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(54) **Worktops and methods of assembling worktops**

(57) In the field of kitchen worktops it is known to bond two different worktop types together using worktop bolts. However, there remains a need for securing an edge member to finish thus bonded worktop portions (11,21) in a visually effective manner.

The invention relates to a worktop (10) having a groove (16) extending along its free edge. The groove (16) receives a tongue (17) that is formed in an edge member (12,22) that is an interference fit in groove (16). Thus the edge member (12,22) may be common to a number of worktop portions (11,21) bonded together.

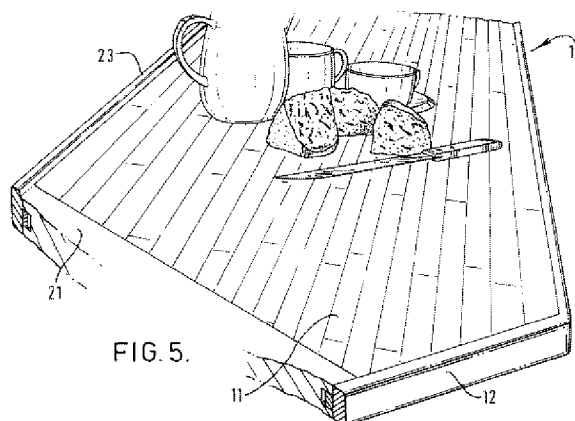


FIG. 5.

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Description

This invention relates to worktops, ie. rigid, substantially planar shelves having scratch-resistant surfaces installed predominantly in fitted kitchens. Shelves similar to kitchen worktops are also employed in bathrooms, cloakrooms and utility rooms; and sometimes in fitted bedrooms. Worktops are also employed in laboratories, hospitals, veterinary surgeries and in vehicles such as trains, aeroplanes and caravans.

Worktops, other than those cut from naturally occurring materials such as granite or slate, are usually mass-produced either as so-called "solid surface" worktops or as laminated worktops.

Solid surface worktops are formed from a self-coloured, curable, resinous plastics material that may be drawn in a vacuum press or other moulding machine. The plastics material on curing is scratch-resistant. The self-coloured nature of the plastics material ensures that any damage to the resulting worktop sufficient to overcome its scratch resistance is disguised, and easily removed by polishing.

The ability to draw or otherwise mould the plastics material used for solid surface worktops permits the formation of eg. sinks and drainers integrally with the remainder of a worktop. By virtue of the self-coloured nature of the plastics material such features are of the same colour as the remainder of a solid surface worktop in which they are formed. This confers an attractive appearance, commonly favoured by kitchen designers, on solid surface worktops.

Laminated worktops comprise a comparatively thick (typically 30mm deep) layer of dense particleboard to which a layer of scratch-resistant, self-coloured, plastics material is adhesively bonded to provide a worktop surface. Laminated worktops are cheaper to manufacture than solid surface worktops. However, it is impossible to form features such as sinks integrally with laminated worktops. It is therefore generally necessary for a kitchen fitter to cut apertures in a laminated worktop for receiving separately manufactured sinks and drainers. Such sinks and drainers differ in colour from the remainder of the laminated worktop. In some kitchen and bathroom designs this may be a disadvantage.

When secured, with its worktop surface uppermost, on top of a line of side by side, floor-mounted, cupboard or other storage units, a portion of the worktop overhangs the front face of the line of storage units. This overhanging portion includes a vertically extending edge terminating the worktop.

These overhanging edges of laminated worktops are usually machined to a rounded profile during manufacture, and the plastics material formed around the resulting profile before final bonding to the worktop, to provide a smooth, rounded appearance. This process is called postforming.

Solid surface worktops may be formed with the

overhanging edges profiled.

As an alternative to manufacturing the edges of the worktops, their edges can be left plain and finishing strips applied to neaten their appearance. One form of such a finishing strip is an elongate strip of plastics material the depth of which equals the depth of the worktop to which it is secured.

