Nov. 12, 1963 R. A. RICHARDSON 3,110,040

SELF-RIMMING SINK MOUNTING

Filed March 12, 1959

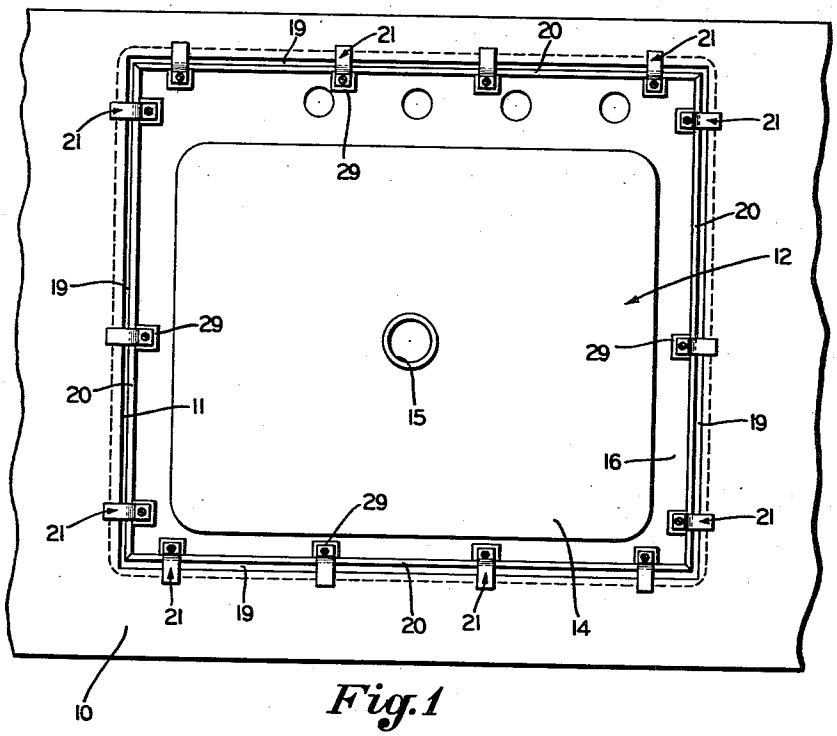


Fig. 1

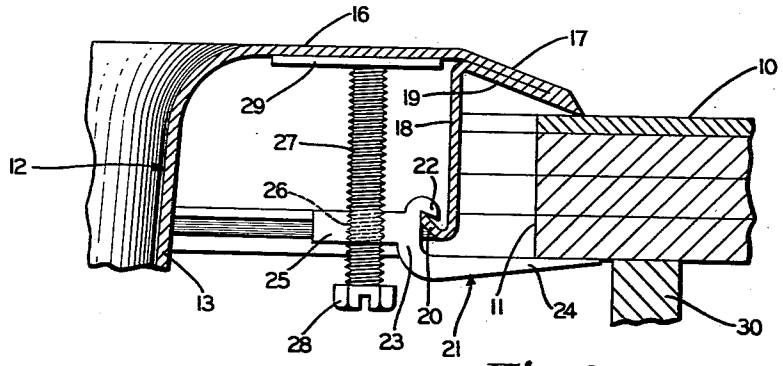


Fig. 2

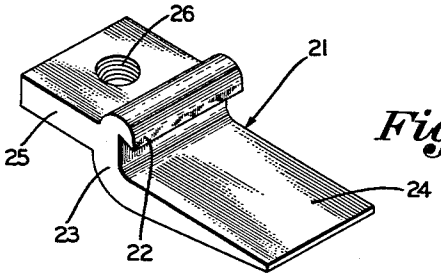


Fig. 3

INVENTOR.
Richard A. Richardson
BY
Frease, Bishop, Johns & Schick
ATTORNEYS

United States Patent Office 3,110,040 Patented Nov. 12, 1963

3,110,040
SELF-RIMMING SINK MOUNTING

Richard A. Richardson, Sherrodsville, Ohio, assignor to Carrollton Manufacturing Company, Carrollton, Ohio, a corporation of Ohio

Filed Mar. 12, 1959, Ser. No. 798,887
2 Claims. (Cl. 4—187)

The invention relates to mountings for self-rimming sinks, and the present application is a continuation-in-part of my copending application Serial No. 733,576, filed May 7, 1958, now Patent No. 2,925,609, issued February 23, 1960, which is a continuation-in-part of my copending application Serial No. 726,370, filed April 4, 1958, and now abandoned.

