This invention relates to improvements in sink mountings and sink frame components therefor, and more particularly to an improved sink frame for mounting a sink having a flat marginal rim or flange within an opening in a kitchen counter top, drainboard or other appropriate sink supporting surface.

A main object of the invention is the provision of a sink frame capable of effectively mounting and securing a sink within an opening therefor in a counter top, drainboard or other supporting surface (for convenience hereinafter referred to as a counter top) and of forming as wall for said sink frame of the sink flange and to the counter top, thereby to mount the sink within a counter top opening.

Yet another object of the invention is the provision of a sink frame of general T cross-section, the vertical leg of which incorporates the sole securing means employed to tightly secure the frame both to the sink flange and to the counter top, thereby to mount the sink within a counter top opening.

Still another object of the invention is the provision of a sink frame of general T cross-section wherein the top portion provides oppositely disposed flanges which bridge the joint between the usually flat marginal flange of a sink and the adjoining edge of the counter top opening, and whose vertical leg depends downwardly in the space between sink and counter top opening edges, wherein said vertical leg is blanked and scored in the fabrication of the sink frame in such manner as to provide bendable locking wings which are adapted, in the operation of installing the sink, to be bent in opposite directions out of the plane of said leg and, when so bent, to press against and automatically lock to the under surface of both sink flange and counter top at locations thereof which are disposed an appreciable distance inwardly from their side edges and generally below the lines of engagement of the flanges of the sink frame top portion therewith, thereby effectively sealing the sink flange to the top sides of both the sink flange and counter top.

A still further object of the invention is the provision of a sink frame as last stated, whose locking wings are so constructed and arranged as to engender a hold-down force effective to a major extent on the flange of the sink-frame top portion which extend over the sink flange, responsive to said wings being bent in opposite directions out of the plane of the vertical leg of said sink frame, which force is of sufficient magnitude both to securely and effectively seal the frame to the top surface of the sink frame, in particular.

The above and other objects of a sink frame mounting and sink frame component therefor according to the present invention will appear from the following detailed description, in which reference is had to the accompanying drawings illustrating various forms of sink frame each satisfying the objectives of the invention as above set forth, in which:

Fig. 1 is a plan view of a sink-counter top assembly employing one of the variant forms of sink frame for mounting the sink in the counter top opening according to the invention;

Fig. 2 is a fragmentary side view of a sink frame incorporating a preferred form of integral, bendable attaching means according to the invention;

Fig. 3 is a typical section through a sink frame as shown in Fig. 2, installed to the adjacent edges of sink flange and counter top;

Fig. 4 is a section taken along line 4—4 of Fig. 3;

Figs. 5 and 6 are views similar to Figs. 2 and 3, which illustrate a modified sink frame incorporating a somewhat different form of integral, bendable sink frame and counter top attaching means according to the invention;

Figs. 7 and 8 are further views similar to Figs. 2 and 3 illustrating yet another form of sink frame incorporating variant integral, bendable attaching means in the structure as herein proposed;

Figs. 9 and 10 are yet other views corresponding to Figs. 2 and 3 illustrating another embodiment of sink frame having integral, bendable attaching means incorporated into its structure; and

Figs. 11 and 12 are still other views corresponding to Figs. 2 and 3, illustrating a further embodiment of sink frame having integral, bendable attaching means incorporated into its structure.

Referring in detail to the drawings, reference numeral 10 (Fig. 1) designates a counter top, drainboard or other suitable sink supporting surface which is provided with an appropriately contoured opening for the reception of a sink generally designated 12, which is conventionally of a type having a flat marginal flange 14, being mounted in the opening and secured to the counter top by means of a sink flange 16 according to the invention.

As is well known, such a sink frame is required to perform two principal functions—first, it is required to securely mount the sink to the counter top and within the opening, and, secondly, it is required to seal the space between the adjacent edges of sink flange 14 and counter top 10 and, equally important, to provide an attractive trim or finished joint between the counter top, which is usually surfaced with a non-structural plastic or like material, and the upper surface of the sink flange, which is conventionally a finished metal or porcelainized surface.

