April 30, 1957 P. J. McCARTHY 2,790,181

SINK MOUNTING FRAME

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Fig. 1.

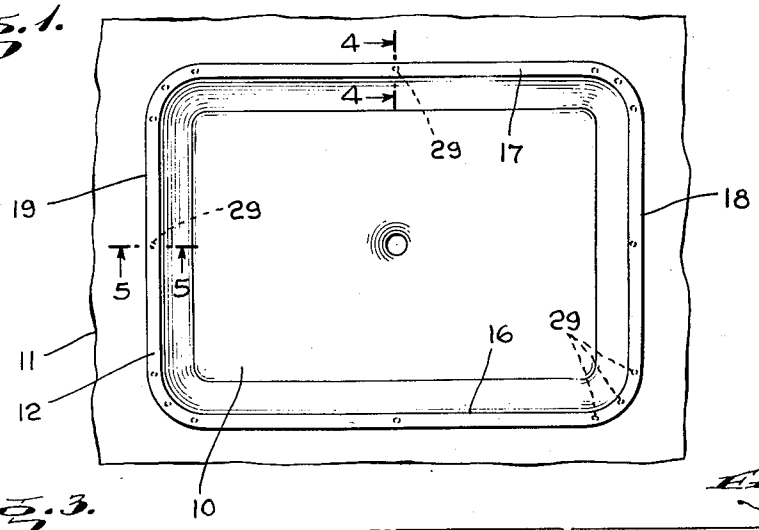


Fig. 3.

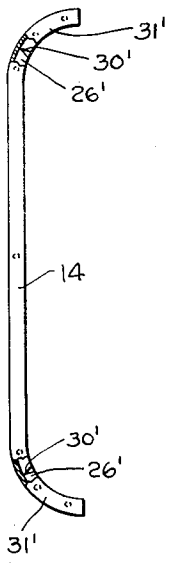


Fig. 2.

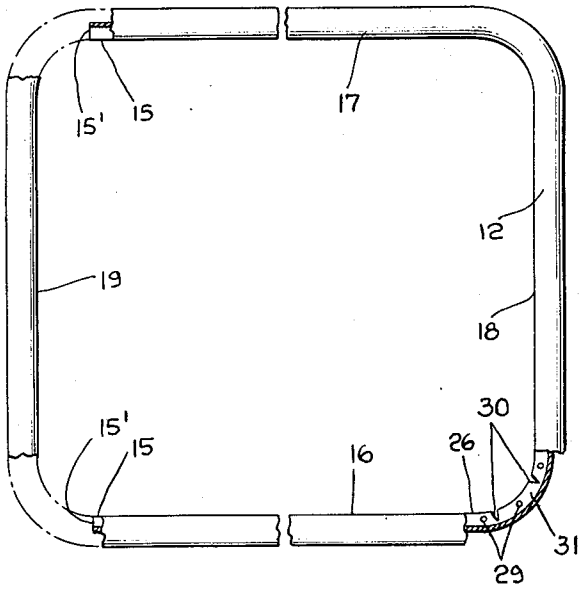


Fig. 4.

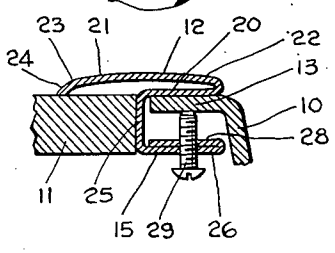
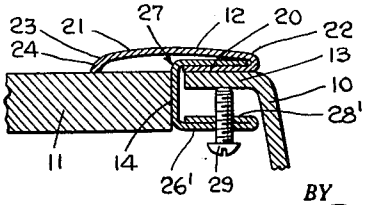


Fig. 5.



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SINK MOUNTING FRAME

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12 Claims. (Cl. 4—187)

This invention relates to frames for use in mounting sinks in sink openings of drainboards. More particularly, the invention deals with a frame structure, wherein the frame can be mounted upon the sink flange and held thereon by a coupling and assembly channel at one side of the frame and, then, the entire assemblage placed in the sink opening of the drainboard, thereby materially simplifying installation and mounting of sinks in drainboard openings of the kind under consideration.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views and, in which:

Fig. 1 is a plan view, diagrammatically showing a sink mounted in connection with a drainboard in the use of one of my improved frames.

Fig. 2 is a broken plan view of the frame detached, with parts of the construction broken away and in section.

Fig. 3 is a plan view of a coupling and assembly channel used in conjunction with the frame of Fig. 2 in completing mounting of the frame on a sink.

Fig. 4 is an enlarged partial section on the line 4—4 of Fig. 1; and

Fig. 5 is an enlarged partial section on the line 5—5 of Fig. 1.

