April 4, 1950 A. P. BALL 2,502,553

SINK ASSEMBLY

Filed June 9, 1948 2 Sheets-Sheet 1

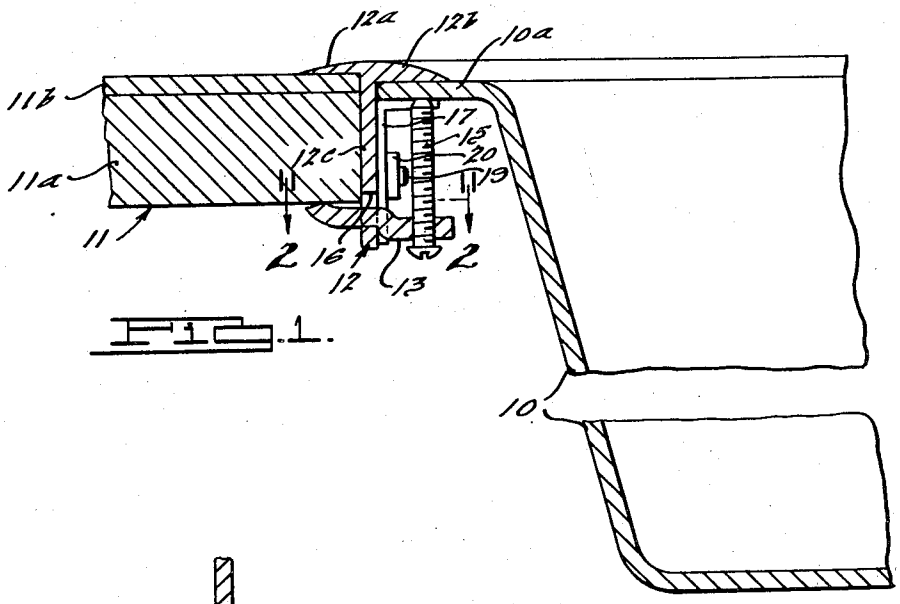


FIG. 1.

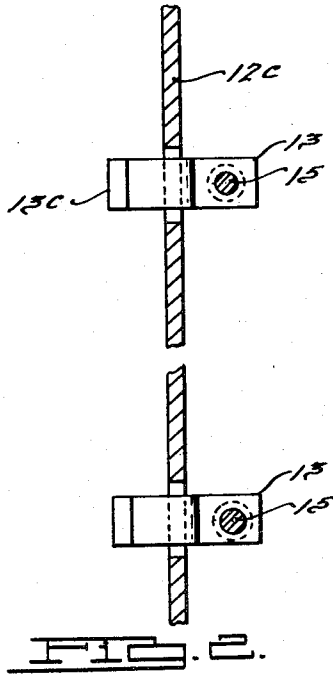


FIG. 2.

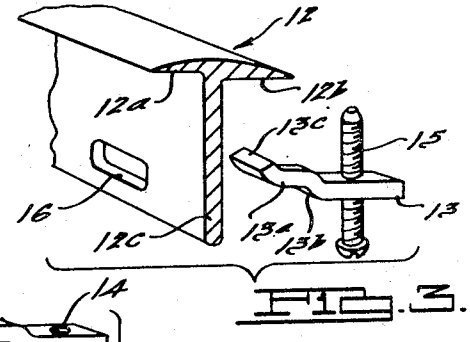


FIG. 3.

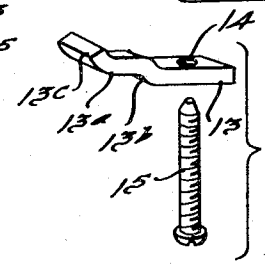


FIG. 4.

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SINK ASSEMBLY

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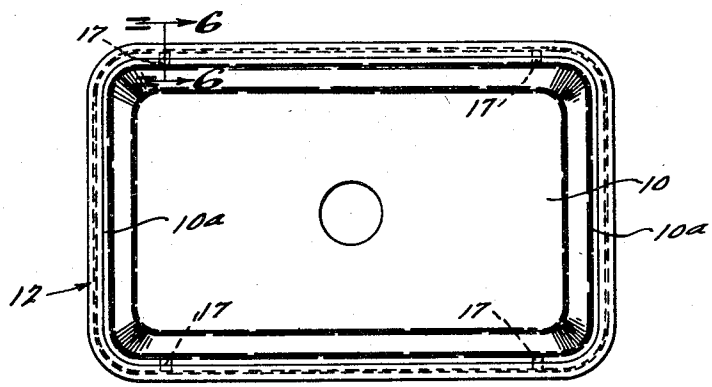


FIG. 5.

