July 15, 1941. S. A. SNELL ET AL 2,249,055

SHEET METAL CONSTRUCTION

Filed Feb. 4, 1939

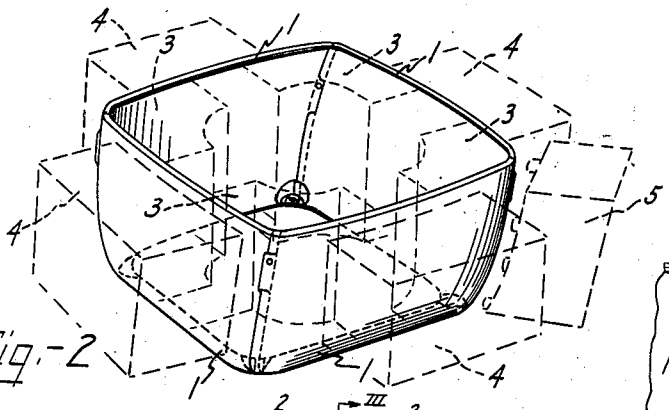


Fig.-2

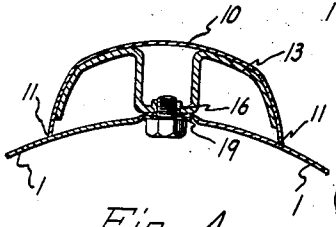


Fig.-4

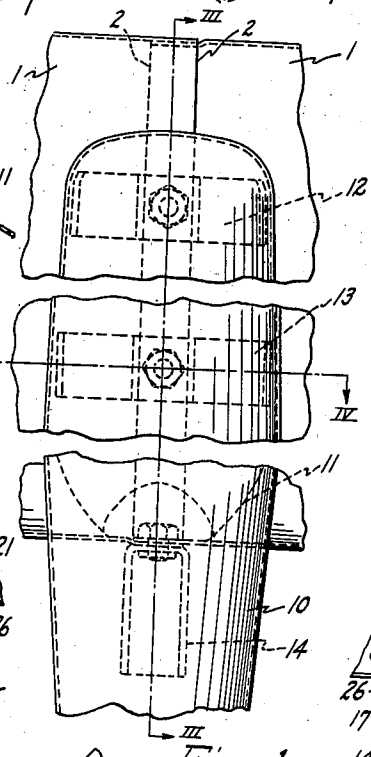


Fig.-1

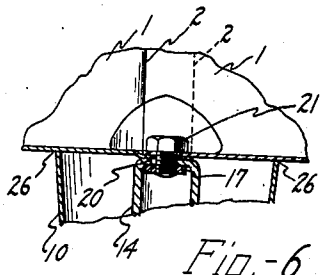


Fig.-6

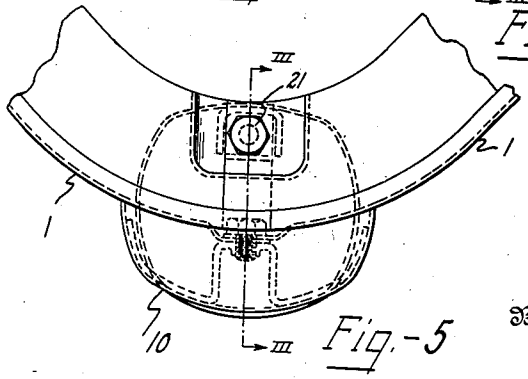


Fig.-5

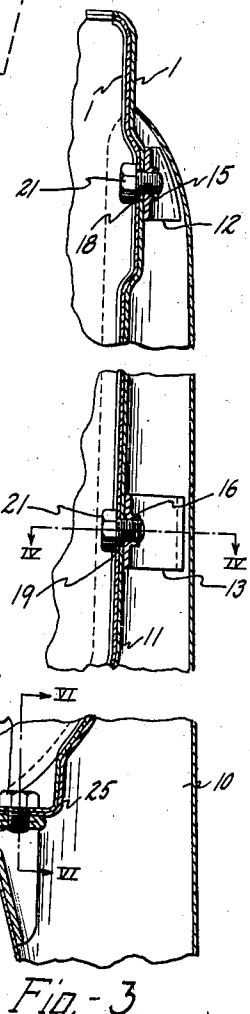


Fig.-3

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Patented July 15, 1941 2,249,055

UNITED STATES PATENT OFFICE

2,249,055

SHEET METAL CONSTRUCTION

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Application February 4, 1939, Serial No. 254,569

1 Claim. (Cl. 248—151)

This invention relates to washing machines, and particularly to a sheet metal skirt therefor for receiving the washing bowl, although the invention is considered to be broad enough to embrace sheet metal constructions having other applications than washing machine skirts.

Washing machines are usually constructed from aluminum castings, wherein single castings comprise the bowl as well as the frame portion, or in the form of cylindrical sheet metal skirts having bowls inserted therein. The ordinary cylindrical skirt is subject to a number of disadvantages, one of which is its plain appearance. However, a sheet metal skirt and bowl construction is particularly desirable for its cheapness in cost and lightness in weight. A desired form of sheet metal skirt for washing machines is one of general tubular configuration having the upper and lower portions thereof drawn inwardly to a smaller internal diameter than the central portion. Because of the dimensions of suitable skirts, it has been impossible to fabricate them by known methods of sheet metal working. The present invention makes possible the fabrication of such skirts by constructing a plurality of full length sections having substantially vertical side edges, which are overlapped and preferably welded together. The side sections can be readily made by stamping, and the overlapping connections at the intersecting edges of the side sections may be covered with the washing machine legs.

Accordingly, an object of the invention is to provide a sheet metal construction of vertical, irregular tubular configuration having a plurality of sections which are connected together.

