C. L. CLARK
SINK AND CABINET CONSTRUCTION
Filed May 26, 1945
2 Sheets-Sheet 1

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Inventor
Carl L. Clark
SINK AND CABINET CONSTRUCTION

Carl L. Clark, Warren, Ohio, assignor to Mullins Manufacturing Corporation, Salem, Ohio, a corporation of New York

Application May 26, 1945, Serial No. 595,947

11 Claims. (Cl. 4—187)

1. The invention relates to sinks and undersink cabinets and, more particularly to a sink and undersink cabinet construction in which a sink is securely anchored to an undersink cabinet.

Present day kitchens are equipped with sinks and drainboards, and cabinets beneath the sinks and drainboards. Frequently, the sinks are enamel coated, sheet metal sinks having one or more fluid-receiving bowls terminating in a splashback and one or more drainboards. The sink bowls and drainboards are surrounded with a rim formed as a part of a depending flange terminating in an intumixed flange at the front and ends of the sink. Sometimes, such sinks are enameled cast metal or are formed from stainless steel, Monel metal or the like, or are formed of china. The undersink cabinets frequently are sheet metal cabinets with a desired arrangement of doors and drawers.

Hitherto, each sink has been shipped separately from its cabinet to a place of installation, and when installation is made, the sink is merely set, laid or supported on the cabinet and leveled thereon by some suitable adjustable means.

The shipping and installation of such sinks and undersink cabinets involve considerable time, labor and expense. Thus, separate crates or cartons are used for each sink and each cabinet; and the placing, supporting and leveling of the sink on the cabinet at the place of installation may involve difficulties.

In accordance with the present invention a sink is mounted on and securely attached and anchored to a cabinet at the place of manufacture of either or both of the articles. The sink and cabinet thus securely anchored together are shipped in one crate or carton as one unit to a place of installation and are installed as one unit. During installation, no leveling of the sink with respect to the undersink cabinet is required. As a result, considerable savings in crating, shipping and installation costs accrue.

Accordingly, it is a primary object of the present invention to provide a sink and undersink cabinet construction which substantially reduces crating, shipping and installation costs.

Furthermore, it is an object of the present invention to provide a sink and undersink cabinet construction in which a sink is securely and rigidly mounted, locked and anchored to an undersink cabinet to form a unitary structure.

Also, it is an object of the present invention to provide a construction in which a sink is anchored to an undersink cabinet in a unitary manner, such that the unit may be shipped with security from a place of manufacture to a place of installation in a single crate or carton.

Moreover, it is an object of the present invention to provide a sink and undersink cabinet anchored together and shipped as a unitary structure which may be installed as a unit without leveling, adjusting or securing the sink relative to the undersink cabinet.

Furthermore, it is an object of the present invention to provide means for securing, clamping, attaching and anchoring a vitreous enamel, sheet metal sink to a sheet metal cabinet as a unitary structure.

Likewise, it is an object of the present invention to provide means for securely mounting, clamping, attaching and anchoring an undersink cabinet to a sheet metal sink formed with one or more fluid-receiving bowls, one or more drainboards, a rim surrounding at least three sides of the bowls and drainboards and formed as a part of a depending flange terminating in an intumixed flange or lip at the front and two ends of the sink.

Likewise, it is an object of the present invention to provide a new joint construction which may be readily and inexpensively formed in connection with standard types of vitreous enamel sheet metal sinks and sheet metal undersink cabinets to anchor such sinks and cabinets together as units.

Also, it is an object of the present invention to provide a new construction of undersink cabinet and sink anchored thereto in a unitary manner which may be fabricated and assembled at a factory by production methods to eliminate shipping and installation difficulties and reduce costs.

Finally, it is an object of the present invention to provide a new anchored sink and undersink cabinet construction which avoids prior art difficulties, satisfactorily solves crating, shipping and installation problems existing in the art, and incorporates the foregoing advantages in a simple, effective and inexpensive manner.

These and other objects and advantages apparent to those skilled in the art from the following description and claims may be obtained, the stated results achieved, and the described difficulties overcome, by the devices, constructions, arrangements, combinations, sub-combinations, parts and elements which comprise the present invention, the nature of which is set forth in the following general statement, preferred embodiments of which—illustrative of the best modes in which applicant has contemplated applying the principles—are set forth in the fol-
following description and shown in the drawings, and which are particularly and distinctly pointed out and set forth in the appended claims forming part hereof.