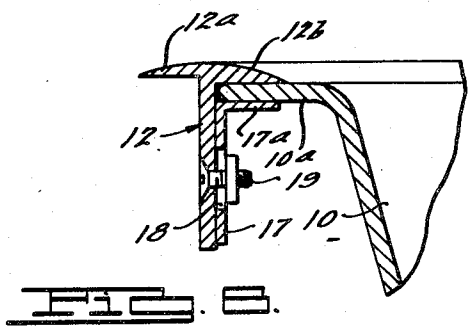


FIG. 6.

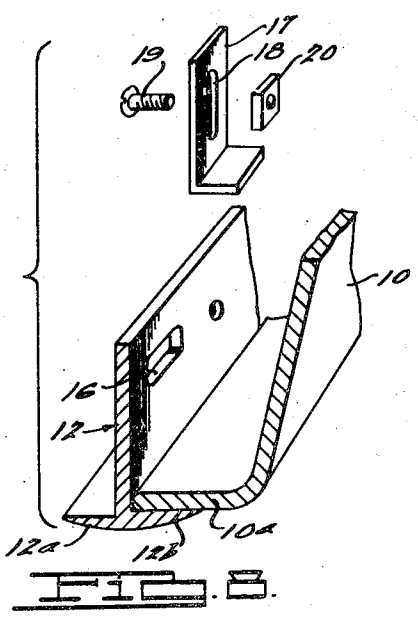


FIG. 8.

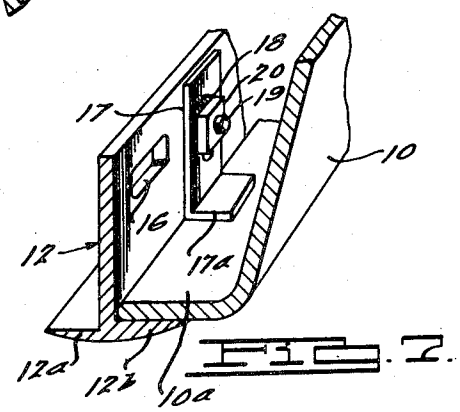


FIG. 7.

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SINK ASSEMBLY

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Application June 9, 1948, Serial No. 32,025

14 Claims. (Cl. 4—187)

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This invention relates in general to sink assemblies and more particularly to means for mounting a sink of the flat rim type within an opening in a drainboard, cabinet top or other supporting structure.

When mounting a sink of the flat rim type it is customary to cut out an opening in the drainboard or cabinet top to receive the bowl and rim of the sink, the latter being supported within the opening so that the rim lies substantially or nearly flush with the top of the drainboard. The gap between the edge of the rim and the edge of the cut-out opening is closed by means of a T-shaped molding which is drawn down tightly to form a seal.

An object of the invention is to provide improved means for mounting a sink of the foregoing type within an opening in a cabinet top, drainboard or the like, which means is relatively simple and inexpensive and easily manipulated during installation of the sink.

A further object of the invention is to provide devices of improved character associated with a molding frame for installing a flat rim sink in an opening in a supporting structure, such devices being adapted to form a tight seal between the top of the molding frame and the underlying edges of the sink rim and supporting structure.

Another object of the invention is to provide improved clamping devices cooperable with a generally T-shaped molding frame for tightly clamping the sink rim, supporting structure and molding frame together, such devices being of simple nature and easily installed, and preferably comprising members insertable through openings in the depending portion of the molding frame so as to engage beneath the supporting structure and also comprising threaded elements carried by said members and engageable beneath the sink rim and operative to draw down the top of the molding frame tightly against the edge of the supporting structure and rim of the sink.

Still another object of the invention is to provide improved means for supporting the sink within an opening in a drainboard, cabinet top or the like preparatory to clamping the sink in place, such means preferably comprising devices adapted to connect the sink rim to the molding frame in proper relation after which the sink and molding frame may be installed as a unit within the drainboard or cabinet top opening and supported along the edge of the latter, thus permitting the sink to be held in place within the opening while the clamping devices are installed.

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Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

Fig. 1 is a fragmentary sectional elevation of a flat rim sink installed in an opening in a drainboard or cabinet top and illustrating one of the devices for clamping the molding frame in place.

Fig. 2 is a fragmentary horizontal section taken substantially through lines 2—2 of Fig. 1 looking in the direction of the arrows.