A preferred form of sink frame ably satisfying these requirements is illustrated in Figs. 2-4, of which Fig. 3 shows such a frame as having a general T-shape cross-section, the top cross portion 17 of the T defining oppositely disposed sealing flanges and being slightly convex upwardly and the leg 18 depending downwardly and
Y. 2,921,821 3 vertically therefrom. Preferably, said frame 16 also incorporates its own attaching means whereby it may be attached to both counter top 10 and sink flange 14 in the installation of the sink in the counter top opening, without any requirement for extra SKU support. As such, the upper wings 20a, 20b and lower wings 22a, 22b are suitably joined as by welding. According to the invention, said sink frame 16 also incorporates its own attaching means whereby it may be attached to both counter top 10 and sink flange 14 in the installation of the sink in the counter top opening, without any requirement for extra SKU support. As such, the upper wings 20a, 20b and lower wings 22a, 22b are suitably joined as by welding. According to the invention, said sink frame 16 also incorporates its own attaching means whereby it may be attached to both counter top 10 and sink flange 14 in the installation of the sink in the counter top opening, without any requirement for extra SKU support. As such, the upper wings 20a, 20b and lower wings 22a, 22b are suitably joined as by welding. According to the invention, said sink frame 16 also incorporates its own attaching means whereby it may be attached to both counter top 10 and sink flange 14 in the installation of the sink in the counter top opening, without any requirement for extra SKU support.

Referring first to Fig. 2, it will be seen that said attaching means is integrally formed in the vertical web 18 of the frame, preferably at regularly recurring intervals along the length thereof. However, as each set or assembly of attaching means is identical, only one will be described as follows:

Each set of integral attaching means as aforesaid comprises an upper pair of bendable wings 20a, 20b and a lower pair of similarly bendable wings 22a, 22b, both pairs of wings being struck out from the material of the vertical frame leg 18 as shown. The upper wings 20a, 20b are characterized by two principal features: first, they extend longitudinally from an intermediate position 18a of appreciable length and they are bendable out of the plane of said vertical leg 18 on fold lines 24a, 24b whose upper ends start at the inner ends of slits 26a, 26b which define the top edges of said wings, from whence the fold lines extend downwardly and converge towards one another by a small angle of approximately 15° from the vertical. Secondly, said slits 26a, 26b define the top edges of said wings 20a, 20b as aforesaid incline outwardly-upwardly for approximately half the width of said wings from said upper ends of the converging fold lines 24a, 24b, which ends are spaced downwardly from the under side of the top portion 17 of the frame a distance which is only slightly greater than the thickness of the sink flange 14, and thereupon the slits extend straightway or horizontally at a level which is spaced from said under side of the frame top portion a distance which is somewhat less than the thickness of said sink flange 14. Accordingly, and because of the downwardly convergent inclination of their fold lines 24a, 24b, when said wings 20a, 20b are bent or swung towards one another by an angle of approximately 90° out of the plane of said vertical leg 18, their upper edges will move in an ascending arc and hence into contact with each other, said arc being intersected by the under side of the sink flange 14 with sufficient force as to cause the topmost edge portions of said wings to fold along horizontal lines indicated at 28a, 28b. As will also be observed in Fig. 3, when the wings 20a, 20b are bent under the sink flange 14 as aforesaid, their top edges will make contact with each other along the under side of the sink flange 14 which is spaced from said under side of the frame top portion a distance which is somewhat less than the thickness of the sink flange 14.

The lower wings 22a, 22b extend laterally from a lower leg portion 18b which depends from the aforesaid leg portion 18a and is bendable with respect to said upper leg portion 18a (but in opposite direction from that in which the wings 20a, 20b are bendable) along longitudinal bend line 30 which is spaced from the lower side of the sink-frame top portion 17 at an equal distance which may be slightly less than the thickness of the counter top 10, and the lower wings 22a, 22b are bendable with respect to the lower leg portion 18b, similarly in opposite direction from that in which the wings 20a, 20b are bendable, along bend line 32a, 32b. As further seen in Fig. 2, the fold lines of the wings 22a, 22b extend outwardly, downwardly at an angle of approximately 30° from the horizontal, and said edges are each formed intermediate its ends with a sharp prong or sharply pointed barb 34 as indicated. Preferably, the fold lines 24a, 24b, 30, 32a and 32b are formed by scoring the material of the frame leg 18 in the same stamping orblanking out operation that cuts the upper wings 20a, 20b and lower wings 22a, 22b out of the material of the frame leg 18.