It has been known to secure two different worktop portions together side by side so that their respective upper surfaces define a substantially continuous, flat worktop surface. This is achieved through use of known worktop bolts that are received in apertures in the undersides of the two worktop portions and draw their abutting edges into close engagement. However, it has hitherto proved difficult to finish the edges of such multi-part worktops in a visually cohesive manner.

According to a first aspect of the invention, there is provided a worktop comprising first and second worktop portions secured to one another, surfaces of the first and second portions defining a worktop surface and the worktop portions including one or more grooves formed in respective edges extending at least in a direction perpendicular to the said worktop surface, the worktop including one or more edge members each having a projecting tongue that is an interference fit in a said groove thereby securing each said edge member on the worktop.

This arrangement advantageously allows the finishing of a multi-part worktop comprising two or more worktop portions secured in abutment with one another. Thus the invention allows manufacturing of a worktop one portion of which is a laminated worktop portion and another of which is a solid surface worktop portion. In turn this allows use of the comparatively expensive solid surface material in areas of the worktop such as the vicinity of the sink/drain unit where the benefits of the solid surface construction are particularly desirable; and the comparatively cheap laminated material in other areas of the worktop.

A kitchen designer may exploit differences between the appearance of the two worktop types to create novel visual effects.

In particularly preferred embodiments of the invention, a said edge member has a wall upstanding relative to the worktop surface, the tongue of the said edge member projecting from a tongue supporting surface spaced horizontally from the upstanding wall; and the edge member including a further surface extending from the edge of the tongue supporting surface towards the upstanding wall.

Edge members having upstanding walls are particularly suitable for mounting along the rear edge of a worktop, in order to prevent spilled liquids from flowing over the said rear edge and causing damage.

The arrangement of the preferred embodiment advantageously spaces the joint line, between the edge member and the worktop surface, from the line of intersection of the respective planes containing the upstand-

ing wall and the worktop surface. This disguises the joint.

The joint between the edge member and the upstanding wall is further disguised by the preferred use of an arcuate surface interconnecting the further surface and the upstanding wall.

According to a second aspect of the invention, there is provided a kit of parts for assembling a worktop according to as defined herein, the kit comprising first and second worktop portions secured together to define a worktop surface; a first edge member having a tongue projecting therefrom; and a second edge member having an upstanding wall and a tongue projecting from a tongue supporting surface spaced horizontally from the upstanding wall, the second edge member including a further surface extending from the edge of the tongue supporting surface towards the upstanding wall.

Such a kit may be supplied to a kitchen fitter with instructions on the dimensions of the grooves, to be formed in the edges of the worktop, for receiving the tongues of the edge members. Such instructions may include information on e.g. the sizes of router bits needed to form the grooves.

The components of the kit may advantageously include an arcuate surface interconnecting the further surface and the upstanding wall. The advantage of this feature is as stated above.

A method of assembling a worktop may in accordance with the invention include the steps of:

as necessary, cutting the worktop surface to a desired shape and size;
forming a groove in an edge of the cut worktop surface, the said edge extending at least in a direction perpendicular to the worktop surface;
applying adhesive between a tongue, supported by an edge member, and the said groove, the tongue being an interference fit in the groove; and
inserting the tongue into the groove thereby causing bonding of the edge member to the said edge.

This method allows the manufacture and assembly of worktops according to the invention to be achieved flexibly and economically. The worktops are preferably supplied lacking any grooves, which latter are formed by the kitchen fitter after he has cut the worktop material to the desired size and shape. This permits the fitter to shape the worktop without foregoing the ability subsequently to attach finishing edge members to the worktop. This would not be the case if the worktop portions are provided with pre-existing grooves.

Additional, advantageous features of the invention are set out in the appended, dependent claims.

