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(54) **Modular base for tile cutters**

Modulares Unterbau für Fliesenschneidvorrichtungen

Bâti modulaire pour des dispositifs de coupe de carreaux

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(56) References cited:
EP-A- 0 428 070 **EP-A- 0 531 916**
GB-A- 1 481 135

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Description

[0001] The present invention relates to a modular base for tile cutters.

[0002] Bases for tile cutters are constituted by an elongated platform to which an upper median rib is longitudinally rigidly coupled: two posts are fixed to the ends of said rib and support a rail along which a slider is movably mounted; a wheel for cutting into the surface of the tile and a shoe for breaking the tile by pressing it (simultaneously on the two sides of the cutting line cut previously with the wheel) against the rib of the base are installed on said slider.

[0003] Known bases, which must be rather strong and relatively non-deformable, are usually manufactured by casting or by pressing metallic material: this entails the execution of a relatively large number of molds (practically one for each base size to be produced) and a considerable use of material which entails hardly negligible costs and weights.

[0004] EP-A-0 428 070 discloses a modular base as defined in the preamble of independent claim 1.

[0005] The principal aim of the present invention is to obviate the above drawbacks of known devices; in other words, to provide a modular base for tile cutters which is extremely light and strong and does not entail the manufacture of a mold for each size.

[0006] Within the scope of this aim, an object of the present invention is to achieve the above aim with a structure that is simple, relatively easy to execute in practice, safe in use, effective in operation and relatively cheap.

[0007] The present invention provides a modular base for tile cutters, which is characterized in that it comprises an extruded hollow profiled element which is longitudinally provided with a median rib on one of its faces and has, along its lateral edges, interlocking joints for the coupling of optional lateral extensions.

[0008] The characteristics and advantages of the invention will become apparent and evident from the following detailed description of a preferred but not exclusive embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a partially sectional front view of a modular base for tile cutters according to the invention;
figure 2 is a plan view of an end of the base of figure 1;

figure 3 shows two views, in orthogonal projection, of a front closing element of the base.

[0009] With particular reference to the above figures, the reference numeral 1 generally designates a modular base for tile cutters according to the invention.

[0010] The base 1 is constituted by an extruded hollow profiled element 2 made of a material such as aluminum alloys, in which there are an upper thick portion

3a and a lower thick portion 3b which are mutually joined by thin spacers 4, 5 and by stiffening elements 6, 7a, 7b.

[0011] The profiled element is longitudinally provided with a median contrast rib 8 on its upper face and has, along the lateral edges of the stiffening elements 7, respective interlocking joints 9 for coupling optional lateral extensions 10: the rib 8 is longitudinally crossed by a triangular cavity 8a.

[0012] Conveniently, the interlocking joints 9 are of the dovetail type, advantageously of the mortise kind.

[0013] The profiled element 2 has longitudinal supporting ribs 11 at its center and sides in a downward region.

[0014] The extensions 10 are also constituted by an upper thick portion 12a and by a lower thick portion 12b which are joined at their sides by stiffening elements 13 and 14; the stiffening element 13 has a longitudinal supporting rib 15 in a downward region, whereas the stiffening element 14 forms, on one side, a longitudinal dovetail tenon 16 suitable to couple to one of the interlocking joints 9: conveniently, the ends of the extensions are cut at 45 degrees so that the base, as a whole, is shaped like an elongated rectangle with rounded corners.

[0015] The ends of the profiled elements 2 and 10 are closed by two closure elements 17 which can be fixed in a snap-together manner and are made of plastic material: the closure elements 17 have an elongated rod 18 which is centrally provided with a contoured ridge 19 suitable to rest against the rib 8 (the ridge 19 is centrally provided with a tooth that can interlock in the cavity 8a); the rod 18 has, at its sides, two extensions 20 which are inclined at 45 degrees and suitable to rest against the ends of the extensions 10, which are cut at 45 degrees.

[0016] The rod 18 and the two extensions 20 have multiple pairs of lugs 21 which are suitable to fit against the upper and lower thick portions of the profiled element 2 and of the extensions.

[0017] A certain number of pins 22 of the expansion type, suitable to deform when a screw is tightened, is distributed on the closing elements 17; said pins 22 are meant to fit in corresponding seats 23 formed by extrusion in the profiled elements 2 and 10; advantageously, the profiled element 2 has a central seat 23 and two lateral seats, and the profiled elements 10 have one lateral seat each.