To install a sink 12 to a counter top 10 by the use of a sink frame 16 as aforesaid, the counter top 10, with the sink frame disposed within the sink-receiving opening, may be laid down on a suitable support intermediate surface 14 and sink flange 14 face, as results in the sink frame 16 to be inverted, and the sink, similarly inverted so that its rim flange faces downwardly, is inserted in said counter top opening as such is then defined by the vertical leg 18 of the sink frame. It will be understood that the upper and lower attaching wings as described, although blanked out therefrom, are still wholly within the plane of the vertical leg proper. By the use of a suitable tool, the worker performing the installation then proceeds (of course operating on only one set of attaching wings at a time) to bend the wings 20a, 20b of the sets about their associated downwardly converging fold lines 24a, 24b toward the sink flange 14 so that they extend at an approximate right angle to the frame leg as hereinbefore explained, this bending operation causes the top edge portions of the wings to bend out of the plane of the wings proper generally along fold lines 23a, 23b, and in so doing said wings exert substantial pressure on and thereby firmly clamp to the sink flange 14 along lines of contact which are disposed well inwardly from the side or marginal edge of the sink flange and immediately below the flange of the sink-frame top part 17 which extends over the sink flange, as results in said sink-frame flange being pressed into tight sealing engagement with the top surface of the sink flange. Accordingly, not only is a secure attachment and highly effective sealing of sink frame to sink flange achieved by the structure of the wings 20a, 20b as aforesaid, but also said wing structure adapts the sink frame to sink flanges of varying thicknesses in simple and effective manner. Preferably, the upper leg portion 18a extending between the wings 28a, 28b is now forcibly bent throughout a small angle toward the sink flange as is indicated in Fig. 3, such having the effect of the wings applying even greater pressure against the under side of the sink flange.

Next, the lower wings 22a, 22b are bent about their respective fold lines 32a, 32b toward the counter top 10 to a 90° angle as indicated. Finally, lower leg portion 18b, with wings 22a, 22b extending at right angles thereof, is forcibly bent about fold line 30 toward the under surface of the counter top, such causing said lower wings 22a, 22b to bite into and thereby secure to said under surface of the counter top at points or locations which are disposed inwardly from the side or marginal edge of said counter top and well under the flange of the sink-frame top part 17 which extends thereover, the prongs or barbs 34 formed in the upper edges of said wings of course facilitating this biting and securing action. As the lower leg portion 18b is forcibly bent toward the under surface of the counter top, it fulcrums on the corner between the edge of the counter top opening and its under surface, thereby engendering a pull-down force which is transmitted through the vertical leg 18 to the top part 17 of the frame, as causes said top portion to bear tightly and seal against the counter top 10. Accordingly, by the conjoint action of the oppositely bent wings 20a, 20b, and 22a, 22b, the sink frame is not only effectively mounted and secured to the counter top 10, but also the sink-frame top part 17 is caused to close and effectively seal the joint between the sink frame 16 and sink flange 14 constituting a variant form of sink frame of the invention also serving to secure and mount a sink within a counter top opening, reference numeral 36 generally indicates a sink frame corresponding to the previously described frame 16 in that it
has T-section providing a top cross part 37 and a vertical leg 38. Blanked out from said vertical leg 38 are a plurality of attaching wing sets or assemblages, each comprising a sink-frame attaching wing 40 and a pair of counter-top attaching wings 42a, 42b, which latter in different directions from an interdigital leg portion 38b. By comparing Figs. 2 and 5, it will be seen that said wings 42a, 42b and leg portion 38b correspond in all substantial respects to the aforesaid lower wing and connecting leg structure of the previously described modification, differing therefrom only in that in the present modification, said wings 42a, 42b are disposed laterally to the sink frame attaching wing 40, rather than being blanked out of a lower portion of the leg as in the prior modification. That is to say, the sink frame attaching wing 40 is defined by substantially right-angledly disposed slit lines 41, 42, of which the vertical slit line 41 extends upwardly from the very bottom edge of the frame leg 38, and the horizontal slit line 42 which defines the top edge of said wing is spaced from the under side of the top portion 37 of the frame a distance which corresponds approximately to the thickness of the flange 14. Preferably, and as shown, said horizontal slit line 42 terminates in a downwardly sloping portion 42c which merges into the wing fold line 43, which fold line 43 is inclined by a small angle to the vertical. Accordingly, when wing 40 is folded toward the sink flange 14 by an angle of approximately 90° to the frame leg 38, the top edge portion 42 of said wings moves in an ascending arc corresponding to the inclination of the wing fold-lines 43 and is folded over (just as are the upper edge portions of the aforesaid wings 20a, 20b) by contact with the under side of said sink flange, with the result that the wing compresses the sink flange against the overlying (underlaying during assembly) flange portion of the frame top part 37 inward of the side edge of the sink flange, as is seen in Fig. 6.