In Fig. 1 of the drawing, I have shown at 10 a sink adapted to be mounted in the opening of a drainboard 11 by the use of one of my improved frames 12. Usually, it has been the custom to provide screws, brackets or other types of mountings for securing a frame of the type and kind in question in connection with a drainboard in the operation of mounting a sink in position. The use of such devices, particularly, in view of the inconvenience of inadequate space for operation has taken considerable time and created much annoyance to the operator in making the assemblage.

To obviate these objectionable and costly operations, I have provided a frame for mounting sinks in the manner described, wherein the frame can be assembled on the flange 13 of the sink 10, as noted in Figs. 4 and 5, by simply sliding the frame 12 onto the flange 13 and, then, applying a coupling and assembly channel 14 with the frame 12 and flange 13 in completing the assemblage so that the sink with the frame securely mounted thereon can simply be dropped into the opening of the drainboard 11.

To accomplish this result, the frame 12 is shaped from sheet metal to form, at the lower portion thereof, a channel 15, which is arranged on and integral with the sides 16, 17 and one end 18; whereas, the other end 19 of the frame has the integral channel 15 terminating, as indicated at 15', leaving the end 19 open to facilitate free passage of the frame over the flange 13 of the sink 10.

Considering Fig. 4 of the drawing, it will appear that

the channel 15 of the frame or the upper member 20 thereof includes an integral top or finishing plate 21, which is preferably convexly curved. The inner end portion 22 of the plate 21 overlies the upper portion 20 of the channel 15; whereas, the outer portion 23 of the plate extends beyond the channel 15 and is adapted to overlie the drainboard 11, the portion 23 having a downwardly extending flange end 24 to provide a tight engagement with the upper surface of the drainboard and also to reinforce and stiffen this outer edge of the plate.

As noted in Fig. 5 of the drawing, it will appear that the part 20 of the channel 15 remains; whereas, the portions 25 and 26 of the channel 15, shown in Figs. 4 and 5, are cut away. The upper plate 27 of the coupling and assembly channel 14 is adapted to extend into the frame 12 between the plate 21 and the upper portion 20 in coupling the channel 14 with the frame 12. The lower portion 26' of the channel 14, as well as the lower portion 26 of the channel 15, both include a double thickness of the sheet material employed by folding portions 28 and 28' inwardly, as clearly shown in Figs. 4 and 5. This construction strengthens the channels and also provides ample bearing support for threads to receive the coupling screws 29, which are utilized in securing the frame, as well as the detachable coupling and assembly channel 14 of the frame with the flange 13 of the sink. The screws 29 can be located in the positions indicated in Fig. 1 of the drawing and additional screws can be employed, if desired. These screws securely support the frame 12 upon the flange 13 of the sink and, when so coupled, the weight of the sink is sufficient to support the frame 12 securely upon the upper surface of the drainboard 11.

It will be noted, from a consideration of Fig. 2 of the drawing, that corner portions of the frame 12, where the sides 16 and 17 join the end 18, have the lower portion 26 of the channel 15 notched, as seen at 30, thus providing, between the notches, a free flexing corner portion 31.

A single notch 30' is provided in the lower portion 26' at each corner portion of the channel 14, as noted in Fig. 3 of the drawing, thus the corner portion 31' becomes freely flexible, similar to the portion 31. The purpose of this construction is twofold. First, it facilitates screws at the corner portions of the frame to draw the corner portions downwardly, so as to maintain a common alinement in engagement with the upper surface of the drainboard 11. The notches also facilitate the bending or forming operation of the frame at the corner portions thereof.

Frames of the type and kind under consideration are usually made from strip material shaped to the rectangular or other contour desired to satisfy the assemblage with a sink of predetermined size and contour. In most instances, the sinks are usually square or oblong and rectangular in form. The sinks come in many sizes and frames are made to suit the different sizes of sinks. The edges of the strip material are butt-welded at their juncture, after which, the frames are finished and, as a rule, chromium or otherwise plated. In some instances, the frames are made from stainless steel, which simply require buffing or finishing operations.

With a structure as described, it will be apparent that, while a sink is resting on a support remote from the drainboard or its final positioning, the frame 12 can be quickly and easily slipped over the flange 13 of a sink, after which, the channel 14 is mounted in position and the several screws 29 tightened to securely clamp the frame 12 in position upon the sink. In this connection, it will be understood that the screws 29 can be pre-assembled with the frame and left so adjusted so as to provide free mounting of the frame, including the channel 14, thus a mini-

mum amount of operation of the screws will be necessary in the final assemblage or coupling.