There now follows a description of preferred embodiments of the invention, by way of example, with reference being made to the accompanying drawings in which:

Figure 1 is a vertically sectioned view through a laminated worktop portion incorporating an edge member according to the invention;

Figure 2 shows the edge member of Figure 1 separately;

Figure 3 is a view, similar to Figure 1, showing an edge member including an upstanding wall secured to a laminated worktop portion;

Figure 4 shows the edge member of Figure 3 separately; and

Figure 5 is a perspective view of an exemplary worktop according to the invention.

Referring to the drawings there is shown a worktop comprising a worktop portion 11 having secured thereto an edge member 12.

Worktop portion 11 is a laminated worktop portion having secured on its upper surface a scratch resistant layer 13 defining a worktop surface.

The forwardly mounted face 15 of worktop portion 11 in the embodiment shown extends vertically and has formed therein an elongate groove 16 extending along its length from one end of worktop portion 11 to the other.

Edge portion 12 is of the same depth as worktop portion 11 and is secured thereon by virtue of tongue 17 that is an interference fit in groove 16. The degree of interference between tongue 16 and groove 17 is such that edge member 12 may be pressed by hand on to the forward face of worktop portion 11.

An adhesive compound is applied between tongue 17 and groove 16 prior to their assembly together. Thus tongue 17 serves to locate edge member 12 accurately on worktop portion 11 while curing of the adhesive compound takes place.

Although worktop portion 11 is shown in Figure 1 as a laminated material, it is equally possible for an edge member such as 12 to be applied in a similar manner to a solid surface worktop portion.

As is shown in Figure 5, it is possible to secure two abutting worktop portions 11, 21 together, by means of known worktop bolts. In Figure 5, worktop portion 11 is a laminated worktop portion as shown in Figure 1; and worktop portion 21 is a solid surface worktop portion.

A common groove 16 extends along the front face of worktop portion 11 and also along the front face of worktop portion 21, to permit securing thereon of a single edge member 12 that traverses the joint between the two worktop portions on the front face of the worktop 10.

Edge member 12, which is conveniently a laminated worktop material made of a natural or formed wood material having a scratch resistant layer 13 secured thereon, is machined at 18 and 19 to provide a smooth, rounded edge to the worktop 10. This may be achieved by postforming the edge member.

Instead of being a wood material, edge member 12 may be formed of solid surface material, with its profile

moulded on manufacture.

As is shown in Figure 5, regardless of the precise construction of edge member 12 its surface may match that of one of the worktop portions 11, 21.

In some embodiments, the worktop portions 11, 21 may themselves have a common surface finish, eg. in order to convey the impression that an entire worktop is manufactured from solid surface material when this is not in fact the case.

The arrangement of Figures 1 and 2 is proposed for the front or overhanging edge of a worktop. An arrangement such as shown in Figures 3 and 4 is proposed for finishing the rear edge of a worktop.

In Figure 3, the worktop portion 11, the scratch resistant material 13, the groove 16 and the tongue 17 are identical to their counterparts in Figures 1 and 2. However, the edge member 22 of Figures 3 and 4 includes an upstanding wall 23. Tongue 17 protrudes from a tongue supporting surface 24 that is horizontally spaced from upstanding wall 23 by a short distance.

At the uppermost edge of tongue supporting surface 24, a further surface 25 extends towards upstanding wall 23. Further surface 25 is radiused as shown in Figures 3 and 4.

The presence of further surface 25 spacing upstanding wall 23 from the edge 24 of worktop portion 11 distinguishes the joint between edge member 22 and wall portion 11. This is because an observer expects to see a joint line between the upstanding wall 23 and the scratch resistant surface 13 at approximately the point 26 indicated in Figure 4, whereas the true joint is spaced therefrom.

Also, the arcuate nature of further surface 25 further neatens the vicinity of the joint between upstanding wall 23 and scratch resistant surface 13.

In practice, worktop portions such as 11 and 21 may be supplied secured together or separated, depending on the requirements of a designer/installer. The edge members 12, 22 may be supplied in pre-formed lengths that may be cut to size by the kitchen installer who would also form the grooves 16 extending along the worktop portions 11, 21 once the latter had been cut to the correct size and shape for the kitchen installation under consideration.