Another object of the invention is to provide a sheet metal construction of vertical, irregular tubular configuration having a plurality of full length side sections having overlapping vertical side edges with welded connections between said side edges to form a unitary structure.

Another object of the invention is to provide a sheet metal construction of the character described having reinforcing edge flanges disposed in overlapping relation and secured together.

Still another subject of the invention is to provide a method for making tubular sheet metal constructions, which comprises the providing of a plurality of full length side sections having overlapping edges, positioning the side sections by means of a jig to dispose them in a predetermined configuration, and connecting the side edges as by welding.

These and other objects will be apparent from the following specification when taken with the accompanying drawing, in which

Fig. 1 is a partial side elevation showing the relation of the leg structure to the skirt,

Fig. 2 is a perspective view of the skirt alone in assembled relation during a step in its manufacture,

Fig. 3 is a partial section on the line III—III of Fig. 5,

Fig. 4 is a section on the line IV—IV of Fig. 1,

Fig. 5 is a plan view of the portion of the structure disclosed in Fig. 1, and

Fig. 6 is a section on the line VI—VI of Fig. 3.

The washing machine skirt according to the present invention is broadly in the form of a vertically arranged tubular member consisting of four full length side sections suitably connected together along vertical seams. Preferably the legs for supporting the skirt are connected thereto in covering relation to the seams.

Referring particularly to the drawing, the reference characters 1 indicate the side sections of the washing machine skirt. The general form of the skirt is disclosed in Fig. 2, and the vertical cross-section of a section 1 is disclosed in Fig. 3. As will be observed from the drawing, the upper and lower edges of the skirt are drawn inwardly so that the internal lateral dimensions of the upper and lower portions are less than those of the mid-portion. The skirt is arranged for receiving and supporting a wash bowl of some suitable form. Each of the sections 1, as disclosed in Figs. 2 and 3, is of dished or concavo-convex configuration and provided with vertical side flanges 2 for stiffening and otherwise reinforcing the structure. The flanges 2 may or may not be offset from the surface of each side section 1. The vertical flanges 2 overlap, as appears clearly in each of the figures of the drawing, and are suitably secured together, as by spot welding.

In Fig. 2 is illustrated one arrangement that may be employed for securing the side sections 1 together. As a snug fit between the wash bowl and the skirt, comprised of the side sections 1, is essential, the side sections 1 must be positioned with respect to one another with very small tolerances. To this end, the side sections 1 are fixedly held in their finally desired position with respect to one another in a jig consisting of internal portions 3 and external portions 4, the external portions 4 serving to clamp the sections 1 against the internal portions 3. When the sections 1 are disposed in their final relation to one another, as shown in Fig. 2, spot welding

electrodes 5, diagrammatically shown are brought against the overlapping portions of the sections 1 to permanently spot weld the sections 1 together. It will be understood, however, that other ways than spot welding may be employed to join the sections.

The skirt comprised of the side sections 1 is supported by legs 10, one of which is disposed at each vertical seam and overlaps the same in covering relation as shown in Fig. 1. Each leg 10 has skirt contacting portions 11 shaped to snugly fit against the outside of the skirt as shown particularly in Figs. 3, 4 and 5. Secured to the inside surfaces of the legs 10 are brackets 12, 13 and 14 which have threaded openings 15, 16 and 17 respectively, in contiguous relation to the vertical seams at the overlapping side flanges 2. Through the overlapping side flanges 2 opposite the openings 15, 16 and 17 are openings 18, 19 and 20 respectively through which screws 21 are passed into threaded engagement with the threaded openings 15, 16 and 17 to secure the skirt to the legs 10. The screws 21 through the openings 18, 19 and 20 serve additionally to reinforce the connections between the side sections 1 provided by the welds. The openings 18, 19 and 20 should be made after the side sections 1 have been welded or otherwise secured together in the manner disclosed in Fig. 2, as the alignment and relative positioning of the side sections 1 should be provided wholly by the jig members 3 and 5. Reference to Figs. 3 and 5 reveals that the portions of the overlapping side edges 2, in which the openings 18 are disposed, are offset outwardly into close relation with the legs 10 to produce a more rigid construction.

At the lower ends of the seams formed by the overlapping side edges 2 are offset projecting seat portions 25 for engagement with the attaching brackets 14 on the legs 10. Also the lower skirt contacting portions 11 of the legs 10 are in skirt supporting relation with the lower portions of the skirt as shown in Fig. 3. The offset portions 25 have through them the hereinbefore described openings 20 and provide clearing for a wrench in turning the screw.

From the foregoing specification it will be apparent that the employment of dished plates in the manner described makes possible the provision of a sheet metal tubular member particularly adaptable for washing machine skirts which cannot be made by any other known process. In the claim any reference to structure being vertical or horizontal is to be considered as relative and not limiting.

Having thus described our invention, what we desire to secure by Letters Patent and claim is:

A washing machine skirt and leg assembly comprising a skirt formed from a plurality of preformed concavo-convex side sections, such sections having arcuate vertical edge portions terminating in corner flanges, the flanges of adjacent sections being overlapped and joined together to form a two-ply corner reinforcement, legs embracing and overlapping at their upper ends substantial portions of the arcuate corners defined by said adjacent sections, the upper ends of said legs being of arcuate cross section, to conform with said arcuate corners and having their vertical edges abutting said skirt at opposite sides of said overlapping corner flanges, an attachment bracket anchored to the inside of each of said legs adjacent its upper end and being completely concealed, and a removable fastener extending through said corner reinforcement and anchored to said bracket to secure the leg to the skirt, said removable fastener being accessible only from the inside of said skirt.

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