Following bending of the wing 40 as aforesaid, the wings 42a, 42b are bent along their fold lines 44a, 44b with respect to the leg portion 38b toward the counter top and thereupon the leg portion 38b is forcibly bent about fold line 38c (corresponding to score line 50 of the prior modification) beneath the counter top 10, such driving the prongs or points 46 formed in the upper edges of said wings 42a, 42b into the under surface of said counter top.

A distinguishing feature of the Figs. 5 and 6 modification is the provision of a triangular shaped "kick" wing 48 disposed intermediate each sink flange attaching wing 40 and its associated counter-top attaching wing structure 38a, 38b, 42a, 42b etc. Said triangular wing 48 is defined on one side by a slit 49 extending vertically upwardly from the bottom edge of the frame leg 38 to a point which is spaced from the under side of the top portion 37 of the frame 36 a distance which is slightly less than the thickness of the counter top 10 and along its other side by a fold line 50 which is inclined by an angle of about 30° to the vertical slit line 49. As seen in Fig. 6, the triangular wing 48, by the use of a special tool or pliers, is adapted to be twisted out of the plane of the frame leg and toward the counter top, following bending of the wing 40 beneath the sink flange 14 as aforesaid. Such tends to engender a hold-down or "kick" force which is transmitted by the vertical leg 38 to the top part 37 of the frame, which force supplements the compressive force exerted on the sink flange 14 by the wing 40 when the latter is bent to secure the sink as aforesaid. Referring to Figs. 7 and 8, illustrating another form of sink frame incorporating integral attaching means generally as aforesaid, reference numeral 56 designates a sink frame having a top cross part 57 and a depending leg portion 58 as previously described, said vertical leg portion having a plurality of integral attaching-wing sets or assemblages provided therein at intervals along its length. Each such assemblage comprises a pair of sink-flange attaching wings 60a, 60b (corresponding generally to the wings 20a, 20b of the Figs. 2 and 3 modification) blanked out of the vertical leg 58 of the frame, which are adapted to be bent at a right angle to the connecting leg portion 58a toward the sink flange 14 about fold lines 62a, 62b which latter, in the present modification, are disposed parallel to one another and at right angles to the bottom edge of the frame leg 58, rather than converging towards one another as in the Figs. 2 and 3 modification. However, the same desirable feature of the top edge portions of said wings being capable of exerting compressive force against the under side of the sink flange 14 inwardly along one or marginal edge as described above is achieved by disposing the slit 66a, 66b which define the top edges of said wings at elevations such that said edges are spaced from the under side of the frame top part 57 a distance which is appreciably less than the thickness of the sink flange 14. Accordingly, as said wings 60a, 60b are bent beneath the sink frame to positions such that they extend at approximately a right angle to the frame leg 58, said top edge portions are folded sidewardly on fold lines 64a, 64b, whereby the wings exert an appreciable compressive force on the underside of the sink flange 14 inwardly of its outer edge. A distinguishing feature of the sink frame and attaching wing structure of the present modification is that the leg portion 58a from which the aforesaid wings 60a, 60b extend is formed with a horizontally elongated window or opening 65 and with a short-length vertical slit 66 extending upwardly thereof, the purpose of which will be explained. Disposed sidewardly of the aforesaid wing structure is a wing structure for attaching to the counter top, such comprising a pair of wings 66a, 66b extending in opposite direction from the leg portion 58b, the wings 66a, 66b being provided with points or prongs 68 on their upper edges. It will be manifest that the latter wing structure is similar in all substantial respects to the counter-top wing structure of the Figs. 5 and 6 modification.

