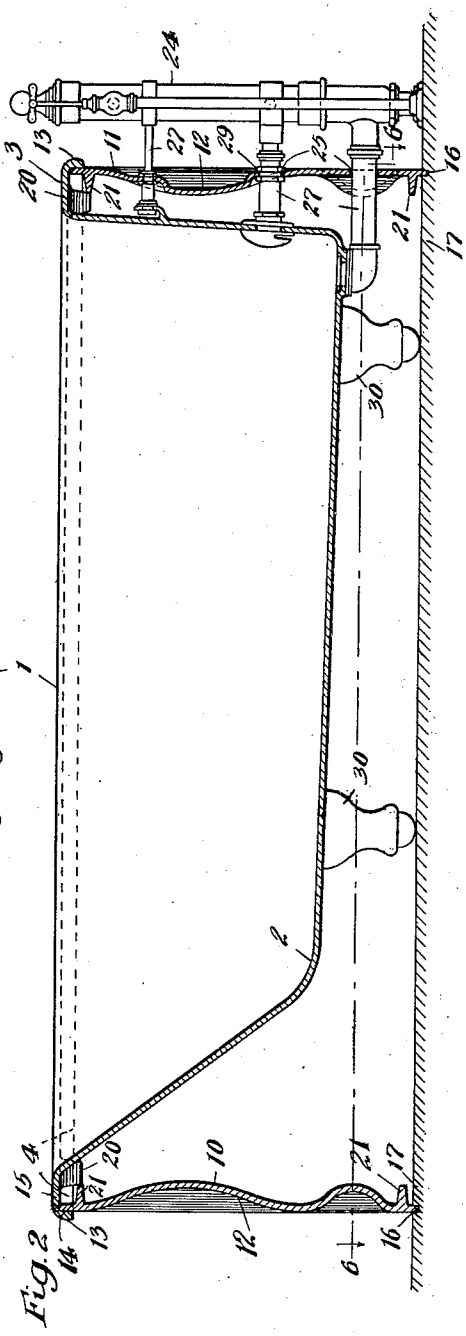


Fig. 2

Witnesses

Wm. Geiger

Pearl Abrams.

Inventor

John Clifford

By Munday, Evarts & Adcock & Clarke

his Attys

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3 SHEETS—SHEET 2.