[0018] Two supports 24 are mounted at the two ends of the rib 8 and are manufactured by molding a material such as plastics for the rail along which the slider slides: the supports 24 comprise a footing 25 below which there is a fork 26 that lies astride the rib 8 and two shoes 27a, 27b which are crossed by respective holes 28 for screws for fixing to the profiled element 2: in an upward region, the supports 24 form the two arms 29 of a fork with holes 30 for screws for fixing the rail of the slider.

[0019] At least two lateral secondary surfaces 31 are mounted above the base and are covered, in an upward region, by an optional mat 32 made of a material such as rubber: the secondary surfaces are rectangular, are arranged on either side of the rib 8, and have seats 33 for the heads 34 of modular feet 35 for connection to the base: the feet 35 are made of two parts, one of which is a lower stub 36 the expanded head 37 whereof is suitable to pass through a wide hole in the lower thick portion 3b and rest against the edges of a corresponding narrow hole 38 of the upper thick portion 3a: the other part of the feet is constituted by a pin 39 which has a head 34 and is crossed by a central seat 40 for a screw and is provided, in a downward region, with a portion which is cut into sectors, is shaped like a truncated cone, and is suitable to expand when the screw penetrates and to fix itself to the stub 36; in order to prevent rotation of the pin during the tightening of the screw, at the top of the stub there are two radial notches 42, and corresponding ones are provided in the secondary surface; related radial wings of the pin 39 fit in said notches, and respective helical compression springs 43 are centered on the feet 35 and press with their ends against the secondary surface and against the profiled element 2 and keep the secondary surface raised at a level that lies slightly above the rib 8: it is noted that the feet according to the invention accelerate and facilitate the operations for the assembly and optional disassembly of the secondary surfaces.

[0020] In order to vary the level of the top of the rib 8 it is possible to provide the rib 8 so that it can be removed, with an interlocking joint, for example of the dovetail type, at its base in order to couple to a corresponding longitudinal dovetail slot of the profiled element 2.

[0021] It has thus been observed that the invention achieves the intended aim and object.

[0022] The invention thus conceived is susceptible to numerous modifications and variations, all of which are within the scope of the appended claims.

[0023] All the details may furthermore be replaced with other technically equivalent ones.

[0024] In practice, the materials employed, as well as the shapes and dimensions, may be any according to the requirements without thereby abandoning the scope of the protection of the appended claims.

[0025] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. A modular base (1) for tile cutters, comprising an extruded hollow profiled element (2) which is longi-

tudinally provided with a median rib (8) on one of its faces and has, along its lateral edges, connection means for the coupling of lateral extensions (10), characterized in that said connection means comprise interlocking joints (9) for the coupling of optional lateral extensions (10), said interlocking joints (9) extending along the full length of said lateral edges of the modular base.

2. The base according to claim 1, characterized in that said interlocking joints (9) are of the dovetail type.
3. The base according to claim 2, characterized in that said interlocking joints (9) are of the mortise kind.
4. The base according to claim 1, characterized in that said profiled element (2) has, in a downward region, longitudinal resting ridges (11) at its center and sides.
5. The base according to claim 1, characterized in that the ends of said profiled elements are closed by respective snap-on closure elements (17) which can be rigidly coupled to the profiled elements by means of screws which couple in respective seats (23) formed by extrusion.
6. The base according to claim 1, characterized in that at least two lateral oscillating secondary surfaces (31) are mounted in an upward region on said base, said secondary surfaces being provided with modular feet (35) for connection to said base, helical compression springs being centered on said feet.
7. The base according to claim 1, characterized in that said median rib (8) is removable and has, in a downward region, an interlocking coupling for a corresponding longitudinal slot of said profiled element (2).
8. The base according to claim 7, characterized in that the interlocking coupling of said median rib is of the dovetail type.

Patentansprüche

1. Modularer Unterbau für Fliesenschneidvorrichtungen, der ein extrudiertes, hohles, profiliertes Element (2) aufweist, welches in Längsrichtung mit einer mittigen Rippe (8) auf einer seiner Seiten versehen ist und welcher entlang seiner seitlichen Ränder Verbindungsmittel zum Ankuppeln seitlicher Verlängerungen (10) aufweist, dadurch gekennzeichnet, daß die genannten Verbindungsmittel Verriegelungselemente (9) zum Ankuppeln von optionalen seitlichen Verlängerungen (10) aufweist, wobei sich die genannten Verriegelungselemente (9) über die

gesamte Länge der seitlichen Ränder der modularen Basis erstrecken.