The nature of the improvements in anchored sink and undersink cabinet construction of the present invention may be stated in general terms, as preferably including a sink having one or more bowls preferably provided with one or more drainboards, terminating in a rim formed as a part of a depending flange with an inturned lip at least at the front and two ends of the sink, an undersink cabinet, means anchoring the lip to the cabinet at the front corners of the sink, means supporting the sink on the cabinet at each sink corner, and means clamping the ends of the sink near the rear corners to the undersink cabinet to securely mount, anchor and attach the sink to the cabinet as a unitary structure.

By way of example, preferred embodiments of the improved sink and undersink cabinet construction are illustrated in the accompanying drawings forming part hereof, wherein:

Figure 1 is a perspective view of a sink and cabinet unit involving the improvements of the present invention;

Fig. 2 is a fragmentary sectional view taken as on the line 2—2, Fig. 1;

Fig. 3 is a plan sectional view illustrating the front corner anchoring means of the present invention, taken as on the line 3—3, Fig. 2;

Fig. 4 is a fragmentary rear elevation of a rear corner of a sink and cabinet illustrating the rear corner clamping means, looking in the direction of the arrows 4—4, Fig. 2;

Fig. 5 is a fragmentary plan sectional view taken as on the line 5—5, Fig. 1;

Fig. 6 is a section looking in the direction of the arrows 6—6, Fig. 5;

Fig. 7 is a view similar to Fig. 2 of a modified form of construction;

Fig. 8 is a fragmentary plan sectional view taken on the line 8—8, Fig. 7; and

Fig. 9 is a fragmentary rear elevation of a rear corner of the part shown in Fig. 7, looking in the direction of the arrows 9—9, Fig. 7.

Similar numerals refer to similar parts throughout the various figures of the drawings.

A sink and undersink cabinet unit made in accordance with the present invention is illustrated in Fig. 1, the sink being generally indicated at 1 and the undersink cabinet at 2. The sink 1 preferably includes a bowl 3, at least one drainboard 4 extending from a side of the bowl, a raised rim 5 extending along the front and two ends of the sink, formed as a part of and terminating in a depending flange or skirt 6, and a rear upstanding splashback 7. The depending flange 6 terminates at the front and both ends in a flange or lip 8 extending inward and preferably upward.

As another feature, the sink may be an integral one-piece vitreous enamel-coated, sheet steel sink; but it is understood that the sink may be formed of other metal such as stainless steel or Monel metal, or may be formed at a vitreous enamel-coated cast metal sink, or as a china sink.

The rear-angled undersink cabinet 2 may be formed of sheet metal walls including a base 9, side walls 10 to which doors 11 are hinged, and an upper front stringer member 12 preferably overhanging the top edges of the doors 11.

The side walls 10 may be provided with rear angled flanges 13 joined together as by spot welding at 14 to rear rail 15; and the upper edge of the side walls 10 may be formed with an inturned and downturned angular flange 16.

A front rail 17 (Fig. 2) is associated with the upper front stringer member 12 and has an angular flanged portion 18 preferably spot welded to the upper edge of the stringer member 12.

At each front corner of the cabinet, a gusset member 19, having a recessed portion 20, is spot welded at 21 and 22, respectively, to the top flange 16 of a side wall 10 and to the flange 15 of the front rail 17. Each gusset member 19 preferably terminates in an upstanding corner flange 23 (Figs. 2 and 3).

A clamping bracket 24 has a downturned flange 25 engaged at 26 with the gusset flange 23 and extends diagonally of the corner of cabinet 2, terminating in a downturned angular flange 27 the edge of which rigidly engages the lip 8 in the corner between the lip 8 and depending flange or skirt 6 of the sink 1.

A post 28 is secured by any suitable means to the gusset member 19 and an adjustable sink support member with a rubber or other bumper head 29 is threaded into the post 28 through an aperture in clamping bracket 24. A nut 30 may be used to adjust the position of support member 29 and to clamp and rigidly secure the bracket member 24 to the gusset member 18 by engagement of the downturned flange 25 against the top edge of corner flange 23 of gusset member 19. Another adjustable support is provided near the rear corner of the cabinet, as indicated in Figs. 8 and 9, and may include a post 31, support member 32 threaded into post 31 having a rubber bumper head 33, and an adjusting nut 34.

At each rear corner of the cabinet, a clamping bracket 35 is bolted at 36 to the rear cabinet rail 15; and each bracket 35 has a downturned flange 37 at one end of the edge of which engages the rear cabinet rail 15 and has an angled flange 38 at the other end of the edge of which engages the sink lip 8 in the corner formed by the inturned and upturned sink lip 8.