Fig. 3

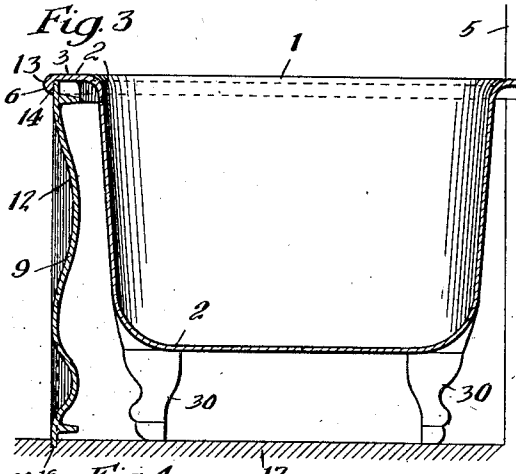


Fig. 7

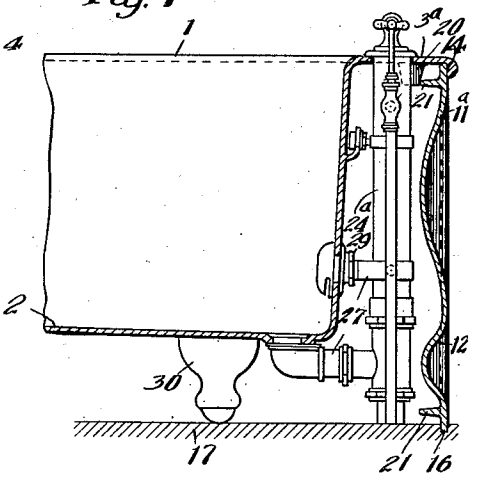


Fig. 4

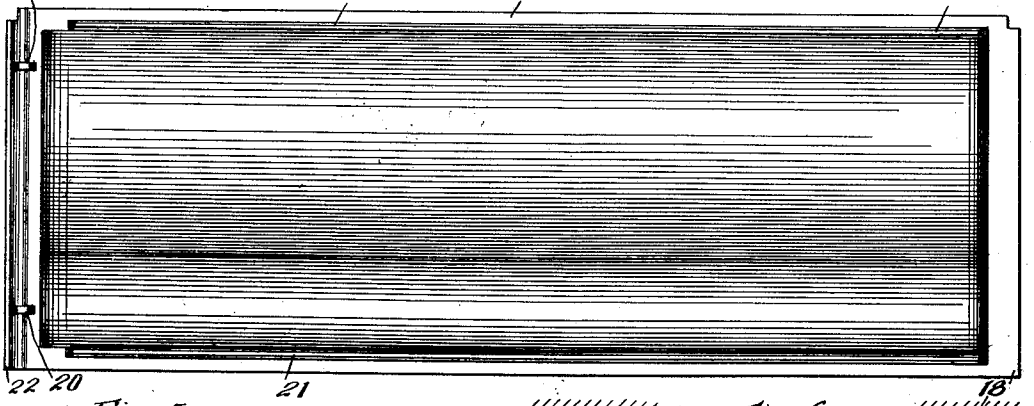


Fig. 5

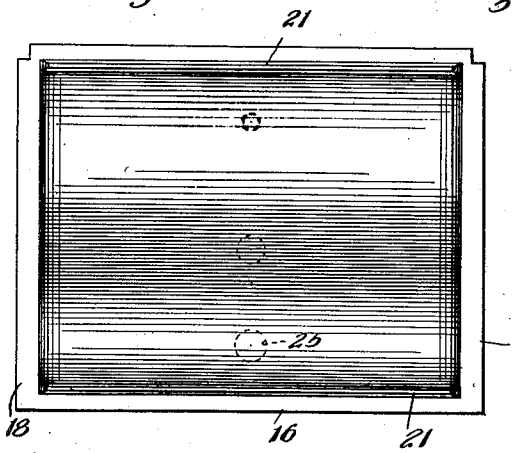
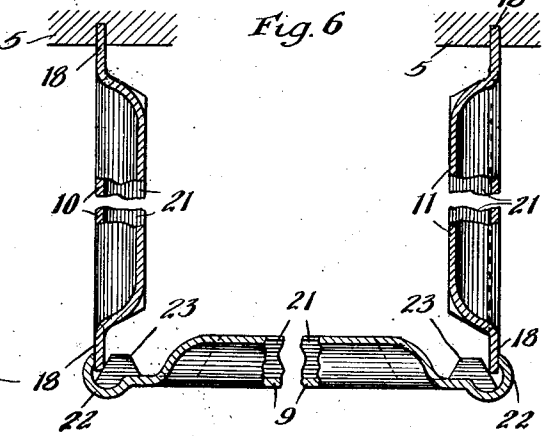


Fig. 6



Witnesses:

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3 SHEETS—SHEET 3.