During installation of the sink frame 56 of the present modification and following working of the sink-flange attaching wings 60a, 60b to their final position as illustrated beneath and against the under side of the sink flange 14, which is achieved first by bending said wings at right angles to the frame leg portion 58a and thereupon forcibly bending said leg portions throughout an angle of approximately 30° from the plane of the leg proper toward the sink frame, a screw driver is inserted in the opening 65 of the leg portion and thereupon manipulated so as to force the aforesaid leg portion extending between the wings and which is split by the slit 66 back against the edge of the counter top lying therebeneath, thereby causing the frame top part 57 to apply a spring "kick" force against the top surfaces of both sink flange and counter top. Next considering the further form of sink frame according to Figs. 9 and 10, reference numeral 76 generally designates a modified sink frame of general T-section having a top cross part 77 and a depending vertical leg 78, which latter is provided at intervals along its length with the sets of sink frame and counter top attaching wings as aforesaid. A distinguishing feature of the present form of sink frame is that the attaching wing 80, which secures to the sink flange 14, rather than being bendable out of the plane of the frame leg 78 about a generally vertical bend or fold line, is instead adapted to be curled or looped outwardly on itself until its lower edge 80a presses against the under side of the sink flange 14, as generally illustrated in Fig. 10. Since said lower edge 80a convenient downwardly as in Fig. 9, when the wing is curled or looped as by tapping it against the under face of the sink flange, said edge would normally make but point contact therewith. However, by the simple expedient of providing an indentation 80b in the curved edge portion of said wing as shown, the aforesaid point con-
tact of wing edge to the sink flange may be changed to line contact by inserting a screw driver blade or like implement into said indentation 80b and thereupon tapping the curbed wing back towards the frame leg 78, whereupon it makes contact with and presses this against the under side of the sink frame 14 along a line which is disposed inwardly from the outer edge of the latter. Such results in a component of downward pull on the overlying flange of the top part 77 of the frame, causing it to bear tight against and sealed to the sink flange 14 as is highly desirable.

The wings which secure to the counter top 10 are designated 86a, 86b and they extend from and are bendable with respect to a lower leg portion 78b, which latter depends from and is bendable with respect to an upper leg portion 78a about a fold line 88 spaced from the under side of the frame top part 77 a distance which is slightly less than the thickness of said counter top. The top edges of said wings 86a, 86b are provided with points or prongs 90, and thus said lower wing structure corresponds in all substantial respects to the wing structure for attaching to the counter top according to the prior described Fig. 7 modification.

To install a sink in the opening provided therefor in the sink top 10 through the use of the modified frame 76 as just described, the same general operations are practiced as described for the prior modifications, except that the free lower end of the wing 80 is curved upwardly by an amount that the lower marginal edge 80a makes engagement with the under side of the sink flange 14 inwardly of the side edge of the latter, whereupon a screw driver tip or blade is inserted into the indentation 80b and the free end of said wing is forced or tapped back on itself, as results in said edge portion being forcibly deformed to a configuration as shown in Fig. 10, and in the wing making pressure contact with the sink flange 14 generally along a line designated 80c in Fig. 9.

Figs. 11 and 12 illustrate yet another form of sink frame in accordance with the invention, the modified sink frame 96, like the prior described sink frames, being of T cross-section, thus having a top cross part 97 and a vertical leg 98 incorporating at intervals along its length a plurality of wing sets or assemblies for attaching the frame to both counter top and sink flange and thereby securing the sink in the counter top opening. Referring to Fig. 11, each such assembly includes a sink-flange attaching wing 106 terminating at its lower end in a convex edge 106a and being provided in its central portion and at a slight distance upwardly from said edge with an indentation 106b, said wing thus corresponding in all substantial respects to the sink-flange attaching wing 80 of the Fig. 9 modification. However, the counter top attaching wing generally designated 106 is formed somewhat differently from the corresponding wing structure of the Fig. 9 form, in that it is roughly W-shaped and includes an upper leg portion 106a and a depending leg portion 106b which is foldable with respect to said upper leg portion about a fold line 108 spaced from the under side of the frame top part 97 a distance which is slightly less than the thickness of the counter top 10. It will also be seen that the lowest part portion of the wing 106 is shaped to provide two points or prongs 108, the wing portion 106c encompassed by said prongs being bendable with respect to the lower wing portion 106a along a horizontal fold line 110. Said lower wing portion 106b may be provided with an indentation 112 initially facing the sink flange side of the frame for the reception of the blade or tip of a screw driver or similarly bladed tool.

