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(12) # EUROPEAN PATENT SPECIFICATION

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(54) **Tiling trowel.**

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Description

This invention relates to a tiling trowel.

Tilers use a notched trowel to apply adhesive to a surface. Depending upon the surface and the type of tile or vinyl used, a different depth of adhesive is required. To accommodate this the tiler needs a series of trowels with different notch sizes for the different jobs. A trowel with different notch sizes is known from GB-A-1 318 493. The need for several different sizes is disadvantageous.

It is an aim of the present invention to overcome this disadvantage.

According to the present invention there is provided a trowel for applying material to a surface, the trowel having a plurality of edges and adjustable means associated with said edges for limiting the depth of material which can be applied to a surface, said edges and adjustable means comprising mutually cooperable and slidingly coupled plate-like members notches having a uniform depth provided along two mutually adjacent edges and characterised by means facilitating movement of one of the members diagonally with respect to the other whereby movement of one of said members with respect to the other serves to vary the depth of the notches simultaneously along said mutual adjacent edges whilst maintaining a uniform notch depth along the two mutually adjacent edges.

In one embodiment both members are notched. The members preferably comprise two substantially rectangular plate like members.

For practical purposes it is advantageous if all four edges of the trowel are notched, and advantageously with two or more different sizes of notch available simultaneously for different tasks. Notches may be rectangular, V-shaped or in any other convenient shape, with sizes and shapes combined as required. The notching may be in a part of the trowel fixed with respect to a handle of the trowel and/or in a movable part.

A notched blade construction may be combined with slidably adjustable depth gauges, thereby providing a further means of adjusting the depth of material applied.

The means for limiting the depth of material applied could be adjustable to discrete settings but are preferably adjustable continuously over a range for flexibility of use. The slidable adjusting means are preferably provided with fixing means to prevent slippage once the desired limit has been set for the material depth.

The present invention will now be described further, by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 is an exploded perspective view of a trowel according to one embodiment of the invention; and

Figures 2, 3 and 4 are plan views of the trowel of Figure 1 shown adjusted to produce different depths of adhesive.

A first embodiment of the invention is shown in Figures 1-4. A tiler's trowel for applying adhesive comprises an upper plate 4 having a handle 1, and a lower plate 5 securable thereto. Two adjacent edges 7 of the upper plate are provided with large rectangular notches 17 for laying ceramic floor tiles, and two adjacent edges 6 are provided with smaller rectangular notches 16 suitable for ceramic wall tiles. The lower plate 5 is without notching.

The upper plate 4 is provided with diagonal slots 3. The lower plate 5 has corresponding smaller holes 9. When assembled the holes 9 in the lower plate 5 and the slots 3 in the upper plate 4 are aligned and loosely held by screws 8 and wing nuts 2. Then depth of notch revealed by the plate 4 and 5 can be adjusted by means of sliding the plates relative to one another with the screws 8 able to travel along the slots 3, while remaining substantially stationary relative to the holes 9. When the desired depth of notch is reached the wing nuts 2 are tightened into place to fix the plates.

Depth gauges 10 are securable to the lower plate 5, said depth gauges being provided with slots 11 for taking the fixing means passing through holes 9 in the lower plate. The length of a depth gauge 10 is adjusted by sliding relative to plate 5 with the screws 8 travelling along the slots 11. Wing nuts 2 are tightened to fix the gauges.

Figure 2 shows an extreme position of the adjusting means with fixing means located at the end of the slots 3. The plates are set to show the entirety of notches 17 on the edges 7, suitable for a thick adhesive bed.

Figure 3 shows an intermediate adjustment where the fixing means are in a middle part of the slots 3 so that both notches 17 and 16 are made effectively smaller by plate 5, to provide a shallower depth of adhesive.

Figure 4 shows detachable depth gauges 10 fixed to plate 5 and protruding from the trowel edge to provide a very thick adhesive bed.

Although in this example the upper plate has notched edge it will be understood that the trowel could have straight edges on the upper plate with the lower plate notched along its edge or edges.

