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G. A. LYON

3,034,150

SINK STRUCTURE

Filed Oct. 2, 1959

Fig-1

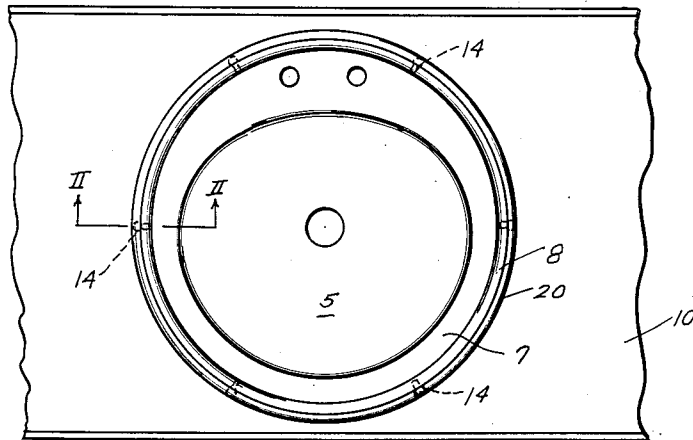


Fig-2

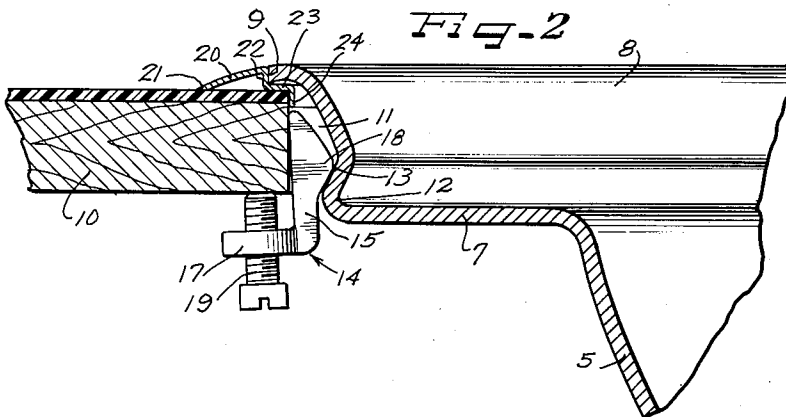


Fig-3

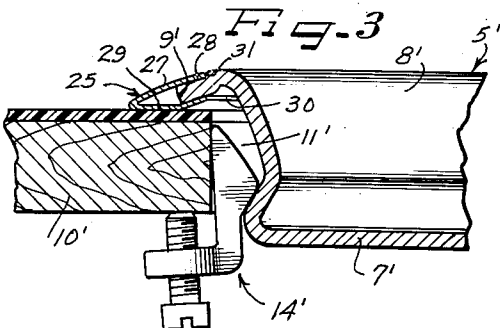
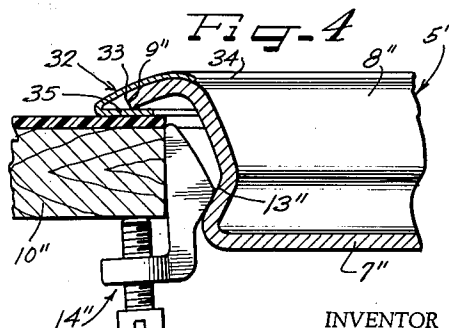


Fig-4



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SINK STRUCTURE

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The present invention relates to improvements in sink structures and more particularly concerns novel means for effecting a neat, hygienic joint between a sink rim and a counter top.

Ordinarily, unless a rigid sink rim flange edge is received within a recess in a counter top upon which such rim flange edge is directly engaged, a reentrant corner or even groove is present at the edge of the sink rim within which dirt can accumulate. In addition, difficulty would be encountered in wiping water from the counter top into the sink.

It is accordingly an important object of the present invention to provide an improved sink structure wherein a rigid rim of a sink is directly engaged upon a counter top without any need for recessing or other alteration of the counter top itself, and novel joint means effect a neat trim smoothly blending the upper surface of the rim flange adjacent its edge with the counter top upper surface.

Another object of the invention is to provide means for bridging the upper surface of a sink rim flange with the upper surface of a counter top upon which the rim flange is engaged without any need for recessing the edge into the counter top.

A further object of the invention is to provide improved trim means for the edges of relatively thick sink rim flanges engaged directly upon counter tops.

Still another object of the invention is to provide an improved sink structure wherein a rigid sink rim flange has an overflow curb and counter top engaging marginal portion and trim means effecting a smooth transition from the blunt thick edge of the rim flange and the counter top surface.

Other objects, features and advantages of the present invention will be readily apparent from the following detailed description of certain preferred embodiments thereof taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a top plan view of a sink structure embodying features of the invention;

FIGURE 2 is an enlarged fragmentary sectional elevational detail view taken substantially on the line II—II of FIGURE 1;

FIGURE 3 is a view similar to FIGURE 2 but showing a modification; and

FIGURE 4 is another view similar to FIGURE 2 but showing another modification.