Until quite recently, the majority of sink bowls have been made of enameled steel wherein the marginal flanges of the bowls have been of considerable thickness. It was, therefore, generally unsatisfactory to have the marginal flange of the bowl rest upon the sink deck due to the thickness of the flange. The general practice, therefore, has been to install such bowls below the top of the sink deck with the use of a separable frame or "Hudee" ring between the flange of the bowl and the surface of the deck.

In recent years stainless steel and similar sink bowls have come into wide use. Such sink bowls are drawn or pressed from sheets of stainless steel or alloy of relatively thin gauge. The bowl is formed with an outwardly projecting marginal flange of such relatively thin gauge that the flange of the sink may bear directly on the upper surface of the deck, thus eliminating the separable frame or "Hudee" ring, and providing a "self-rimming" sink.

In my copending application, Serial No. 733,576 (now Patent No. 2,925,609), of which this application is a continuation-in-part, I disclose a sink having a marginal flange with a downwardly and outwardly inclined terminal portion overlying the opening in the drainboard, and sheet metal strips depending from the marginal flange of the sink and having outwardly and downwardly disposed flanges integrally attached at their outer edges to the outer edges of the marginal flange on the sink.

Said sheet metal strips are shown in said copending application as provided at the lower edges with outwardly and upwardly disposed hooks engaged by downwardly and outwardly disposed hooks upon clamping clips having screws threaded therethrough and located in clamping contact with the underside of the drainboard to clamp the marginal flange of the sink against the top of the drainboard surrounding the opening therein.

Although such a construction provided a satisfactory mounting for clamping the marginal flange of the sink tightly against the top surface of the drainboard, it has been found that additional advantages may be obtained by the construction of sink mounting disclosed and claimed herein.

It is therefore an object of the present invention to improve the construction of self-rimming mounting for sink bowl disclosed in my copending application, Serial No. 733,576 (now Patent No. 2,925,609).

Another object of the invention is to provide such a self-rimming sink mounting in which sheet metal strips depend from the outwardly and downwardly disposed marginal flange of the sink at points spaced inwardly

from the edges thereof, integral outwardly and downwardly disposed flanges being formed at the upper edges of said sheet metal strips and integrally attached at their outer edges to the outer edges of the sink flange, and inwardly and upwardly disposed hooks are formed upon the lower edges of said sheet metal strips for attachment of the clamping means.

A further object of the invention is to provide a self-rimming sink mounting of this character, in which the clamping means comprises a plurality of clips, each having downwardly and outwardly disposed hooks engaging the hooked lower edges of the sheet metal strips, an inwardly disposed portion of each clip being screw threaded and having a clamping screw threaded therethrough for contacting the underside of the rim of the sink to clamp an outwardly disposed portion of the clip against the underside of the drainboard adjacent the opening therein to clamp the edge of the marginal flange of the sink against the top of the drainboard.

A still further object of the invention is to provide such a self-rimming sink mounting in which the downwardly and outwardly disposed flanges at the upper edges of the sheet metal strips are attached to the outer edge portions of the marginal flange of the sink by helio-arc welding, seam-welding, inert-gas welding or in which they may be formed in one piece therewith.

Another object of the invention is to provide a self-rimming sink mounting of this character in which sheet metal pads are located between the upper ends of the clamping screws and the under surface of the flange of the sink.

The above objects together with others which will be apparent from the drawing and following description, or which may be later referred to, may be attained by constructing the improved self-rimming sink mounting in the manner hereinafter described in detail and illustrated in the accompanying drawing, in which:

FIG. 1 is a bottom plan view of a sink installed within an opening in a drainboard by means of the improved sink mounting to which the invention pertains;

FIG. 2 is an enlarged fragmentary sectional view through the marginal flange of the sink bowl and the adjacent portion of the drainboard showing the improved sink mounting means for clamping the sink flange upon the drainboard; and

FIG. 3 is a detached perspective view of one of the clamping clips.