In the illustrated embodiment, four slots are provided, but an alternative, especially where the additional depth gauge is dispensed with, is to have two slots positioned on opposite sides of the handle.

Claims

1. A trowel for applying material to a surface, the trowel having a plurality of edges (6; 7) and adjustable means associated with said edges for limiting the depth of material which can be applied to a surface, said edges and adjustable means comprising mutually cooperable and slidingly coupled plate-like members (4, 5), notches (16; 17) having a uniform depth provided along two mutually adjacent edges (6; 7) and characterised by means (3, 2, 8) facilitating movement of one of the members diagonally with respect to the other whereby movement of one of said members with respect to the other serves to vary the depth of the notches simultaneously along said mutual adjacent edges whilst maintaining a uniform notch depth along the two mutually adjacent edges.

2. A trowel as claimed in claim 2 in which both members are notched.

3. A trowel as claimed in claim 1 or 2 in which two or more different sizes of notch are available simultaneously to respective edges.

4. A trowel as claimed in any one of claims 1, 2 or 3 in which one of the members is fixed with respect to a handle (1) of the trowel.

5. A trowel as claimed in any one of claims 1 to 4 in which clamp means (2, 8) is provided for selectably locating the two members with respect to one another to set the maximum depth of material which can be applied.

Patentansprüche

1. Kelle zum Aufbringen von Material auf eine Oberfläche, wobei die Kelle mehrere Kanten (6; 7) und mit den Ecken verbundene einstellbare Mittel zum Begrenzen der Höhe des auf die Oberfläche aufzubringenden Materials besitzt, wobei die Kanten und verstellbaren Mittel zusammenwirkende und verschiebbar verbundene plattenartige Teile (4; 5), Vertiefungen (16; 17) mit entlang zweier benachbarter Kanten (6; 7) vorgesehenen einheitlichen Vertiefungen, aufweisen, gekennzeichnet durch Mittel (3, 2, 8) zur leichteren Bewegung eines der Teile diagonal zum anderen, wobei die Bewegung eines Teils zum anderen dazu dient, die Tiefe der Vertiefungen gleichzeitig an den einander benachbarten Kanten zu variieren, während gleichmäßige Vertiefungen entlang einander benachbarten Kanten vorliegen.

2. Kelle nach Anspruch 1, wobei beide Teile gezahnt sind.

3. Kelle nach Anspruch 1 oder 2, wobei zwei oder mehrere unterschiedliche Zahngrößen gleichzeitig für die entsprechenden Kanten zur Verfügung stehen.

4. Kelle nach irgendeinem der Ansprüche 1, 2 oder 3, wobei eines der Teile gegenüber dem Griff (1) der Kelle befestigt ist.

5. Kelle nach irgendeinem der Ansprüche 1 bis 4, wobei Befestigungsmittel (2, 8) zum selektiven Anbringen der beiden Teile zueinander vorgesehen sind, um die maximale Schichtdicke des aufbringbaren Materials einzustellen.

Revendications

1. Truelle pour appliquer un matériau sur une surface, ladite truelle comportant une pluralité de bords (6,7) et des moyens de réglage associés auxdits bords pour limiter la profondeur du matériau à appliquer, lesdits bords et moyens de réglage comportant des éléments en forme de plaque (4,5) qui coopèrent et coulissent d'une façon réglable l'un par rapport à l'autre, et des entailles (16,17) présentant une profondeur uniforme disposées le long de deux bords adjacents (6,7), caractérisée par des moyens (3,2,8) facilitant le mouvement de l'un des élément diagonalement par rapport à l'autre ; ledit mouvement d'un élément par rapport à l'autre servant à modifier la profondeur des entailles simultanément le long de deux bords adjacents, tout en maintenant une profondeur d'entaille uniforme le long des deux bords adjacents.