Fig. 8

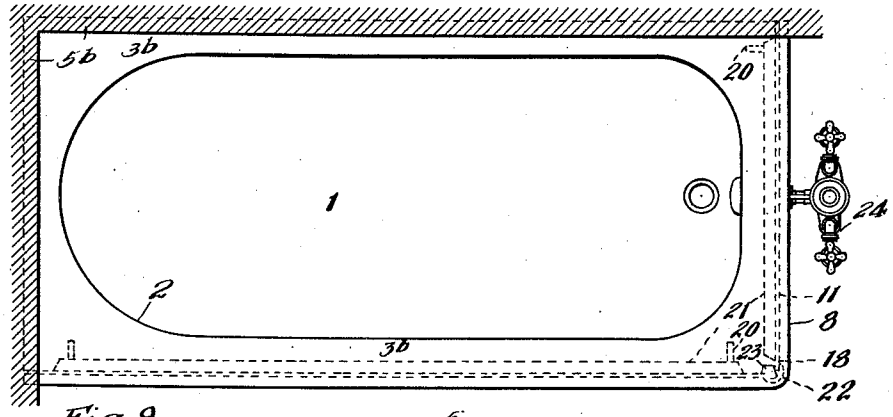


Fig. 9

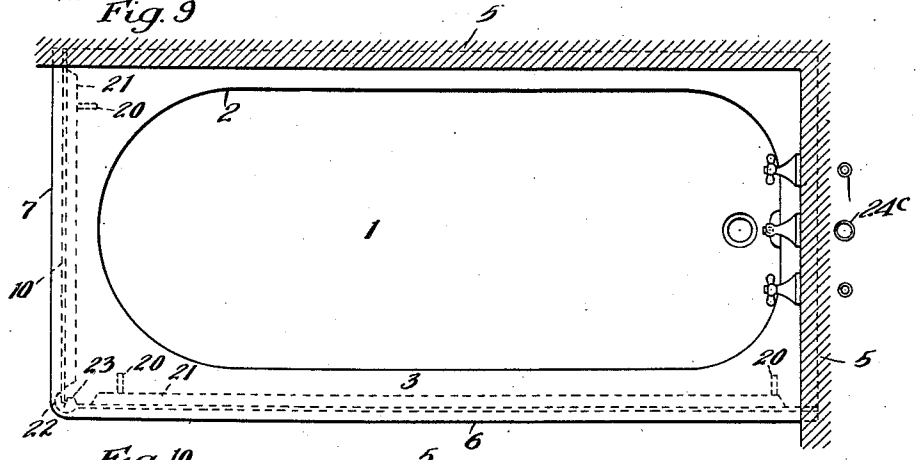
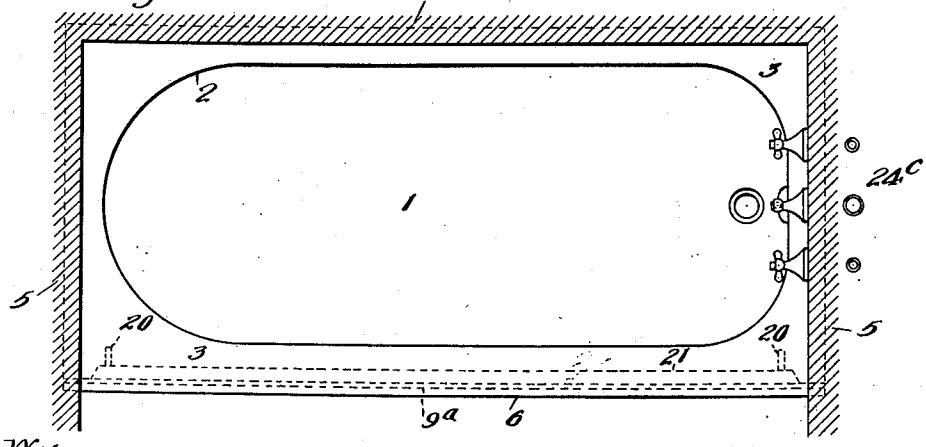


Fig. 10



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN CLIFFORD, OF CHICAGO, ILLINOIS, ASSIGNOR TO L. WOLFF MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ENAMELED IRON BATH-TUB.

1,116,015. Specification of Letters Patent. Patented Nov. 3, 1914.

Application filed March 23, 1911. Serial No. 616,309.

To all whom it may concern:

Be it known that I, JOHN CLIFFORD, 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 Enameled Iron Bath-Tubs, of which the following is a specification.