When the assemblage of the frame with the sink has been accomplished, the sink is then simply lowered into the opening of the drainboard and the weight of the sink upon the drainboard will provide a tight fitting of the flanged ends 24 on the drainboard throughout the entire circumference of the frame. After the sink has been placed in position, the usual plumbing fittings are coupled with the sink, as is the usual practice.

For purposes of description, the cross-sectional contour of the frame proper may be said to comprise a channel, upper and lower walls of which are of two thicknesses of metal. The upper wall of one thickness of metal thereof extends outwardly beyond the channel to form what can be termed a drainboard engaging member, identified by the portion 23, including the downwardly extending flange end 24.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A frame for mounting sinks having peripheral outwardly extending flanges in openings of drainboards, said frame, throughout the major portion of its length, being of channel cross-sectional form adapted to receive the peripheral flange of a sink, fastener devices operatively engaging the lower wall of the channel and the flange of the sink in securing the frame to the flange by abutment with the upper wall of said channel being circumferentially continuous and, the upper wall of the channel including an outer integral wall portion having an outwardly extending circumferentially continuous drainboard engaging member for support of the sink upon the drainboard and within the opening of said drainboard, part of the channel of said frame being omitted to facilitate slidable mounting of the frame upon the flanged portion of the sink, and a coupling and assembly channel arranged in the removed portion of the channel of said frame and operatively engaging the frame and the flange of the sink in securing the frame upon the sink.

2. A frame for mounting sinks having peripheral outwardly extending flanges in openings of drainboards, said frame, throughout the major portion of its length, being of channel cross-sectional form adapted to receive the peripheral flange of a sink, fastener devices operatively engaging the lower wall of the channel and the flange of the sink in securing the frame to the flange by abutment with the upper wall of said channel being circumferentially continuous and, the upper wall of the channel including an outer integral wall portion having an outwardly extending drainboard engaging member for support of the sink upon the drainboard and within the opening of said drainboard, part of the channel of said frame being omitted to facilitate slidable mounting of the frame upon the flanged portion of the sink, a coupling and assembly channel arranged in the removed portion of the channel of said frame and operatively engaging the frame and the flange of the sink in securing the frame upon the sink, and the frame at the removed channel portion, where the coupling and assembly channel is coupled therewith, including the outwardly extending drainboard engaging member.

3. A frame for mounting sinks having peripheral outwardly extending flanges in openings of drainboards, said frame, throughout the major potrion of its length, being of channel cross-sectional form adapted to receive the peripheral flange of a sink, fastener devices operatively engaging the lower wall of the channel and the flange of the sink in securing the frame to the flange by abutment with the upper wall of said channel being circumferentially continuous and, the upper wall of the channel including an outer integral wall portion having an outwardly extending drainboard engaging member for support of the sink upon the drainboard and within the opening of said drainboard, part of the channel of said frame being omitted to facilitate slidable mounting of the frame upon the flanged portion of the sink, a coupling and assembly channel arranged in the removed portion of the channel of said frame and operatively engaging the frame and the flange of the sink in securing the frame upon the sink, the frame at the removed channel portion, where the coupling and assembly channel is coupled therewith, including the outwardly extending drainboard engaging member, said frame and said coupling and assembly channel having corner portions, and the lower wall of the channel of the frame and said coupling and assembly channel, at said corner portions, having notches facilitating free movement of corner portions of the frame in assemblage with said sink and mounting on said drainboard.

4. A frame for mounting sinks having peripheral outwardly extending flanges in openings of drainboards, said frame, throughout the major portion of its length, being of channel cross-sectional form adapted to receive the peripheral flange of a sink, fastener devices operatively engaging the lower wall of the channel and the flange of the sink in securing the frame to the flange by abutment with the upper wall of said channel being circumferentially continuous and, the upper wall of the channel including an outer integral wall portion having an outwardly extending drainboard engaging member for support of the sink upon the drainboard and within the opening of said drainboard, part of the channel of said frame being omitted to facilitate slidable mounting of the frame upon the flanged portion of the sink, a coupling and assembly channel arranged in the removed portion of the channel of said frame and operatively engaging the frame and the flange of the sink in securing the frame upon the sink, the frame at the removed channel portion, where the coupling and assembly channel is coupled therewith, including the outwardly extending drainboard engaging member, said frame and said coupling and assembly channel having corner portions, the lower wall of the channel of the frame and said coupling and assembly channel, at said corner portions, having notches facilitating free movement of corner portions of the frame in assemblage with said sink and mounting on said drainboard, and part of the fastener devices being arranged at corner portions of the frame and said coupling and assembly channel.