2. Truelle selon la revendication 1 dans laquelle les deux éléments sont entaillés.

3. Truelle selon la revendication 1 ou 2 dans laquelle deux tailles au moins d'entailles différentes sont disponibles simultanément sur les bords correspondants.

4. Truelle selon l'une quelconque des revendications 1, 2 ou 3, dans laquelle l'un des éléments est fixé à une poignée (1) de la truelle.

5. Truelle selon l'une quelconque des revendications 1 à 4 dans laquelle les moyens de fixation (2,8) sont prévus pour positionner de façon sélective les deux élements l'un par rapport à l'autre afin de mettre la profondeur maximum de matériau à appliquer.

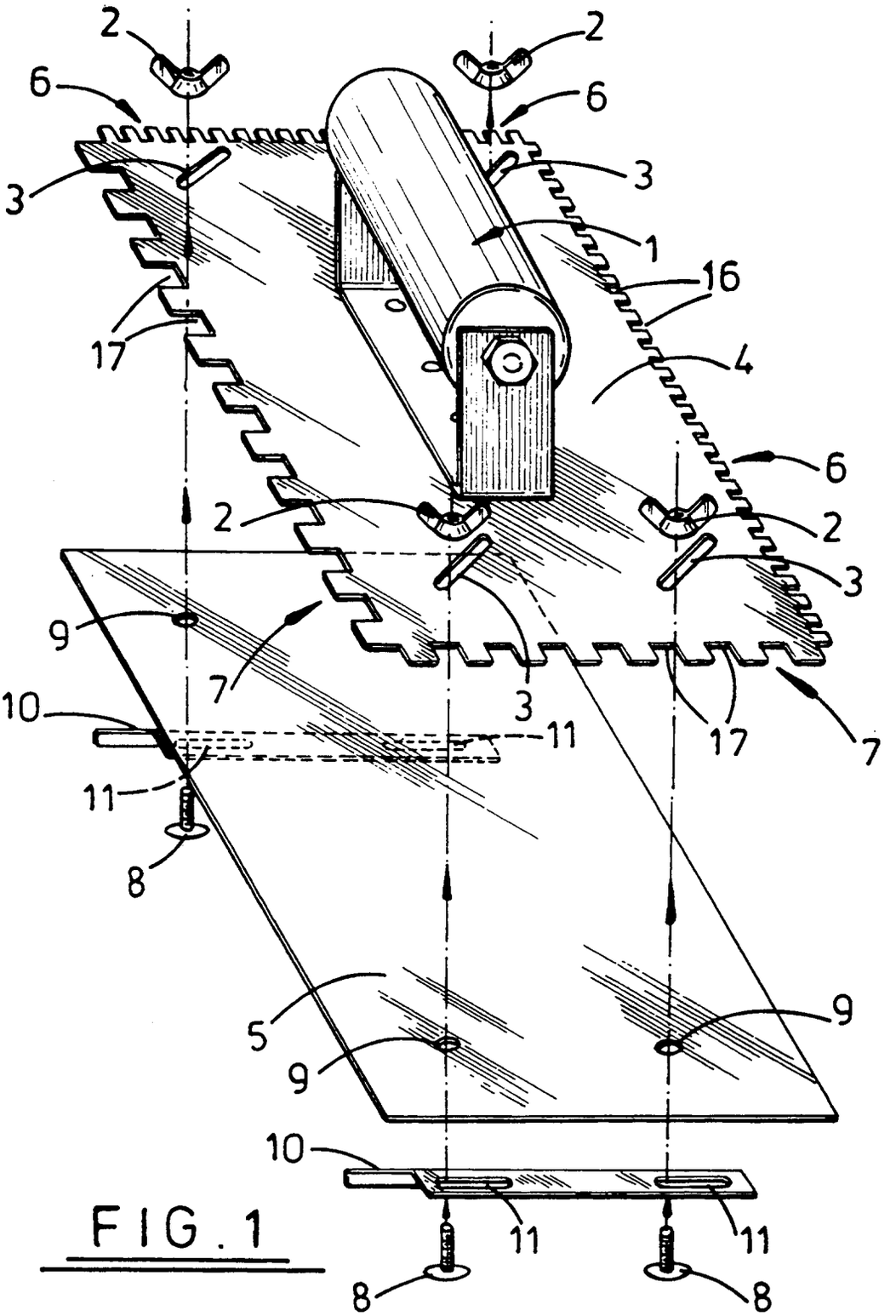

FIG. 1

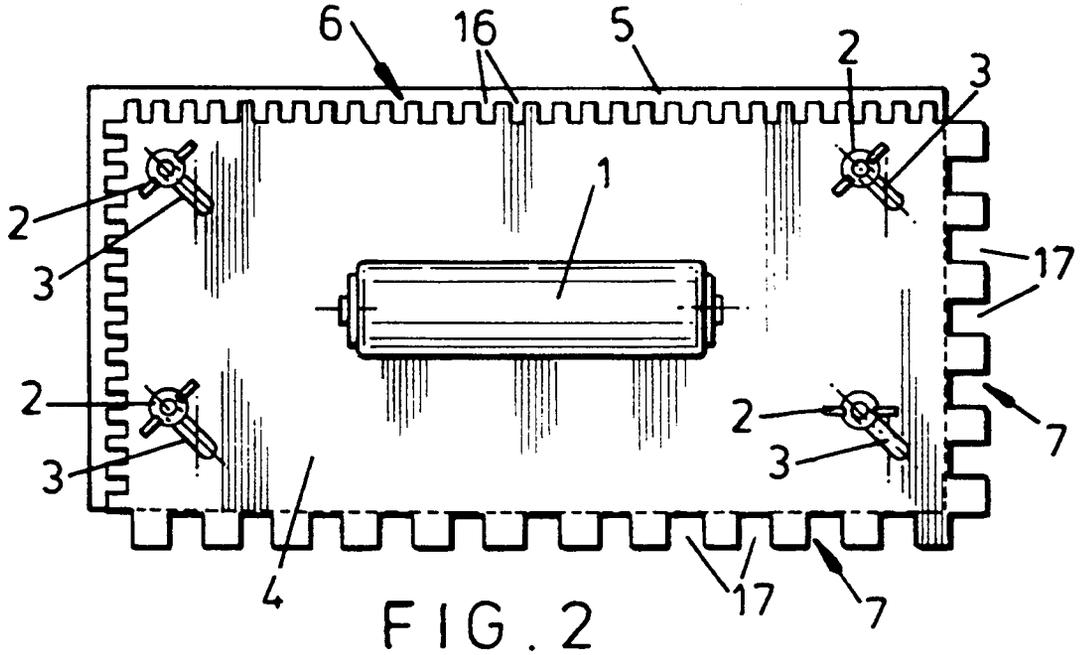

FIG. 2

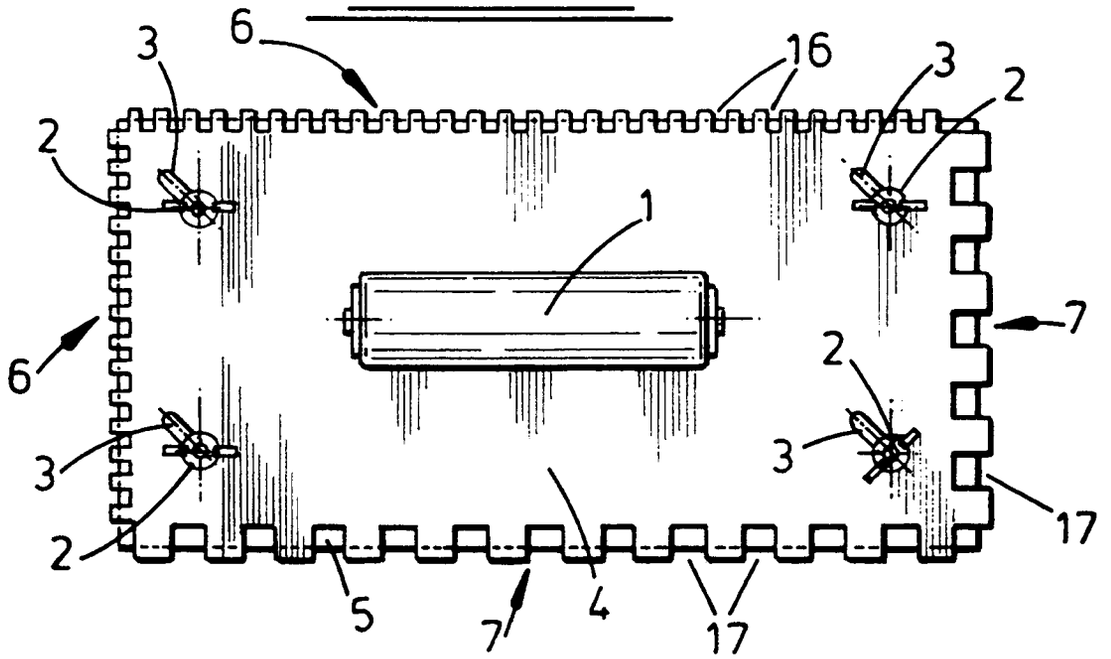

FIG. 3

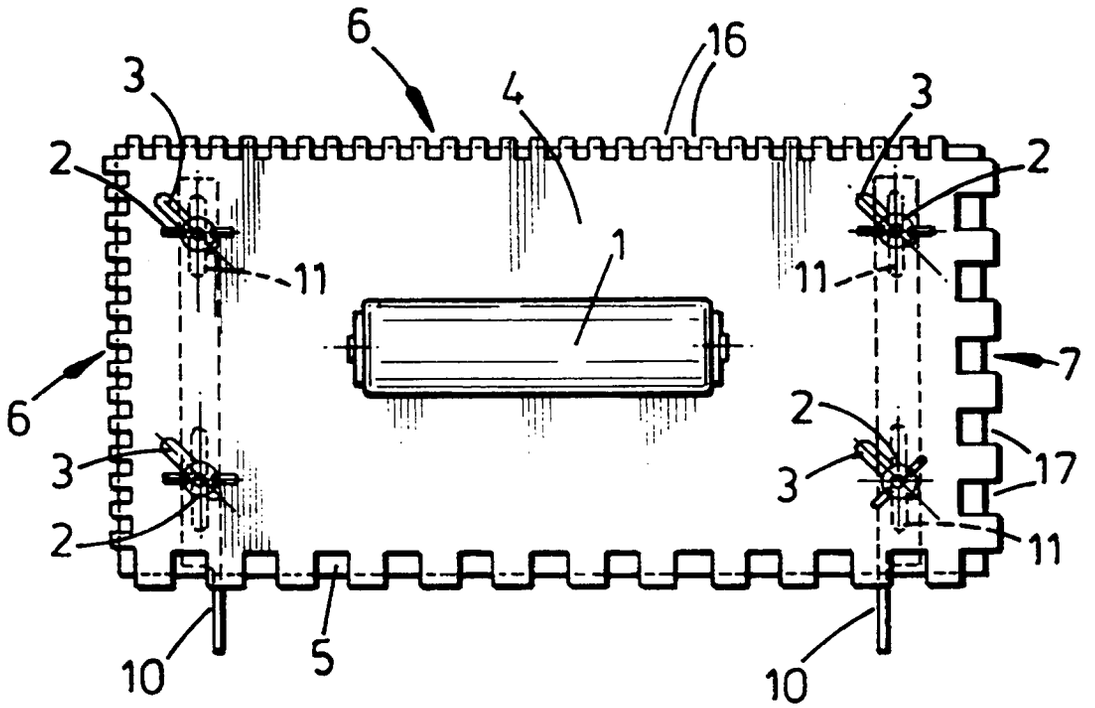

FIG. 4