As shown in FIGURES 1 and 2, a sink 5 has a lateral rigid rim flange 7 provided with an integral rigid upwardly and outwardly extending marginal overflow curb and drainback portion 8 having a slightly downturned edge 9 arranged to engage upon the margin of a counter top 10 about an opening 11 within which the sink is mounted. The counter top may be of the wooden base and thermosetting plastic top lamina construction. By "counter top" is meant generically, any suitable form of drainboard, cabinet top, service counter, and the like, forming a suitable support for the sink or which may even be partially supported by the sink in some installations.

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The sink 5 may be of the heavy gauge pressed steel, or similar rigid construction having an enamel finish. At juncture of the rim flange extension portion 8 with the rim flange 7 is provided an anti-splash groove 12 opening inwardly and providing under the overlying portion of the extension 8 an upwardly and outwardly facing shoulder 13 which in the assembly is spaced a limited distance from the edge defining the counter top opening 11 and is adapted to be retainingly engaged by retaining clips 14 although in some cases it may be sufficient to rely upon downward pull of attached plumbing to retain the sink in assembly with the counter top.

Although in this instance the bowl portion of the sink 5 is shown as of generally oval form with the perimeter of the sink rim 7 circular and with the sink rim widened at back of the sink to accommodate plumbing fixtures, other preferred shapes of the sink bowl and rim outline may be provided, depending upon the kind of sink and other preferences.

In a preferred form, the retaining clips 14 are of a rigid construction adapted for firmly retaining the sink and counter top against displacement not only in an up and down direction but also in a transverse direction. For this purpose each of the spring clips 14 comprises a generally L-shaped arrangement of an upstanding arm 15 and an outwardly projecting arm 17. The upstanding arm has an inwardly projecting head shoulder portion 18 which engages the sink rim shoulder 13 cammingly while the outer face of the head end portion engages against the edge defining the counter top openings 11. The outwardly projecting arm 17 of the clip is arranged to underlie the counter top 10 in spaced relation and carries movable clamping means conveniently in the form of a screw 19 threaded therethrough and engageable at its tip with the underside of the counter top whereby tightening of the screw against the counter top causes the clip arms 15 and 17 to be drawn downwardly, thus thrusting the head shoulder 18 against the rim shoulder 13 to draw the sink rim edge 9 toward the counter top. At the same time, a wedging coaction occurs between the sink rim shoulder 13 in the adjacent edge of the counter top to effect a firm retention of the sink against transverse movement relative to the counter top. Assembly of the clips 14 is effected by inserting the arm 15 into the narrow gap between the sink rim and the counter top edge while the clip is turned with the narrowest dimension of the head end portion of the arm 15 oriented to enter the gap, such position being about 90° from that shown in FIGURE 2, whereafter the clip is turned to engage the projection 18 upon the shoulder 13, and the screw 19 then tightened.

It will be observed that the edge 9 of the rim flange portion 8 is of substantial thickness and would thus provide an undesirable step-like relation to the counter top creating an undesirable dirt catching reentrant corner with the counter top and making it difficult to wipe water or particles of material or debris from the counter top into the sink unless as has sometimes been done heretofore the edge were to be countersunk into the counter top as by having a recess of the counter top. However, according to the present invention a neat ramp-like transition between the upper surface of the rim flange portion 8 and the upper surface of the counter top is afforded by a trim strip 20 which constitutes primarily a body flange portion extending downwardly and outwardly as shown and is contoured to afford an outward continuation of the uppermost surface of the rim portion 8 at the edge

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9, having an outer extremity edge 21 which engages sealingly against the upper surface of the counter top 10 and an inner marginal flange including a portion 22 projecting downwardly and arranged to abut the blunt edge 9 of the sink flange and joining an inwardly extending seating flange portion 23 which underlies and is clamped by the sink rim flange edge 9 against the counter top. While the depending spacer flange portion 22 of the trim strip affords an abutment against the rim flange edge 9 retaining the trim strip against inward displacement, a depending inner terminal flange portion 24 of the trim strip opposes the edge defining the counter top opening 11 and positively retains the trim strip against outward displacement relative to the sink rim flange. Suitable material such as stainless steel strip may be utilized in making the trim strip 20.

In the modification of FIGURE 3, a sink 5' having a rigid rim flange 7' with a rim flange extension and counter top engaging rim flange extension portion 8' having an outer edge 9' engaging upon a counter top 10' formed with a sink receiving opening 11' provides substantially similar arrangement as in FIGURE 2 so that substantially the same description of elements and functions applies, except that a somewhat different form of joint trim strip 25 is provided for cooperation with the sink rim edge 9'.