My invention relates to improvements in enameled iron bath tubs. Heretofore, enameled iron bath tubs have only had an enameled or vitreous coating upon the inside, the tubs, however, being usually furnished with a rolled rim and with the enameled coating on the inside of the tub extending continuously over the external surface of the rolled rim, the interior surface of the rolled rim and the exterior surface of the tub being unprotected or simply covered with white paint, which is neither durable nor sanitary, and soon becomes very unsightly, especially at the exposed side or exposed end or ends of the tub. And as the tubs and their rolled rims are always made with rounded corners, crevices or confined open spaces are necessarily left or formed between the back side of the tub and the wall and between one or both ends of the tub and the wall, and also under the tub for collection of dirt and litter, where it cannot be readily removed or kept clean, thus rendering the installment as a whole objectionable and far from sanitary. It is practically impossible to enamel an iron bath tub simultaneously both upon its inside and outside surfaces, and if it were attempted to enamel it upon the inside first, and then subsequently enamel it upon the outside, the inside enamel coating would be cracked and destroyed in the heating step of the second enameling operation. And even if an iron bath tub could be enameled upon both its inside and outside surfaces without such difficulty and expense as to render it impractical, the fixture would still have the objection of unsanitariness on account of the confined spaces left between the tub and the floor and side and end walls of the building against which the tub is installed.

The object of my invention is to provide an improved construction of enameled iron bath tub which will be perfectly sanitary, which may be installed in a bath room with one, two or more of its upright sides or ends exposed as may be required and without leaving or forming any confined spaces or crevices between the other sides or ends of the tub and the walls of the room or between the bottom of the tub and the floor for collection of dirt or litter, and which will be neat in appearance and have no un-enameled surfaces exposed to the room, and which will have firm, liquid tight, upright and horizontal joints with the walls and floor of the room in which it is installed.

My invention consists in the means I have devised and employ to practically accomplish this object or result, the same consisting essentially in an enamel iron tub provided with a straight edged, square cornered rim adapted at one or more of its sides or ends to form a tight joint with the wall of the room against which the tub is installed, and separate piece removable straight edged and square cornered enameled iron skirt members fitting under the straight edged rim of the tub and extending to the floor and inclosing the tub at its exposed side or exposed side and end or exposed side and ends, as the case may be, the straight, horizontal lower edges of the skirt members forming tight joints with the tile, cement or other floor of the room, and the straight, upright edges of the skirt member or members forming tight joints with the tile or other wall of the bath room and the skirt members having at the outer or exposed corners of the tub, the one a curved flange overlapping and embracing the upright edge of the other and also wedge lugs to hold the same rigidly in place.

My invention also consists in the novel construction of parts and devices and in the novel combination of parts and devices herein shown and described and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a plan view of an enameled iron bath tub embodying my invention, showing a portion of one of the upright walls of a bath room in section. Fig. 2 is a vertical, longitudinal section on line 2—2 of Fig. 1. Fig. 3 is an upright, cross section on line 3—3 of Fig. 1. Fig. 4 is a detail elevation of the side skirt member. Fig. 5 is a detail elevation of one of the end skirt members. Fig. 6 is a detail, partial, horizontal section on line 6—6 of Fig. 2. Fig. 7 is a detail, vertical, longitudinal section showing a modification in

which the water supply and flushing pipes and valves are inclosed between the end skirt member and the tub. Fig. 8 is a detail plan view, showing the walls in section, of a modified construction in which one side and one end of the tub is exposed. Fig. 9 is a plan view illustrating another modification, wherein the fixtures or water supply pipes are located within the wall of the bath room. Fig. 10 is a plan view, partly in horizontal section, illustrating a further modification in which but one side of the tub is exposed, both ends and one side being joined to the upright walls of the room.