In installing a sink in an opening provided therefor in the counter top 10 through the use of a sink frame 96, the parts are preliminarily assembled as described, whereupon the wing 100 is curved or looped and finally set to the under side of the sink flange by a screw driver engaged in its indentation 109b, just as with the wing 80 of the Figs. 9 and 10 modification. Thereupon the lowest wing portion 106c and its prongs 108 is bent by a 90° angle towards the counter top 10 along fold line 110. Next, the depending wing portion 106b is bent with respect to the vertical leg proper and leg portion 106a about fold line 108 toward the counter top, the blade of a screw driver being preferably inserted in the indentation 112 during this latter bending operation to insure wrapping of the wing 106 about the corner define by the side edge bottom of the counter top. Finally, the points 108 are driven into the bottom surface of the counter top, thereby securely attaching the sink frame to the counter top and effectively mounting the sink in the counter top opening.

Without further analysis, it will be appreciated that the various forms of sink frames illustrated and described in the foregoing are capable of satisfying the desirable objectives of the invention as set forth above. In the manufacture of sink frames of the invention, they are fabricated complete with their attaching wings from strip stock of appropriate metal, the fabrication operation being relatively simple in that it consists only in forming out the strip to T cross-section, subsequently blanking out the attaching wing structures from the vertical leg of the frame and in the same operation scoring the fold lines in the leg surface, and finally bending the finished strip to the contour required for a particular installation.

As will be clear from the above description of the installation of sink frames according to the invention is exceedingly simple and may be performed by relatively unskilled labor through the use of a simple screw driver or screw driver-type tool capable of bending the wings from out of the plane of the vertical leg proper of the frame, which bending operation is facilitated by the fold lines having been scored into the metal of the frame leg.

Thus, sink frames according to the invention are notable principally because they incorporate the means by which they attach to both counter top and sink frame within their own structure, that is, said attaching means are blanked out from the vertical leg of the frame. Hence, no lugs, bolts, or other extraneous fastener means are required to mount and secure a sink within a counter top opening when using the herein proposed sink frame. It is also to be noted that, by appropriately blanking out of attaching wings and placement of the score lines which define the lines on which said wings fold, the herein sink frame construction lends itself to any thickness of sink flange and to various counter top thicknesses. Also of interest is that sink frames according to the invention are adapted to the mounting of all the various forms of sink now currently in use, namely, cast-iron, porcelain and stainless steel sinks.

As many changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:
1. A sink frame for mounting a sink having a marginal flange within the sink opening of a counter top, drainboards and the like, comprising a sink framing strip extending along said opening and having T-shape cross-section, the top cross part of the T having oppositely extending flanges adapted to overlie and sealingly engage on the adjacent top edge portions of the sink flange and counter top, respectively, and the vertical leg of the T adapted to extend downwards between side edges of the sink flange and counter top, said vertical leg including first and second attaching wings constituting the sole securement between sink flange, counter top and intermediate sink frame, said first wings being integrally connected to the leg and adapted in installation of the sink to be bent out of the plane of said leg to predetermined angular positions to one side of the leg.
in which they bear against the under side of the sink flange along a line inwardly of the edge of said sink frame, said second wings depending integrally from said leg and being similarly adapted to be bent to underlie the counter top, said second wings including at least one drive point adapted to be driven upwardly into the counter top from beneath same.

2. A sink frame substantially as set forth in claim 1, wherein said wings are contained within the vertical dimension of the leg and are blanked out from the material thereof.