If the upper edge of the sink 1 has an extended span, one or more center supports may be provided as illustrated in Figs. 5 and 6, including a bracket 39 preferably spot welded at 40 to the top flange 16 of the front rail 17 and having a rubber bumper 41 engaging under the rim 5 of the sink.

In assembling the sink 1 on the cabinet 2, the adjustable supports 29 and 33 are adjusted to approximate position, the sink 1 is tilted with its splashback portion 7 upward so that the inturned lip 8 along the front of the sink may be engaged under anchoring brackets 24 when the rear edge of the sink is lowered to engage the underside of the rim 5 on bumpers 29 at each front corner, on front center support bumper 41, and on bumper supports 33 adjacent each rear corner.

Adjustable supports 29 and 32 may then be adjusted to level the sink 1 with respect to the cabinet 2 and brackets 35 are then bolted to rear cabinet rail 15 to securely clamp the rear corners of the sink to the cabinet. Thus, the sink 1 is securely anchored and clamped in a rigid and level manner to the cabinet 2 forming a unitary sink and undersink cabinet structure which may be shipped in a single crate or carton to a place of installation and there installed as a unit.

A modified construction of anchoring and clamping means is illustrated in Figs. 7, 8 and 9.
in which a modified gusset member 42 is used having an integral anchoring flange 43 extending outward from each corner of the front side of the gusset corner flange 44. The anchoring flange 43 engages in the corner formed between the lip 8 and the side flange of the sink 1. A U-shaped support 45 is secured to each gusset member 42 preferably by spot welding at 46. Each support member 45 is provided with a fixed rubber bumper 47 engaging under the sink rim 5.

Another support member 48 is secured to the top flange 16 of each cabinet side wall 10 in the rear thereof and provided with a rubber bumper 49 engaging under the sink rim 5. A clamping bracket 50 may be bolted at 51 to the cabinet side wall flange 16 near each rear corner, having a downturned flange portion 52 engaged over sink lip 8 to securely clamp the rear corners of the sink 1 to the undersink cabinet 2.

The construction illustrated in Figs. 7, 8 and 9 omits the adjustable supports and substitutes instead, fixed supports which may be used where flatness of the sink is assured as when the sinks are assembled to undersink cabinets at the place of manufacture. The rubber support bumpers 47 and 48 have sufficient flexibility and resilience to allow themselves to slight variations in sinks. The construction of Figs. 7, 8 and 9 may be assembled, crated, shipped and installed in substantially the same manner as described with respect to the construction of Figs. 1 through 6.

Accordingly, in each of the embodiments of the present invention illustrated, there is a corner gusset member at each front corner of the cabinet having a bracket associated therewith anchoring the sink by engagement with an inverted lip of the sink. There are resilient bumper support means on the cabinet engaging under the sink rim at or adjacent each corner of the sink; and there are clamping brackets at each rear corner of the cabinet engaging the inverted sink lip to securely clamp the sink which is anchored at its front edge, to the undersink cabinet as a unitary structure.

Accordingly, the present improvements provide a sink and undersink cabinet construction in which a sink is securely anchored to an undersink cabinet so that it may be assembled under production methods at a place of manufacture and crated, shipped and installed as a unitary structure, thus effecting great savings in crating, shipping and installation costs.

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 utilized for descriptive purposes herein and not for the purpose of limitation, and are intended to be broadly construed.

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

Having now described the features of the invention, the structure and assembly of preferred embodiments of the improved sink and undersink cabinet construction, and the advantageous, new and useful results attained thereby; the new and useful devices, constructions, arrangements, combinations, sub-combinations, parts and elements, and reasonable mechanical equivalents thereof obvious to those skilled in the art, are set forth in the appended claims.

I claim:
1. In sink and undersink cabinet construction, a rectangular sheet metal sink having a rim extending along the front and two ends formed as a part of a depending flange terminating in an inverted lip, an undersink cabinet, flanged anchor brackets mounted on the cabinet at each upper front corner thereof and engaging the sink lip, support means separate from said flanged anchor brackets mounted on the cabinet and engaging under the sink rim adjacent each of the four sink corners, and a flanged clamping bracket engaging the sink lip adjacent each rear sink corner and secured to the cabinet.

2. In sink and undersink cabinet construction, a rectangular sink having an inverted lip flange adjacent each of its four corners, an undersink cabinet, a gusset plate secured to the cabinet at each upper front corner, an anchor bracket associated with each gusset plate and having an overhanging depending flange engaging the adjacent sink lip, a support member mounted on each gusset plate and engaging the sink under each front corner thereof, a support member mounted on the cabinet and engaging under the sink rim adjacent each rear corner thereof, and a clamping bracket bolted to the cabinet having a downturned flange engaging the sink lip at each rear corner thereof.