Fig. 3 is a fragmentary exploded perspective view, partly in section, illustrating the molding frame and one of the clamping devices.

Fig. 4 is an exploded perspective view illustrating the parts of the clamping device.

Fig. 5 is a plan view of a sink having a molding frame attached thereto preparatory to installation in an opening in a drainboard, cabinet top or the like.

Fig. 6 is an enlarged fragmentary sectional view taken substantially through lines 6—6 of Fig. 5 looking in the direction of the arrows.

Fig. 7 is a fragmentary perspective view, partly in section, illustrating one of the devices in operative position for attaching the sink and molding frame together preparatory to installation thereof.

Fig. 8 is an exploded view, in part similar to Fig. 7, illustrating the supporting device removed to permit assembly of the sink with the molding frame.

Before explaining in detail the present invention it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

In the drawings there is illustrated, by way of example, one embodiment of the invention in which a sink 10 is installed within an opening in a cabinet top, drainboard or other supporting structure generally indicated at 11. The sink 10 is of any conventional type having the usual basin or bowl terminating around the upper marginal edge thereof in an outwardly extending continuous horizontal rim flange 10a. The drainboard or cabinet top 11 comprises the usual supporting board 11a which may be of plywood or

any other laminated structure covered in the usual manner by means of a sheet of linoleum 11*b* which is bonded thereto. For the purpose of installing the sink 10 it is the usual practice to cut out a generally rectangular opening in the cabinet top or drainboard 11, which opening is somewhat larger than the sink so as to permit the latter to be inserted freely through the opening and also to accommodate a molding 12 which seals the joint between the marginal edge of the sink rim 10*a* and the adjacent edge of the opening in the drainboard or cabinet top 11.

The sealing molding 12 is preferably in the form of a generally rectangular frame having a configuration corresponding to the shape of the opening cut in the drainboard as well as the edge of the sink rim. This molding has a head comprising a flange portion 12*a* overlapping the drainboard around the margin of the opening therein and a flange 12*b* overlapping the sink rim 10*a*. Extending downwardly from the head of the molding frame is a leg 12*c* adapted to fit against the edge of the drainboard around the opening cut therein, this leg 12*c* projecting a suitable distance below the bottom of the drainboard 11. The molding 12 is formed of metal and not only serves as a sealing means but also provides an ornamental finish around the sink along the juncture of the sink rim and drainboard.

After installation of the sink 10 and molding frame 12, as shown in Fig. 1, the molding frame is drawn down tightly so as to effect a tight joint between the flange portions 12*a*, 12*b*, the sink rim and the drainboard. This is accomplished in accordance with the present invention by means of a number of clamping devices, each of which is illustrated in Fig. 4. Any suitable number of these devices may be used, such as twelve, four being arranged at spaced intervals along each side of the sink and two along each end of the sink. Each clamping device comprises a stamped metal clamping plate or piece 13 having a tapped hole 14 adjacent one end thereof for the reception of a screw 15. The clamping plate is preferably formed with an upwardly offset portion 13*a* providing a shoulder 13*b*, and preferably the end of this offset portion 13*a* is bent up at 13*c* to provide a curved working edge engageable with the underside of the drainboard 11. The vertical leg 12*c* of the molding frame is pierced to provide a series of elongate slots 16 corresponding in number to the number of clamping devices. Each slot, as shown in Fig. 2, is preferably somewhat longer than the width of the clamping plate 13 and is located near the lower edge of the leg 12*c* so as to lie mainly below the plane of the bottom of the drainboard when the molding is installed.

After the sink and molding frame have been installed and supported in position within the opening in the drain board, as hereinafter described, the clamping devices are assembled in their proper positions. The screw 15 is first threaded through the hole 14 in the clamping plate, as shown in Fig 3, and thereupon the offset end of the clamping plate is inserted through the slot 16. In case the distance between the wall of the sink and edge of the drainboard opening is unduly restricted the clamping plate may be inserted through the slot 16 angularly and thereafter turned so as to extend at right angles to the leg 12*c* of the molding frame, this operation being permitted by virtue of the greater length of the slots 16 as compared with the