5. A frame for mounting sinks having peripheral outwardly extending flanges in openings of drainboards, said frame, throughout the major portion of its length, being of channel cross-sectional form adapted to receive the peripheral flange of a sink, fastener devices operatively engaging the lower wall of the channel and the flange of the sink in securing the frame to the flange by abutment with the upper wall of said channel being circumferentially continuous and, the upper wall of the channel including an outer integral wall portion having an outwardly extending drainboard engaging member for support of the sink upon the drainboard and within the opening of said drainboard, part of the channel of said frame being omitted to facilitate slidable mounting of the frame upon the flanged portion of the sink, a coupling and assembly channel arranged in the removed portion of the channel of said frame and operatively engaging the frame and the flange of the sink in securing the frame upon the sink, and said drainboard engaging member including, at its free edge, an offset downwardly extending flange.

6. In frames for mounting sinks in openings of drainboards, the sink including an outwardly extending peripheral flange, said frame including a channel receiving the flange of said sink, said frame and sink being generally rectangular in form defining corner portions, the channel of one side of the frame being formed by a removable coupling and assembly channel having curved ends defining two of said corner portions, fastener devices spaced on the frame and at corner portions thereof for securing the frame to the flange of the sink, and spaced

means, at each of said corner portions of the frame, providing free movement of the corner portions to insure firm engagement of the corner portions of the frame with said drainboard.

7. In frames for mounting sinks in openings of drainboards, the sink including an outwardly extending peripheral flange, said frame including a channel receiving the flange of said sink, said frame and sink being generally rectangular in form defining corner portions, the channel of one side of the frame being formed by a removable coupling and assembly channel having curved ends defining two of said corner portions, fastener devices spaced on the frame and at corner portions thereof for securing the frame to the flange of the sink, spaced means, at each of said corner portions of the frame, providing free movement of the corner portions to insure firm engagement of the corner portions of the frame with said drainboard, and said last named means including spaced slits formed in the lower portion of the channel at each corner portion of the frame.

8. The combination with a sink having an outwardly extending peripheral mounting flange, of a frame including a channel portion, the channel portion being removed on part of the frame to facilitate sliding engagement of the frame upon the flange of said sink, means, coupled with the frame at the channel removed portion thereof, to secure the frame against displacement from the sink, and the channel of said frame and said last named means including fastener devices for securing the frame in firm engagement with the flange of said sink.

9. The combination with a sink having an outwardly extending peripheral mounting flange, of a frame including a channel portion, the channel portion being removed on part of the frame to facilitate sliding engagement of the frame upon the flange of said sink, means, coupled with the frame at the channel removed portion thereof, to secure the frame against displacement from the sink, the channel of said frame and said last named means including fastener devices for securing the frame in firm engagement with the flange of said sink, and said frame, in its entirety, including an outwardly extending drainboard engaging member at the upper portion thereof.

10. The combination with a sink having an outwardly extending peripheral mounting flange, of a frame including a channel portion, the channel portion being removed on part of the frame to facilitate sliding engagement of the frame upon the flange of said sink, means, coupled with the frame at the channel removed portion thereof, to secure the frame against displacement from the sink, the channel of said frame and said last named means including fastener devices for securing the frame in firm engagement with the flange of said sink, said frame, in its entirety, including an outwardly extending drainboard engaging member at the upper portion thereof, and the free edge of said member including an offset downwardly extending flange.

11. The combination with a sink having an outwardly extending peripheral mounting flange of a frame including a channel portion, the channel portion being removed on part of the frame to facilitate sliding engagement of the frame upon the flange of said sink, means, coupled with the frame at the channel removed portion thereof, to secure the frame against displacement from the sink, the channel of said frame and said last named means including fastener devices for securing the frame in firm engagement with the flange of said sink, said frame, in its entirey, including an outwardly extending drainboard engaging member at the upper portion thereof, and said means comprising a coupling and assembly channel engaging the frame and enveloping part of the flange of said sink.

12. The combination with a sink having an outwardly extending peripheral mounting flange, of a frame including a channel portion, the channel portion being removed on part of the frame to facilitate sliding engagement of the frame upon the flange of said sink, means, coupled with the frame at the channel removed portion thereof, to secure the frame against displacement from the sink, the channel of said frame and said last named means including fastener devices for securing the frame in firm engagement with the flange of said sink, said frame, in its entirety, including an outwardly extending drainboard engaging member at the upper portion thereof, said means comprising a coupling and assembly channel engaging the frame and enveloping part of the flange of said sink, the frame being rectangular in form and having rounded corner portions, and means, at the corner portions, providing free flexure and bending of said corner portions.

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