In the drawing, 1 represents an enameled iron bath tub having the customary enamel coating 2 upon its inside and upon the outer surface of its rim 3. The rim 3 of the tub is straight edged and square cornered and has one or more of its straight, horizontal edges 4 adapted to form a tight joint with the upright cement or tile wall 5 of the bath room, and one or more of its other edges as 6, 7 and 8 adapted for junction with the separate piece removable enameled iron skirt members 9, 10, 11, all of which have an enamel coating 12 upon their outer surfaces. The straight edged and square cornered rim 3 of the bath tub is provided with a marginal depending flange 13, the inner face 14 of which flange is upright and straight to form a snug close joint with the straight, horizontal upper edges or joint flanges 15 with which each of the skirt members is provided. Each of the skirt members is also furnished with a straight, lower, horizontal edge 16 to form a square joint with the cement tile or other floor 17 of the bath room, the joint flange or edge 16 being preferably set into the masonry of the floor, as will be readily understood from Figs. 2, 3 and 4 of the drawing. Each of the end skirt members 7, 8 is also provided at each end with an upright, straight edge or flange 18 adapted to form tight close joints with the cement, tile or other upright wall 5 of the bath room or with the front or side skirt member 9.

The rim 3 of the tub is provided with a plurality of inclined faced or wedging integral lugs 20 on the under side thereof for engagement with corresponding horizontally projecting flanges 21 with which the removable skirt members 9, 10, 11 are provided, the wedging lugs 20 and flanges 21 in connection with the rim flange 13, thus serving to lock the skirt members 9, 10, 11 rigidly in position under the rim of the bath tub and within the marginal depending flange 13 of said rim. The separate piece skirt members 9, 10, 11 are preferably furnished with flanges 21 at both their upper and lower horizontal edges so that the skirt members may be placed either side up if desired, and as the flanges 21 also serve to strengthen and stiffen the skirt members against warping. The side skirt member 9 is provided at its upright ends with curved flanges 22 which embrace the straight edges or flanges 18 of the end skirt members 10, 11. The side skirt member 9 is also provided with a plurality of wedge faced lugs 23 for engagement with the straight edges or flanges 18 of the end skirt members 10, 11 and thus serve to lock the end skirt members to the side skirt member and form a strong and rigid upright corner at the junction of the side and end skirt members. The enameled iron removable skirt members 9, 10, 11 are thus all held firmly and rigidly in position without the necessity of any screws or forming any bolt holes through the enamel coating of the skirt members. As the curved corner flanges 22 of the side or front skirt member 9 are turned toward the wall, the joint between the extreme edges of the curved flanges 22 and the straight edged joint flanges 18 of the end skirt members 10, 11 is turned toward the wall, and not noticeable from the room so that the appearance of the bath tub installment as a whole is the same as though the bath tub, its rim and the skirt members were all in one solid piece. This gives the fixture as a whole a very neat appearance in connection with the depending marginal flanges 14 of the bath tub rim 3 which embrace and conceal the upper straight horizontal edges of the removable separate piece skirt members.

The water supply and waste fixtures or pipes 24 may be upon the outside of one of the end skirt members, as shown in Figs. 1 and 2, in which case the end skirt member 11 is provided with openings 25 and bosses 26 to receive the horizontal pipes 27 which are furnished with caps or flanges 29 to give a neat finish at the points where the horizontal pipes pass through the enameled iron end skirt member. If preferred, as illustrated in Fig. 7, the water and waste fixtures 24^a may be located between the upright end wall of the bath tub at the outlet end and the enameled iron end skirt member 11^a. In such case, the rim of the tub at the outlet end thereof is increased in width as indicated at 3^a in the drawing.

In the modification illustrated in Fig. 8, the construction is the same as shown in Figs. 1, 2 and 3, excepting that the tub is exposed and has skirt members at only one end and one side instead of at two ends and a side, as shown in Fig. 1. In Fig. 8, one straight side edge and one separate end edge of the tub rim 3^b forms a tight joint with the upright wall 5^b of the bath room.

In Fig. 9 the construction is similar to that shown in Fig. 8, excepting that the fixtures or water supply and waste pipes 24^c

are located within the wall of the bath room instead of in the bath room.