3. In sink and undersink cabinet construction, a sink having an inverted lip flange extending along the front and two ends thereof, a rectangular cabinet, gusset plate means rigidly secured to each of the two upper front cabinet corners, anchor means rigidly secured to each gusset plate means and engaging the sink lip flange adjacent the corresponding front sink corner, support means between the sink and cabinet adjacent each of the four front and rear corners thereof, and a clamping bracket secured to the cabinet and engaging the sink lip flange adjacent each of the two rear corners thereof.

4. In sink and undersink cabinet construction, a sink having an inverted lip flange extending along the front and two ends thereof, a rectangular cabinet, gusset plate means provided with an anchor clip rigidly secured to each of the two upper front cabinet corners and engaging the sink lip flange adjacent the corresponding front sink corner, resilient bumper support means mounted on the cabinet adjacent each of the four front and rear cabinet corners supporting the sink, and clamping bracket means secured to the cabinet and engaging the sink lip flange adjacent each of the two rear corners thereof.

5. In sink and undersink cabinet construction, a rectangular sink having an inverted lip flange adjacent each of its four corners, a rectangular cabinet, anchoring means rigidly secured to each of the two upper front cabinet corners each provided with downturned flange means the edge of which engages the sink lip flange adjacent the corresponding front sink corner, support means between the sink and cabinet adjacent each of the four front and rear corners thereof, and clamping bracket means secured to the cabinet adjacent each rear corner of the downturned flange, the edge of which engages the sink lip flange adjacent the corresponding rear sink corner.

6. In sink and undersink cabinet construction, a rectangular sink having an inverted lip flange adjacent each of its four corners, a rectangular
2,441,563

7. In sink and undersink cabinet construction, a rectangular sink having an inturned lip flange adjacent each of its four corners, an undersink cabinet, means rigidly secured to the cabinet at each upper front corner thereof engaging and anchoring the sink lip flange at each front sink corner, means separate from said anchoring means supporting the sink on the cabinet adjacent each of its four corners, and means separate from said supporting means clamping the sink lip flange to the cabinet adjacent each rear sink corner.

8. In sink and undersink cabinet construction, a rectangular sink having an inturned lip flange adjacent each of its four corners, an undersink cabinet, means rigidly secured to the cabinet at each upper front corner thereof engaging and anchoring the sink lip flange at each front sink corner, adjustable means separate from said anchoring means each of the four sink corners supporting the sink on the cabinet, and means separate from said supporting means clamping the sink lip flange to the cabinet adjacent each rear sink corner.

9. In sink and undersink cabinet construction, a rectangular sink having an inturned lip flange adjacent each of its four corners, an undersink cabinet, means rigidly secured to the cabinet at each upper front corner thereof engaging and anchoring the sink lip flange at each front sink corner, rubber bumper support means spaced from the engagement of the anchoring means with the sink lip flange and separate from said anchoring means between the sink and cabinet adjacent each of the four sink corners, and means separate from said bumper, for engaging the sink lip and clamping the sink to the cabinet adjacent each rear sink corner.

10. In sink and undersink cabinet construction, a rectangular sink having an inturned lip flange extending along the front and two ends thereof, a rectangular undersink cabinet, gusset plate means rigidly secured to each of the two upper front cabinet corners, the gusset plate means at each front cabinet corner being provided with an overhanging depending anchor flange the edge of which engages the sink lip flange adjacent the corresponding front sink corner, resilient bumper support means between the sink and cabinet adjacent each of the four front and rear corners thereof, and means securing the rear corners of the sink against movement with respect to the cabinet.

11. In sink and undersink cabinet construction, a rectangular sink having an inturned lip flange extending along the front and two ends thereof a rectangular undersink cabinet, gusset plate means rigidly secured to each of the two upper front cabinet corners, the gusset plate means at each front cabinet corner being provided with an overhanging depending anchor flange the edge of which engages the sink lip flange adjacent the corresponding front sink corner, and rubber bumper support means spaced from the engagement of the anchor flange with the sink lip flange and separate from said anchor flange between the sink and cabinet adjacent each of the four sink corners.

CARL L. CLARK.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,718,231</td>
<td>Griffiths</td>
<td>June 28, 1929</td>
</tr>
<tr>
<td>2,146,939</td>
<td>Coordes</td>
<td>Feb. 14, 1939</td>
</tr>
<tr>
<td>2,341,093</td>
<td>Haberstump</td>
<td>Feb. 8, 1944</td>
</tr>
</tbody>
</table>