The preferred method of forming the groove 16 is through use of a power router. Instructions supplied with the worktop portions 11, 21 and edge members 12, 22 may if desired specify the size and method of operation of the router bit to produce the desired size and extent of groove 16.

Since member 22 is generally located at the rear of worktop, the reinforcing function of the adhesive compound between the tongue 17 and the groove 16 may be enhanced through use of screws extending eg. as shown by chain lines in Figure 3. This feature particularly assists in bonding the edge member 22 to the worktop portion 11, 21 while the adhesive compound is curing.

The apparatus, method and kit of the invention advantageously provide worktop surfaces that are a mixture of solid surface and laminated materials yet which have an attractive appearance that may emphasise the differences between the materials used, according to the requirements of the designer/installer.

Claims

1. A worktop comprising first and second worktop portions secured to one another, surfaces of the first and second portions defining a worktop surface and the worktop portions including one or more grooves formed in respective edges extending at least in a direction perpendicular to the said worktop surface, the worktop including one or more edge members each having a projecting tongue that is an interference fit in a said groove thereby securing each said edge member on the worktop.
2. A worktop according to Claim 1 wherein the first worktop portion is a solid surface worktop portion, and the second worktop portion is a laminated worktop portion.
3. A worktop according to Claim 2 wherein the first worktop portion includes a sink formed integrally therewith.
4. A worktop according to any preceding claim wherein a said groove is common to respective said perpendicularly extending edges of the first and second worktop portions.
5. A worktop according to any preceding claim wherein the or each said groove extends longitudinally of the downwardly depending edge of the worktop surface.
6. A worktop according to any preceding claim wherein a said edge member has a wall upstanding relative to the worktop surface, the tongue of the said edge member projecting from a tongue supporting surface spaced horizontally from the upstanding wall; and the edge member including a further surface extending from the edge of the tongue supporting surface towards the upstanding wall.
7. A worktop according to Claim 6 including an arcuate surface interconnecting the further surface and the upstanding wall.
8. A worktop according to Claim 6 or Claim 7 wherein the upstanding wall and the further surface are generally perpendicular to one another.
9. A worktop according to any preceding claim

wherein the surfaces of the worktop portions defining the worktop surface are mutually coplanar.

10. A worktop according to any preceding claim wherein the or each said tongue is adhesively secured in its associated groove. 5

11. A kit of parts for assembling a worktop according to any preceding claim, the kit comprising first and second worktop portions secured together to define a worktop surface; a first edge member having a tongue projecting therefrom; and a second edge member having an upstanding wall and a tongue projecting from a tongue supporting surface spaced horizontally from the upstanding wall, the second edge member including a further surface extending from the edge of the tongue supporting surface towards the upstanding wall. 10 15

12. A kit of parts according to Claim 11 including an arcuate surface interconnecting the further surface and the upstanding wall. 20

13. A kit of parts according to Claim 11 or Claim 12 including a power tool bit for forming said one or more grooves. 25

14. A method of assembling a worktop from a kit in particular according to any of Claims 11 to 13, the method comprising the steps of: 30
 - as necessary cutting the worktop surface to a desired shape and size;
 - forming a groove in an edge of the cut worktop surface, the said edge extending at least in a direction perpendicular to the worktop surface; 35
 - applying adhesive to a tongue supported by an edge member, the tongue being an interference fit in the groove;
 - inserting the tongue into the groove thereby causing bonding of the edge member to the said edge. 40

15. A method according to Claim 14 wherein the step of forming the groove is carried out using a power router. 45

16. A method according to Claim 14 or Claim 15 wherein the step of inserting the tongue into the groove includes applying a fastener between the edge member and the said edge. 50

17. A method according to any of Claims 14 to 16 including forming of a plurality of grooves and bonding of a corresponding plurality of edge members. 55

FIG. 1.