widths of the clamping plates. On account of the offset portions of the clamping plates the slots 16 have sufficient depth so as to facilitate insertion of the plates through the slots. Each clamping plate is accurately positioned within the slot by the engagement of the shoulder 13*b* with the lower edge of the slot, as a result of which the offset end of the clamping plate will underlie the drainboard 11 and the opposite end will underlie the rim 10*a* of the sink. After the clamping device has been installed, as shown in Fig. 1, the screw 15 is driven upwardly by means of a screw driver so as to engage the underside of the rim 10*a*. When the screw is tightened against the rim of the drainboard the underlying end of the clamping plate will be drawn down thereby forcing the offset end 13*c* of the clamping plate upwardly against the underside of the drainboard, this operation drawing down the leg 12*c* of the molding frame and causing the flange portions 12*a* and 12*b* to engage tightly the upper surfaces of the drainboard and sink rim. In order to ensure a water-tight seal suitable plastic sealing material may be interposed between the flange portions 12*a*, 12*b* and the underlying surfaces of the drainboard and sink rim.

In accordance with the present invention means is provided for supporting the sink 10 within the opening in the drainboard or cabinet top in proper position with respect to the molding frame 12 preparatory to installation of the clamping devices 13, 15. As illustrated in Figs. 6 to 8 inclusive, the means for preliminarily supporting the sink at the proper height within the drainboard or cabinet top opening comprises a number of devices which serve to attach the molding frame and sink rim together after which the assembled molding frame and sink may be set into the opening in the drainboard or cabinet top and supported substantially at their final location. Any suitable number of these supporting devices may be utilized, such as four which may be arranged at or adjacent the four corners of the molding frame. As herein illustrated, each such supporting device comprises a metallic angle bracket 17 adapted to fit against the inside of the leg 12*c* of the molding frame and terminating in an inwardly extending flange 17*a* adapted to underlie the sink rim 10*a*. The vertical leg of each angle bracket 17 is formed with an elongate slot 18 for the reception of the threaded shank of a screw 19. This screw extends through a counter-sunk hole in the leg 12*c* of the molding with a nut 20 threaded onto the inner end thereof. Before assembly of the sink with the molding frame the supporting angles 17 may be installed in position on the molding frame by means of screws 19 and nuts 20. The sink may be readily assembled with the molding frame by first removing the brackets 17, inverting the sink and frame and assembling them together as shown in Fig. 8 with the sink rim engaging the flange 12*b* of the molding frame. Thereafter the angle brackets 17 are installed as shown in Fig. 7 and adjusted so as to engage the flanges 17*a* thereof with the underside of the sink rim, whereupon the nuts 20 are tightened to clamp the parts together.

After the molding frame and sink have been assembled together by means of the brackets 17, as above described, the assembly may be turned rightside up, as shown in Fig. 6, and then installed within the opening in the drainboard or cabinet top. When thus installed the flange 12*a* will rest upon the drainboard, as shown in Fig. 1,

and the sink rim will be supported upon the brackets 17 carried by the molding. Thereafter the clamping devices 13, 15 may be readily installed and tightened so as to clamp the molding tightly in place.

In the event the drainboard or cabinet top is separable from its support, it will be understood that the angle brackets 17, which only serve to support the sink while the clamping elements 13, 15 are installed, may be omitted. In such case the drainboard, sink and molding frame may be assembled in inverted position and the clamping elements installed and tightened, after which the entire assembly is turned rightside up in the manner shown in Fig. 1.

I claim:

1. Means for mounting a flat rim sink in an opening in a supporting structure, comprising a molding frame having a top portion adapted to overlie adjacent edges of the sink rim and supporting structure and a vertical portion adapted to extend therebetween, a clamping member insertable through an opening in the lower end of said vertical portion in such manner as to cause one end of the clamping member to engage the underside of said structure and the opposite end to underlie said sink rim in spaced relation therebelow and a clamping screw on said last named end of the clamping member adjustable to engage the underside of said rim.

2. Means for mounting a flat rim sink in an opening in a supporting structure, comprising a molding frame having a top portion adapted to overlie adjacent edges of the sink rim and supporting structure and a vertical portion adapted to extend therebetween, a clamping member insertable through an opening in the lower end of said vertical portion in such manner as to cause one end of the clamping member to engage the underside of said structure and the opposite end to underlie said sink rim in spaced relation therebelow, and adjustable clamping means interposed between said last named end of the clamping member and the underside of the rim.

3. In combination, a molding frame having a top portion adapted to overlie adjacent edges of a sink rim and supporting structure and a vertical portion adapted to extend therebetween, a clamping member insertable horizontally through an opening in the lower end of said vertical portion in such manner as to cause one end of the clamping member to engage the underside of said structure and the opposite end to underlie said sink rim in spaced relation therebelow, means on said clamping member for positioning the same within said opening relatively to said molding frame, and a clamping screw on said last named end of the clamping member adjustable to engage the underside of said rim.