In the modification shown in Fig. 10, the construction is the same as shown in Fig. 9, excepting that the bath tub is represented as being installed in a recess of the bath room so that its rim forms a liquid tight joint with the upright wall at three of its rectangular edges, the bath tub thus having but one exposed side, and as a consequence only one enameled iron removable skirt member 9^a is employed.

As shown in Figs. 2, 3 and 4, the bath tub is represented as being supported upon legs 30. In cases where legs are employed, they are preferably removably attached to the bath tub in the customary manner.

The separate piece removable enameled iron skirt members 9, 10, 11 have the main or panel portions thereof within their marginal straight edged joint flanges molded into any desired ornamental curved shape, and preferably about as indicated in the drawing.

I claim:—

1. The combination with an enameled iron bath tub having a substantially horizontally projecting rim, of separate piece removable enameled iron side and end skirt members fitting at their upper horizontal edges under the rim of said tub, said side skirt member having at its upright end edges curved flanges overlapping the upright end edges of said end skirt members, the rim of said tub having a depending marginal flange overlapping and embracing the upper horizontal edges of said skirt members, and the rim of said tub having wedge faced lugs for engagement with said skirt members to lock them in place, substantially as specified.

2. The combination with an enameled iron bath tub having a substantially horizontally projecting rim, of separate piece removable enameled iron side and end skirt members fitting at their upper horizontal edges under the rim of said tub, said side skirt member having at its upright end edges curved flanges overlapping the upright end edges of said end skirt members, the rim of said tub having a depending marginal flange overlapping and embracing the upper horizontal edges of said skirt members, and the rim of said tub having wedge faced lugs for engagement with said skirt members to lock them in place, and said skirt members having on their inner faces near their upper horizontal edges locking flanges for engagement with said lugs, substantially as specified.

3. An enameled iron bath tub having a substantially horizontally projecting straight edge and square cornered rim adapted to form square joints with a wall of the bath room, said rim at one or more of its straight edges having a depending marginal flange adapted for reception under the rim and within said depending flange of the upper horizontal edge of a removable enameled iron skirt member, and a removable enameled iron skirt member having a straight, horizontal upper edge fitting under said rim and within its depending marginal flange, said skirt member having a lower, horizontal straight edge adapted to form a square joint with the floor, and said rim of said tub having on its under side lugs for holding the upper edge of said skirt member against the marginal flange of said rim, substantially as specified.

4. The combination with an enameled iron bath tub having a rim with a depending marginal flange, of a separate piece removable enameled iron skirt member having a straight upper edge fitting under said rim and against said depending flange, said tub having lugs under said rim for holding the upper edge of said skirt member against said depending flange, substantially as specified.

5. The combination with an enameled iron bath tub having a straight edged rim adapted to form at one of its straight edges a square joint with an upright wall of the bath room and having at another of its straight edges a depending marginal flange, of a separate piece removable enameled iron skirt member fitting at its upper, horizontal edge under said rim and engaging said depending marginal flange, said tub having under its said rim lugs for locking the upper edge of said skirt member against said marginal flange, substantially as specified.

6. The combination with an enameled iron bath tub having a straight edged rim adapted to form at one of its straight edges a tight joint with an upright wall of the bath room and having at another of its straight edges a depending marginal flange, or a separate piece removable enameled iron skirt member fitting at its upper, horizontal edge under said rim and engaging said depending marginal flange, said skirt member having at one end thereof an upright straight edge adapted to form a tight joint with an upright wall of the bath room, said skirt member having a lower, horizontal edge adapted to form a tight joint with the floor, substantially as specified.

7. The combination with an enameled iron bath tub having a substantially horizontally projecting rim, of a plurality of separate piece removable enameled iron skirt members fitting at their upper horizontal edges under the rim of the tub and extending to the floor, one of said skirt members having a curved flange at its end overlapping the upright edge of the other skirt member, and provided also with lugs

for holding the upright edge of said other skirt member against said curved flange, substantially as specified.