Referring now more particularly to the embodiment of the invention illustrated in the drawing, in which similar numerals refer to similar parts throughout, a portion of a drainboard or sink deck is indicated at 10, provided with the usual cut-out opening 11 therein for the reception and positioning of a sink bowl indicated generally at 12.

The sink may be made in a single piece by drawing or pressing a sheet of corrosion-resistant alloy metal of relatively light gauge, having side walls 13 and bottom wall 14 provided with the usual drain opening 15. Although a single bowl sink is shown, it should be understood that the invention is equally applicable to multiple-bowl sinks.

A continuous marginal flange 16 is integrally formed around the upper edge of the sink bowl 12, the terminal portion thereof being inclined downwardly and outwardly as indicated at 17. This marginal flange of the sink is of such dimensions that it will overlie the upper surface of

the drainboard 10 at the framing of the opening 11 therein so as to provide a support for the sink bowl and afford means for clamping the bowl upon the drainboard 10.

For this purpose sheet metal strips 18 are provided depending from the marginal flange of the sink at all four sides thereof and spaced inwardly from the edges thereof, as best shown in FIG. 2.

An outwardly and downwardly disposed flange 19 is integrally formed upon the upper edge of each sheet metal strip 18 and conforms to and is coextensive with the downwardly and outwardly disposed terminal portion 17 of the sink flange and is integrally connected at its outer edge to the outer edge thereof.

The outer edge of the flange 19 may be connected to the outer edge of the terminal portion 17 of the sink flange by helio-arc welding, seam-welding, inert-gas welding, or may be formed as an integral part thereof bent backwardly upon itself. An upwardly and inwardly disposed hook 20 is formed upon the lower edge of each of the sheet metal clips 18 for attaching the clamping means thereto.

The clamping means comprises a plurality of clips, as indicated generally at 21, and each of these clamping clips is provided intermediate its ends, on its upper side, with a downwardly and outwardly disposed hook 22 for attachment to the upwardly and inwardly disposed hooked edge 20 of each sheet metal strip 18.

The intermediate portion of each clip 21 extends downwardly as shown at 23, and terminates in the outwardly disposed, substantially horizontal, clamping plate 24 for clamping contact with the underside of the drainboard 10 adjacent the opening 11 therein.

The inwardly disposed horizontal portion 25 of the clip is preferably of greater thickness than the clamping plate 24 and is provided with the threaded opening 26 through which is threaded the clamping bolt 27 having the head 28 at its lower end.

A metal pad 29 is preferably interposed between the upper end of the clamping screw 27 and the underside of the sink flange 16 in order to distribute the pressure of the screw over the under surface of the sink flange and prevent any distortion of the upper surface thereof.

To install the sink bowl 12, it is inserted downwardly through the opening 11 in the drainboard 10 and properly positioned within said opening, with all edges of the marginal flange of the sink overlying and resting upon the top of the drainboard around said opening.

A plurality of the clamping clips 21 are then placed in position in association with each of the sheet metal strips 18, the downwardly and outwardly disposed hooks 22 of the clips engaging the upwardly and inwardly disposed hooked lower edges 20 of said strips.

The metal pads 29 are placed in position between the upper ends of the clamping screws 27 and the under surface of the sink flange, and the clamping screws are tightened against the under surface of the sink flange forcing the inwardly disposed portions 25 of the clamping clips downward.

As the clamping clips are fulcrumed upon the hooked lower edges 20 of the sheet metal strips 18, the clamping plates 24 thereof are thus forced upwardly into clamping contact with the under surface of the drainboard, as shown in FIG. 2, drawing the terminal edges of the inclined portions 17 of the sink rim tightly down upon the top of the drainboard.

It will be obvious that, since the outer edges of the flanges 19 at the upper edges of the sheet metal strips 18 are integrally connected to the outer edges of the inclined terminal portions 17 of the sink rim, that the downward pull upon the hooked lower edges 20 of the sheet metal strips 18, by the clamping means, will be transmitted directly to the outer edges of the sink rim, clamping the same tightly upon the top of the drainboard.

