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(54) **Device for fastening of kitchen sinks**

(57) Device for fastening a sink (13) to a cabinet work top (11), with a series of tension means (23) each arranged to connect an anchor means (21) at the sink, with a clamping means (24) fastened to the cabinet. The ten-

sion means comprises a strap (23) arranged to be tensioned with a screw device (41) at the clamping means (24). The clamping means (24) being provided for attachment to one of the sidewalls of the cabinet.

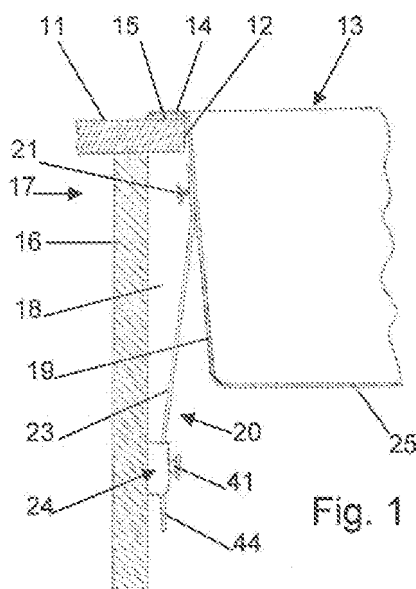


Fig. 1

Description

[0001] This invention relates to a device as stated in the introduction to claim 1, for fastening of a sink, particularly a kitchen sink.

Background

[0002] Kitchen sinks are mounted in openings in kitchen work tops. A possible arrangement for fastening a kitchen sink is based on an adhesive applied at the work top - sink interface, possibly with a sealant added.

[0003] Due to the need for a long time attachment and/or the need for demounting, e.g. for replacement, attachment clips have been proposed, which can be mounted at the rim of the opening to clamp the sink to the work top. A series of such clips have been attached to the work top and to the sink, and been secured by screws.

[0004] As the kitchen sinks have been expanding in the space available in the defined widths of kitchen furniture, the openings available for arranging and mounting the clips have been decreasing and made the mounting difficult or at least cumbersome.

Object

[0005] Thus a need for a mounting device occupying less space and being more easy to mount than prior art clips has emerged. Thus the main object of the invention is to provide such a mounting device being easy to install and to activate. It should also allow a release or demounting of the kitchen sink.

[0006] It is particularly important that the mounting device will be operable in the narrow space which may be available around a kitchen sink being expanded to fill the place available in a given kitchen furniture.

The Invention

[0007] The present invention is described in claim 1.

[0008] This mounting device can be manufactured with few and simple parts. It can be designed to fit different sizes of sinks and different arrangements for connecting the mounting device to the sink. It will be easy to mount, even if the sides of the sink are close to the walls of the kitchen cabinet. It will provide a firm and lasting attachment of the sink to the work top, without needing to apply an adhesive. A sealant may still be applied, as the clamping force of the mounting device according to the invention will provide a force on the sealant.

[0009] Further features of the invention are stated in claims 2 - 8.

Example

[0010] The invention is described more detailed with reference to the drawings, wherein

Figure 1 shows a vertical section through a part of the kitchen sink mounted on a work top, with a side view of an embodiment of the invention,

Figure 2 shows a perspective view of the strap device used in Figure 1, while

Figure 3 shows a cross section of the tension means of Figure 2, with the strap device in an active position.

[0011] Figure 1 shows a section of a kitchen work top 11, e.g. of fibreboard with a plastic coating, with an opening 12 provided to accommodate a kitchen sink 13 with a flange 14 covering the edge 15 of the opening 12. The work top 11 is supported at the shown end of the kitchen sink by a wall 16 being a part of a kitchen unit or cabinet 17 upon which the work top 11 is mounted.

[0012] The kitchen unit wall 16 is leaving a space 18 to the side 19 of the kitchen sink 13, this space being provided for mounting of a fastening device 20 according to the invention.

[0013] The kitchen sink 13 has a headed stud 21 welded at the side 19, closed to the upper part of the sink. On this stud 21, the upper end 22 of the fastening device 20 is fastened. Details of this part of the fastening device will be described with reference to Figure 2.

[0014] The main part of the fastening device is a strap 23 of plastic or metal, extending from the upper end 22 to a clamping means 24 mounted on the kitchen unit wall 18 below the bottom 25 of the kitchen sink 13, easily accessible. The clamping means 24 will be described in more detail with reference to Figure 3.

[0015] Figure 2 shows a perspective view of a strap 23, the upper end 22 of which is provided with an enlargement 26 having a keyhole slot 27 for mounting on the stud 21 and a fork extension 28 with a pair of parallel fingers 29, 30 and an interposed, offset finger 31 with a retention 32 protruding into the space between the fingers 29, 30. This arrangement is provided to fasten the upper end 22 to an alternative attachment under the flange 14. This alternative attachment belongs to the state of the art, and will not be further described.

[0016] The main part of the strap 23 has a series of notches 33 providing a gear rack suitable for retention in a ratchet. This design corresponds to that of a cable tie.