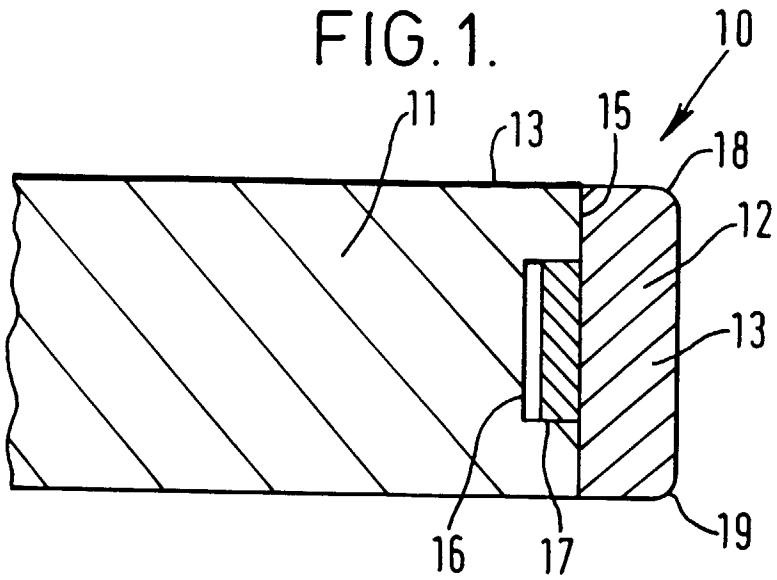


FIG. 2.

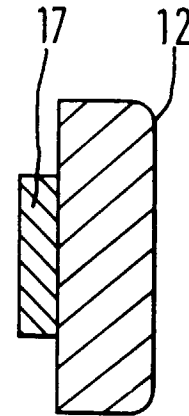


FIG. 3.

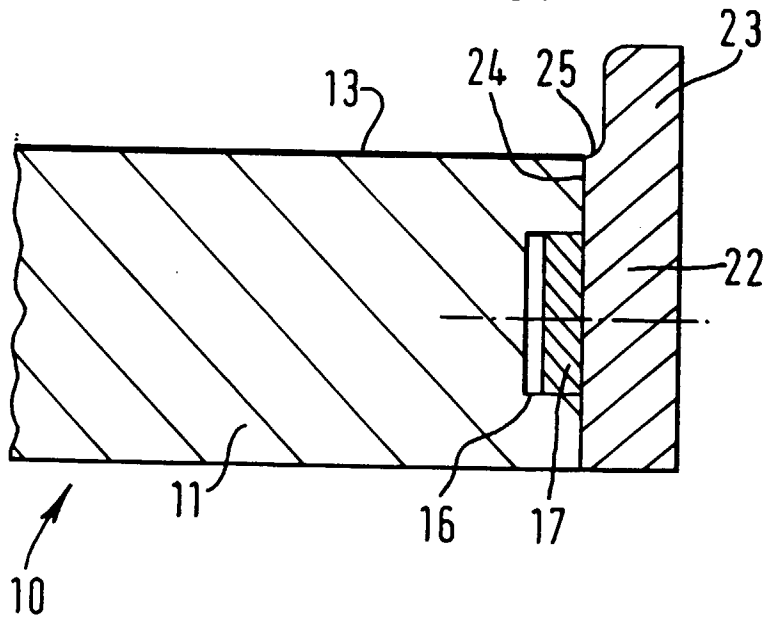
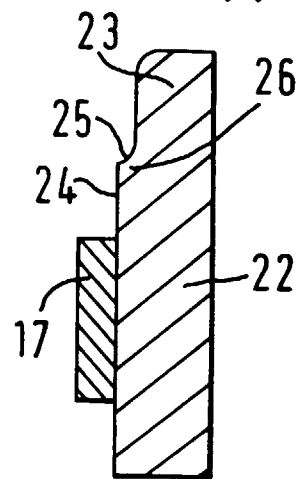


FIG. 4.