4. Means for mounting a flat rim sink in an opening in a supporting structure, comprising a molding frame having a top portion adapted to overlie adjacent edges of the sink rim and supporting structure and a vertical portion adapted to extend therebetween, said vertical portion having a slot adjacent its lower end, a clamping member insertable horizontally through said slot to cause one end of the member to engage the underside of said structure and the opposite end to underlie said sink rim, and a clamping screw extending through said last named end and engageable with the underside of said rim.

5. In combination, a molding frame having a top portion adapted to overlie adjacent edges of a sink rim and supporting structure and a vertical portion adapted to extend therebetween, said vertical portion having a slot adjacent its lower end, a clamping member insertable horizontally through said slot to cause one end of the member to engage the underside of said structure and the opposite end to underlie said sink rim, and means interposed between said last named end of the clamping member and the underside of the rim for exerting a downward force on said last named end thereby to draw down said molding frame tightly against said rim and supporting structure.

6. In combination, a molding frame having a top portion adapted to overlie adjacent edges of a sink rim and supporting structure and a vertical portion adapted to extend therebetween, a horizontally extending clamping member tiltingly connected intermediate its ends to the lower end of said vertical portion so as to cause one end of the member to engage the underside of said structure and the opposite end to underlie the sink rim, means for clamping said last named end to the rim, and means for attaching said rim and top portion of the molding frame together.

7. In combination, a molding frame having a top portion adapted to overlie adjacent edges of a sink rim and supporting structure and a vertical portion adapted to extend therebetween, a horizontally extending clamping member tiltingly connected intermediate its ends to the lower end of said vertical portion so as to cause one end of the member to engage the underside of said structure and the opposite end to underlie the sink rim, means for clamping said last named end to the rim, and adjustable means connected to the vertical portion of said frame for connecting said frame to the sink rim.

8. In combination with a flat rim type sink adapted to be mounted within an opening in a supporting structure, a molding frame of generally T-shaped cross-section having a top portion adapted to overlie the sink rim and said structure and a vertical portion extending therebetween, means for securing the sink rim to the molding frame to permit installation thereof as a unit in said opening, and means for securing the molding frame to said supporting structure.

9. In combination with a flat rim type sink adapted to be mounted within an opening in a supporting structure, a molding frame of generally T-shaped cross-section having a top portion adapted to overlie the sink rim and said structure and a vertical portion extending therebetween, means for securing the sink rim to the molding frame to permit installation thereof as a unit in said opening, and means for clamping the molding frame, sink rim and said structure together.

10. In combination with a flat rim type sink adapted to be mounted within an opening in a supporting structure, a molding frame of generally T-shaped cross-section having a top portion adapted to overlie the sink rim and said structure and a vertical portion extending therebetween, adjustable means carried by the molding frame for securing the sink rim to the molding frame to permit installation thereof as a unit in said opening, and means for securing the molding frame to said supporting structure.

11. In combination with a flat rim type sink adapted to be mounted within an opening in a supporting structure, a molding frame of generally T-shaped cross-section having a top portion

adapted to overlie the sink rim and said structure and a vertical portion extending therebetween, adjustable devices on the vertical portion of said frame for supporting the sink rim on said frame when the sink and frame are installed as a unit in said opening, and means for clamping the molding frame to the sink rim and supporting structure.

12. In combination with a flat rim type sink adapted to be mounted within an opening in a supporting structure, a molding frame of generally T-shaped cross-section having a top portion adapted to overlie the sink rim and said structure and a vertical portion extending therebetween, angle brackets adjustably mounted on the vertical portion of said frame for supporting the sink rim on said frame when the latter is positioned in supported relation to said structure, and means for clamping the molding frame to said structure.

13. In a mounting for a flat rim sink on a supporting structure, a molding frame adapted to be interposed between the sink rim and an edge of said structure, adjustable devices on said frame for supporting the sink rim, and means for clamping the molding frame, sink rim and supporting structure together.

14. Means for mounting a flat rim sink on a supporting structure, comprising a molding frame adapted to be interposed between the sink rim and an edge of said structure, adjustable devices on said frame for supporting the sink rim, and adjustable clamping devices connected to said molding frame for securing the frame to said sink rim and supporting structure.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
2,228,186	Thumm	Jan. 7, 1941
2,440,741	Drain	May 4, 1948