3. A sink frame substantially as set forth in claim 1, wherein said wings are arranged in sets and said sets are repeated at predetermined intervals along the length of the frame.

4. A sink frame substantially as set forth in claim 1, wherein said first and second wings bear against the sink flange and drive into the counter top, respectively, at locations which are disposed substantially immediately below the oppositely extending flanges of the top cross part of the T.

5. A sink frame substantially as set forth in claim 1, wherein said first attaching wings are each connected to the frame leg by a fold line which is inclined by a small angle to the vertical and having a top edge which is spaced from the under side of the frame top part a distance which is approximately equal to the thickness of the sink flange, whereby when said wing is bent in installation to extend at an approximate right angle to the leg said edge is adapted to move in an ascending arc and thence to make contact with the under side of the sink flange inwardsly of the side edge of the latter with substantial pressure.

6. A sink frame substantially as set forth in claim 1, wherein said first and second attaching wings are arranged in upper and lower pairs, respectively, the wings of the upper pair adapted in installation of the frame to be bent substantially at a right angle to the leg in the direction of the sink frame and having top edges which are spaced from the under side of the frame top part a distance which is slightly less than the thickness of the sink flange whereby, responsively to bending of the wings as aforesaid, the top edge portion of said wings are adapted to fold on themselves by contact with the under side of said sink flange.

7. A sink frame substantially as set forth in claim 6, wherein the fold lines between the upper pair of wings and the leg proper are inclined from the vertical by a small angle and converge downwardly towards one another whereby the top edges of the upper pair of wings are adapted to move in an ascending arc toward the under side of the sink flange when said wings are bent as aforesaid.

8. A sink frame substantially as set forth in claim 6, wherein the fold lines between the upper wings and the frame leg proper are vertically disposed.

9. A sink frame substantially as set forth in claim 6, wherein the wings of the upper pair extend from the opposite ends of a first intermediate leg portion and the wings of the lower pair extend from a second intermediate leg portion which depends from the first intermediate leg portion and is connected thereto by a horizontal line of fold which is spaced from the under side of the frame top a distance which corresponds substantially to the thickness of the counter top.

10. A sink frame substantially as set forth in claim 1, wherein the attaching wings are struck from the material of said leg and include a wing adapted to be bent toward the sink flange about a fold line which extends upwardly from the bottom edge of the leg and at a slight angle to the vertical to a position in which it is disposed substantially at a right angle to said leg, said wing having a top edge which is spaced from the under side of the frame top part a distance less than the thickness of the sink flange whereby said top edge is folded over by contact with the under side of the sink flange responsively to bending of the wing as aforesaid, and further including a pair of wings disposed sidewardly of said first wing and extending in opposite directions from and being bendable with respect to a leg portion contained within the vertical dimension of the leg proper and which is bendable with respect to the latter on a horizontal fold line which is spaced from the under side of the frame top part a distance substantially equal to the thickness of the counter top, the upper edges of said pair of wings each including a prong which is adapted to be driven into the under surface of the counter top upon said pair of wings being bent at right angles to said depending leg portion and said depending leg portion being thereupon bent towards said counter top under the same.

11. A sink frame substantially as set forth in claim 10, wherein a triangular flap is provided in the leg portion extending intermediate the sink frame and counter top securing wings, said flap being defined by a vertical slit extending upwardly from the lower edge of the leg to a point which is spaced from the under side of the top part of the frame a distance which is somewhat less than the thickness of the counter top and by an inclined fold line extending downwardly from said point and inclining toward said first wing, said flap being twistable out of the plane of the leg in the direction of the counter top.

12. A sink frame substantially as set forth in claim 1, wherein said attaching wings include a wing which is adapted to be bent upwardly out of the plane of the frame leg along a curvature which effects contact of the free lower edge of the wing with the under face of the sink frame along a line which is substantially spaced from the leg, and a wing disposed laterally of the first wing and which is bendable out of the plane of the frame leg about a fold line which is spaced from the under side of the frame top a distance substantially equaling the thickness of the counter top, said last wing carrying prongs adapted upon bending of said wing to a position underlying the counter top to be driven into the under surface of said counter top.