8. The combination with an enameled iron bath tub having a substantially horizontally projecting rim having square corners and straight edges, of a plurality of separate piece removable enameled iron skirt members fitting at their upper horizontal edges under the rim of the tub and extending to the floor, one of said skirt members having a curved flange at its end overlapping the upright edge of the other skirt member, said skirt members having also straight, horizontal edges adapted to form tight joints with the floor and said skirt members being disposed substantially at right angles to each other, substantially as specified.

9. The combination with an enameled iron bath tub having a substantially horizontally projecting rim, of a plurality of separate piece removable enameled iron skirt members fitting at their upper horizontal edges under the rim of the tub and extending to the floor, one of said skirt members having a curved flange at its end overlapping the upright edge of the other skirt member, and provided also with lugs for holding the upright edge of said other skirt member against said curved flange, said skirt members having also straight, horizontal edges adapted to form square joints with the floor, substantially as specified.

10. The combination with an enameled iron bath tub having a straight edged square cornered rim, of separate piece removable skirt members fitting under the rim and extending to the floor at the exposed edges of the tub, said tub rim having an edge thereof adapted to form a square joint with a bath room wall, said skirt members having at the outer or exposed corners of the tub interengaging flanges and the ends of the skirt members beneath the ends of the edge of the tub rim forming the joint with the bath room wall, being also adapted to form a square fit with the wall, substantially as specified.

11. An enameled iron bath tub adapted for use in a tiled floor and wall bath room, said tub having a substantially horizontally projecting rim and provided with an enameled coating upon the inside of the tub and the exterior of the outer surface of the rim, and furnished with a separate piece removable enameled iron side skirt member extending from the rim to the floor, said skirt member being adapted to project below the surface of the bath room floor and form a square fit with the tile thereof and said rim having straight edges and angular corners whereby the rim is adapted to form a square fit with an adjacent wall, said rim being adapted to project within the wall and form a square fit with the tile thereof.

12. An enameled iron bath tub having a substantially horizontally projecting rim, and provided with an enameled coating upon the inside of the tub and the exterior of the outer surface of the rim, and furnished with separate piece removable enameled iron side and end skirt members extending from the rim to the floor, said skirt members being adapted to project below the surface of the bath room floor and form a square fit with the tile thereof, said rim having straight edges and angular corners, whereby the rim is adapted to form a square fit with an adjacent wall and to project within the wall and form a square fit with the tile thereof.

13. The combination with an enameled iron bath tub having a substantially horizontally projecting rim, said rim having straight edges meeting each other at substantially right angles, of a plurality of separate piece removable enameled iron skirt members fitting at their upper, horizontal edges under the rim of the tub and extending to the floor, and adapted to form a square fit with the floor, one of said skirt members having a curved flange at its end overlapping the upright edge of the other skirt member, said skirt members being disposed substantially at right angles to each other.

14. The combination with an enameled iron bath tub having a straight edge rim, of a separate piece removable enameled iron skirt member having horizontal parallel edges, one of which is adapted to engage beneath the rim of the tub and the other to engage the floor and form a square fit therewith, said removable skirt member being reversible, whereby either longitudinal edge thereof is adapted to engage either the tub rim or the floor, substantially as specified.

15. A bath tub, comprising an enameled tub member having a substantially flat and approximately rectangular rim with a downwardly extending bead at its edge, downwardly projecting lugs on the rim spaced from the bead, enameled side and end panels fitting beneath the rim and engaging the bead, flanges on the panels engaging the lugs, and a hook shaped flange on the end of one panel adapted to engage and overlap the edge of the adjoining panel.

Signed in the presence of two subscribing witnesses, this 10th day of February, 1911.

JOHN CLIFFORD.

Witnesses:
PEARL ABRAMS,
EDMUND ADCOCK.