An advantage of this construction over that shown

in the copending application, Serial No. 733,576, (now Patent No. 2,925,609), is that the sink may be more easily installed in places where there is very little room to work. For instance, in cases where there is a partition wall 30, as shown in FIG. 2, the sink may be installed more readily with this construction of mounting than with the mounting shown in said copending application, wherein the clamping bolts engage the underside of the drainboard adjacent the opening therein.

In the foregoing description, certain terms have been used for brevity, clearness and understanding, but no unnecessary limitations are to be implied therefrom beyond the requirements of the prior art, because such words are used for descriptive purposes herein and are intended to be broadly construed.

Moreover, the embodiments of the improved construction illustrated and described herein are by way of example, and the scope of the present invention is not limited to the exact details of construction.

Having now described the invention or discovery, the construction, the operation, and use of preferred embodiments thereof, and the advantageous new and useful results obtained thereby; the new and useful construction, and reasonable mechanical equivalents thereof obvious to those skilled in the art, are set forth in the appended claims.

I claim:

1. A sink and drainboard assembly comprising a unitary sink bowl, the drainboard being provided with an opening conforming to and slightly larger than the body of the bowl to receive the bowl positioned within the opening, said bowl being formed with an integral continuous flange projecting outwardly and downwardly from its upper edge and overlying the marginal edge surface defining the drainboard opening, sheet metal strips depending from said flange on the sink bowl at points spaced inwardly from the marginal edges thereof, an integral outwardly and downwardly disposed flange at the upper edge of each sheet metal strip located under and conforming to and coextensive with the marginal portions of the flange on the sink bowl and integrally attached throughout its length at its outer edge to the outer edge of the flange on the sink bowl, the lower edges of said sheet metal strips being upwardly hooked, a plurality of clips each having a downturned hook intermediate its ends detachably connected to said upwardly hooked lower edges of said sheet metal strips, an inwardly disposed internally screw-threaded portion on each clip, a clamping screw threaded through said inwardly disposed portion and located in clamped contact with the under surface of the flange upon the sink bowl, and an outwardly disposed clamping plate on said clip located in clamped contact with the under surface of the drainboard, said clips and clamping screws comprising the sole means for attaching said sink bowl to said drainboard.

2. A sink and drainboard assembly comprising a unitary sink bowl, the drainboard being provided with an opening conforming to and slightly larger than the body of the bowl to receive the bowl positioned within the opening, said bowl being formed with an integral continuous flange projecting outwardly and downwardly from its upper edge and overlying the marginal edge surface defining the drainboard opening, sheet metal strips depending from said flange on the sink bowl at points spaced inwardly from the marginal edges thereof, an integral outwardly and downwardly disposed flange at the upper edge of each sheet metal strip located under and conforming to and coextensive with the marginal portions of the flange on the sink bowl and integrally attached through its length at its outer edge to the outer edge of the flange on the sink bowl, the lower edges of said sheet metal strips being inwardly and upwardly hooked, a plurality of clips each having a downwardly and outwardly disposed hook intermediate its ends de-

tachably connected to said inwardly and upwardly hooked lower edges of said sheet metal strips, an inwardly disposed internally screw-threaded portion on each clip, a clamping screw threaded through said inwardly disposed portion and located in clamped contact with the under surface of the flange upon the sink bowl, and an outwardly disposed clamping plate on said clip located in clamped contact with the under surface of the drainboard, said clips and clamping screws comprising the sole means for attaching said sink bowl to said drainboard.

References Cited in the file of this patent

UNITED STATES PATENTS

1,496,581	Kusterle	June 3, 1924
2,549,415	Bonnell	Apr. 17, 1951
2,672,621	Drain	Mar. 23, 1954
2,818,579	Katz	Jan. 7, 1958
2,897,516	Ensch	Aug. 4, 1959
2,921,320	Lantz	Jan. 19, 1960
2,925,609	Richardson	Feb. 23, 1960