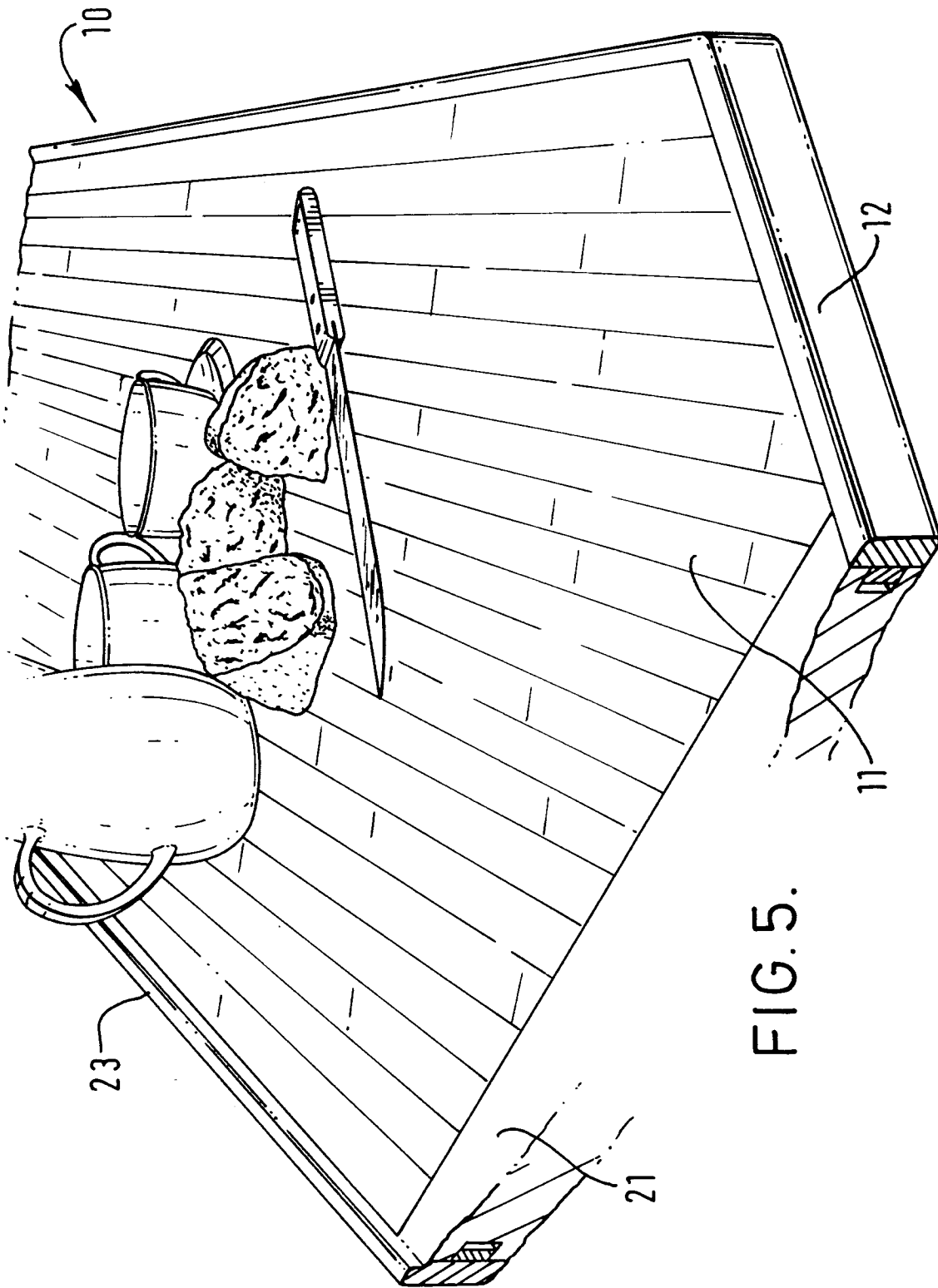


FIG. 5.