In the trim strip 25, an upper body flange portion 27 is provided which has an inner margin seated in an upwardly opening groove 28 in the margin of the sink flange extension portion 8' equal to the thickness of the material of the flange portion 27 so that there is a smooth transition from the upper surface of the portion 8' to the upper surface of the trim flange 27 and then from the trim flange 27 to the counter top 10'. Extending inwardly from the outer extremity of the flange portion 27 is an underturned seating flange 29 upon which the sink rim edge 9' clampingly engages, with an upturned interlock flange portion extremity 30 of the trim flange 29 engaging the underside of the downturned rim flange edge portion and acting to hold the trim strip 25 against outward displacement while the edge of the trim flange 27 engaging against an opposing shoulder 31 defining the inner side of the groove 28 retains the trim strip against inward displacement relative to the sink and counter top.

In the modification of FIGURE 4 double primed reference numerals indicate parts substantially identical with those in FIGURE 2 so that the same description applies as to general structure and function. In this instance, however, a trim strip 32 is provided which has an upper body flange 33 transversely contoured generally in conformity with the downturned marginal flange of the rim flange extension portion 8' to effect a transition of such upper surface to the counter top surface. On its inner end, the trim flange 33 has a downturned extremity portion 34 which interlockingly engages with the rim flange portion 8' to retain the trim strip 32 against outward displacement. An underturned inwardly directed seating flange 35 underlies the rim flange edge 9'' and is clamped against the counter top thereby, inward displacement of the trim strip being precluded by wedging engagement of the edge 9'' within the convergence of the trim flanges 33 and 35.

While the trim strip 20 is constructed to be assembled with the counter top and the sink rim edge as a separate member to be clamped in place by the sink rim flange edge, the trim strips 25 and 32 are constructed and arranged to be mounted upon and carried by as functionally integral parts of the respective rim flanges with which associated. In all instances, however, the trim strips are preferably made from as thin sheet material as practicable consistent with utility. In all instances it is desirable that the outermost edge or extremity portion of the trim

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strip be oriented or biased in a sufficiently downward initial direction relative to the associated edge of the sink rim flange to assure a firmly sealingly coating pressure of such outer extremities with the counter top for effective sealing of the strip thereagainst. Such sealing may be enhanced with respect to the strip 20, at least, by placing a plastic sealing or caulking material within the chamber afforded between the arched strip body and the concealed portion of the counter top, such material having been omitted from the drawing since it is a more or less conventional expedient and not essential to an understanding of the disclosure.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. In a structure including a counter having an opening therein, a member received in said opening and having an outwardly projecting rim flange, said flange presenting a blunt edge disposed in step-like relation over said counter top, and a trim strip of thin sheet material provided with a body flange extending on a smooth gentle slope from the upper surface of said rim flange outwardly and downwardly to an outer extremity engaging sealingly against the upper surface of the counter top spaced from said blunt edge and thereby affording a ramp-like transition between the upper surface of the rim flange and the upper surface of the counter top, said body flange having thereon a flange portion grippingly interengaged between said rim flange and the counter top to thereby hold the trim strip firmly in position relative to said edge, said flange having an upwardly opening marginal groove of a depth substantially equal to the thickness of the material of said body flange and the body flange having an inner edge portion which is seated to provide a smooth transition from the upper surface of the rim flange to the upper surface of the trim strip body flange.

2. In a structure including a counter having an opening therein, a member received in said opening and having an outwardly projecting rim flange, said flange presenting a blunt edge disposed in step-like relation over said counter top, and a trim strip of thin sheet material provided with a body flange extending on a smooth gentle slope from the upper surface of said rim flange outwardly and downwardly to an outer extremity engaging sealingly against the upper surface of the counter top spaced from said blunt edge and thereby affording a ramp-like transition between the upper surface of the rim flange and the upper surface of the counter top, said body flange having thereon a flange portion grippingly interengaged between said rim flange and the counter top to thereby hold the trim strip firmly in position relative to said edge, said flange portion of the body flange of the strip comprising an extension from the side of said body flange nearest to said rim flange and conformed to engage against said blunt edge with a portion underlying the rim flange and clamped thereby against the counter top and having a downturned inner extremity engaging the edge of the counter top in said opening to maintain the strip against outward displacement on the counter top.

3. In a structure including a counter top having an opening therein, a member received in said opening and having an outwardly projecting rim flange, said flange presenting a blunt edge disposed in step-like relation over said counter top, and a trim strip of thin sheet material provided with a body flange extending on a smooth gentle slope from the upper surface of said rim flange outwardly and downwardly to a juncture with an inwardly extending flange in V-relationship, said inwardly extending flange being in ripped relation between said rim flange and the counter top to thereby hold the trim strip firmly in position relative to said edge, said V-juncture substan-

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tially merging with the counter top and affording a seal therewith.

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