[0017] Figure 3 shows a section through a clamping means 24 used together with the strap 23 to mount the kitchen sink 13. The clamping means 24 has the structure of a rectangular box provided to be fastened to the kitchen unit wall 16 with screws (not shown). This box has a slot 34 at the upper end wall 35, being arranged close to the bottom 36 of the box, and a similar slot 37 at the lower end wall 38 of the box. The slots 34 and 37 are dimensioned to accommodate the strap 23.

[0018] At the lower end of the clamping means 24, a tooth or ratchet 43 is provided at the lower end wall 38, close to the slot 37, protruding into the opening of the slot 37 for engaging with the notches 33. The tooth 43 may be integrated with the clamping means in a manner available to someone skilled in the art of plastic manu-

facturing.

[0019] The bottom of the clamping means 24 has a centrally located stud 39 with a threaded opening 40 for a screw 41 with a head 42 available from the outside. The axis of the screw 41 may be oblique, with the head pointing downward, to make the screw easily accessible with a screwdriver.

Use of the invention

[0020] A series of clamping means 24 are provided for attachment to the walls 16 of the kitchen cabinet 17 according to the number of mounting devices to be provided for the sink to be mounted. The clamping devices should be positioned shortly under the level of the bottom 25 of the sink 13 to be mounted.

[0021] Before or during placing the sink 13 in the opening 12, a series of straps 23 are attached to the sink. The lower ends of these straps are previously, preferably at the manufacturing entered into the slots 34 and 37 as shown on Figure 3.

[0022] After lowering of the sink, the straps 23 are tightened manually to the straight condition shown in Figure 1. Then the clamping means 24 are mounted with screws to the adjoining wall 16, or back wall of the kitchen cabinet.

[0023] With the strap 23 thus fixed at both ends, the screw 41 is then tightened. The strap will then be pressed into the position shown in Figure 3. In this position, the strap is tightened to place a tension on the sink 13 for pressing it against the edge 15 of the work top 11, activating any sealant and holding the sink firmly in place.

Modifications

[0024] The shown device, for the time being a preferred embodiment, can be modified in various ways. The upper end 22 of the strap 23 can be used for sinks with lugs at the upper part of the sides, such lugs having a slot for catching the retention 31.

[0025] In an alternative embodiment, the strap 23 and the clamping means 24 can be provided in one piece, e.g. of plastic, with a fixed distance from the upper end of the strap to the attachment at the lower end of the clamping means. This will remove the flexibility of the fastening device 20 in regard of adaption to different sizes of sinks, but will simplify the fastening means.

[0026] The shown strap 23 being suitable for the use of plastic as a material, preferably of polyamide or a corresponding heavy duty plastic material. It can however be replaced by any ribbon or strap of a material withstanding long time tension, e.g. of steel or an alloy. It is important that the strap is flexible to stand the trust of a bending means, as any fissures will create a weakening spot.

[0027] The free end 42 of the strap 23 can be trimmed to leave no end under the clamping means 24. This will make the invention more desirable from an esthetical point of view.

[0028] In an alternative embodiment, a screw for tightening the strap 23 can engage a head with a threaded opening at the lower end of the strap. E.g. can the tooth 38 be arranged on a slide movable by a screw, to place a tension on the strap 23 to mount the sink.

[0029] The strap 23 can be manufactured from various materials and with different designs. Although the shown notch/racket design has advantages, there will be several other straps or ribbons of plastic or metal available for use with the clamping according to the present invention.

[0030] The invention has been described specifically with reference to a kitchen sink. Even if this is the main area of use, the mounting device described can be used for every kind of sinks to be mounted in an opening in a work top. Thus the invention can be used for sinks to industrial, laboratory, and public service and hotel use, as well as for other purposes.

Claims

1. Device for fastening a sink (13) to a cabinet work top (11), particularly a kitchen sink to a kitchen cabinet work top, with a series of tension means (23) each arranged to connect an anchor means (21) at the sink, with a clamping means (24) fastened to the cabinet, **characterized in that** the tension means comprises a strap (23), including a string, arranged to be tensioned with a screw device (41) at the clamping means (24), the clamping means (24) being provided for attachment to one of the sidewalls of the cabinet.
2. Device according to claim 1, **characterized in that** the strap (23) has a series of notches (33) provided for engagement with a ratchet (43) at the clamping means.
3. Device according to claim 1, **characterized in that** the strap has a fixed connection to the clamping means.
4. Device according to claim 1, **characterized in that** the strap is provided to be connected to the clamping means with a screw.
5. Device according to one of the claims 1 to 4, **characterized in that** the clamping means (24) comprises a crosswise extending screw (41) which is arranged to be engaging the strap for imposing a tensioning force.
6. Device according to one of the claims 1 to 5, **characterized in that** the strap (23) is provided with a multiple function attachment (27, 28) for fastening to the sink.
7. Device according to one of the claim 5, **character-**

ized in that the screw (41) has an oblique axis, with the head pointing downward.

8. Device according to claim 1, **characterized in that** the screw is arranged vertically to pull the strap lengthwise. 5

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