13. A sink frame substantially as set forth in claim 12, wherein said pointed members extend in initially vertical continuation of the wing carrying same.

14. A sink frame substantially as set forth in claim 1, wherein said attaching wings include a wing adapted to be bent upwardly out of the plane of the frame leg along a curvature which effects contact of its free lower edge with the under side of the sink frame along a line which is substantially spaced from said leg and a pair of wings extending in opposite directions from and being bendable with respect to said intermediate leg portion which depends from the leg proper and is bendable with respect to said leg proper about a line of fold which is spaced from the under side of the frame top a distance substantially equal to the thickness of the counter top, the upper edges of said wings carrying prongs adapted, when said wings of the pair thereof are bent toward the counter top and at right angles with respect to the intermediate leg portion and said leg portion is bent along its fold line with the leg proper to a position in which it underlies the counter top, to be driven into the surface of said counter top.

15. A counter top and sink assembly comprising a counter top having a sink-receiving opening, a sink having a horizontal marginal flange disposed in said opening, and a sink frame securing said sink within the opening and to the counter top and further sealing the joint between the adjacent side edges of sink frame and counter top, said frame comprising a strip member of T section having a top cross part providing oppositely disposed flanges which overlie the adjacent top edge portions of sink frame and counter top, respectively, and a vertical leg extending downwardly into the space between adja-
11. cent side edges of sink flange and counter top, said leg including a plurality of bendable intercal attached wings struck out from the material thereof, of which certain wings are bent to positions in which their top edges underlie and engage with substantial pressure against the under side of the sink flange at locations thereof which are spaced inwardly from its side edge and certain other wings are bent to underlie the counter top edge, said other wings including prongs which are adapted to be driven upwardly into the under surface of the counter top at points which are spaced inwardly from its side edge.

16. A counter top and sink assembly substantially as set forth in claim 15, wherein the sink-flange engaging wings are bent on fold lines which are inclined by a small angle from the vertical and converge downwardly towards one another and the top edges of said wings are spaced from the under side of the frame top part a distance which is less than the thickness of the sink frame, whereby the top edge portions of the wings in moving inwardly under the sink flange are bent out of the plane of the wings proper thus to engage the sink flange with substantial pressure as aforesaid.

17. A counter top and sink assembly substantially as set forth in claim 15, wherein the sink flange and counter top engaging wings are arranged in upper and lower pairs, respectively, the wings of the upper pairs being bent substantially at a right angle to the plane of the frame leg proper, the wings of the lower pair initially extending in opposite directions from a depending leg portion foldable about a horizontal line of fold which is spaced from the under side of the frame top part a distance substantially equal to the thickness of the counter top, said depending leg portion being bent to underlie the counter top and said lower wings being bent to extend at right angles thereto and normal to the under surface of the counter top, the edges of said lower wings carrying the aforesaid prongs which are driven into the under surfaces of the counter top.

18. A counter top and sink assembly substantially as set forth in claim 15, wherein said sink-frame attaching wings each includes a wing which extends at a right angle to the frame leg and is connected thereto by a fold line which inclines upwardly from the bottom edge of the frame leg at a slight angle to the vertical and has a top edge which is spaced from the under side of the sink flange a distance less than the thickness of the sink flange, and said other wings are arranged in pairs each disposed laterally of said first wing and extending at a right angle out of the plane of a depending leg portion which in turn is bent to underlie the counter top along a horizontal line of fold which is spaced from the under side of the frame top part a distance substantially equal to the thickness of said counter top.

19. A counter top and sink assembly substantially as set forth in claim 15, wherein the sink-flange attaching wings each includes a wing which extends towards the sink flange along a curvature such that the free lower edge of said wing abuts the under face of the sink frame a substantial distance inwardly from its side edge, and said other wings each includes a wing disposed laterally of the first wing and being bent out of the plane of the frame leg along a fold line which is spaced from the under side of the frame top part a distance substantially equaling the thickness of the counter top, said last wing carrying the aforesaid prongs which are driven into the under surface of the counter top.

20. A counter top and sink assembly substantially as set forth in claim 19, wherein said prongs are carried by side wings extending from said last wing and said side wings are bent at a right angle to said last wing toward the under surface of the counter top.

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