2. Basis nach Anspruch 1,
dadurch gekennzeichnet,
daß die Verriegelungselemente (9) schwalbenschwanzartig sind. 5
3. Basis nach Anspruch 2,
dadurch gekennzeichnet,
daß die genannten Verriegelungselemente (9) nutenartig ausgebildet sind. 10
4. Basis nach Anspruch 1,
dadurch gekennzeichnet,
daß das profilierte Element (2) in seinem unteren Bereich Rippen (11) in seinem Zentrum und an den Seiten aufweist. 15
5. Basis nach Anspruch 1,
dadurch gekennzeichnet,
daß die Enden der genannten profilierten Elemente von entsprechenden, einschnappbaren Verschlusselementen (17) geschlossen werden, die fest an den profilierten Elementen mittels Schrauben gekoppelt werden können, die in entsprechende Sitze (23) einkoppeln, die bei der Extrusion gebildet wurden. 20 25
6. Basis nach Anspruch 1,
dadurch gekennzeichnet,
daß wenigstens zwei seitliche schwingende Sekundärflächen (31) in der oberen Region der genannten Basis montiert sind, wobei die sekundären Oberflächen mit modularen Füßen (35) ausgerüstet sind zur Verbindung mit der genannten Basis, wobei spiralförmige Druckfedern auf den Füßen zentriert sind. 30 35
7. Basis nach Anspruch 1,
dadurch gekennzeichnet,
daß die mittige Rippe (8) abnehmbar ist und in ihrer nach unten weisenden Region eine Verriegelungskupplung für einen entsprechenden Längsschlitz im genannten profilierten Element (2) aufweist. 40 45
8. Basis nach Anspruch 7,
dadurch gekennzeichnet,
daß die Verriegelungskupplung der mittleren Rippe schwalbenschwanzartig ausgebildet ist. 50

cordement pour coupler des prolongements latéraux (10), caractérisé en ce que lesdits moyens de raccordement comprennent des joints de blocage mutuel (9) pour coupler les prolongements latéraux facultatifs (10), lesdits joints de blocage mutuel (9) s'étendant sur toute la longueur desdits bords latéraux du bâti modulaire.

2. Bâti selon la revendication 1, caractérisé en ce que lesdits joints de blocage mutuel (9) sont du type queue d'aronde.
3. Bâti selon la revendication 2, caractérisé en ce que lesdits joints de blocage mutuel (9) sont du type mortaise.
4. Bâti selon la revendication 1, caractérisé en ce que ledit élément profilé (2) présente, dans une région vers le bas, des arêtes d'appui longitudinales (11) en son centre et sur ses côtés.
5. Bâti selon la revendication 1, caractérisé en ce que les extrémités desdits éléments profilés sont fermés par des éléments de fermeture par encliquetage respectifs (17) qui peuvent être couplés de manière rigide aux éléments profilés à l'aide de vis qui viennent en prise dans des logements respectifs (23) formés par extrusion.
6. Bâti selon la revendication 1, caractérisé en ce qu'au moins deux surfaces secondaires pivotantes latérales (31) sont montées dans une région vers le haut sur ledit bâti, lesdites surfaces secondaires étant munies de pieds modulaires (35) destinés à être raccordés audit bâti, des ressorts de pression hélicoïdaux étant centrés sur lesdits pieds.
7. Bâti selon la revendication 1, caractérisé en ce que ladite nervure médiane (8) est amovible et présente, dans une région vers le bas, un dispositif de couplage par blocage mutuel pour une fente longitudinale correspondante dudit élément profilé (2).
8. Bâti selon la revendication 7, caractérisé en ce que le dispositif de couplage par blocage mutuel de ladite nervure médiane est du type queue d'aronde.

Revendications

1. Bâti modulaire (1) pour des dispositifs de coupe de carreaux, comprenant un élément profilé creux extrudé (2) qui est muni d'une nervure médiane (8) longitudinalement sur une de ses faces et présente, le long de ses bords latéraux, des moyens de rac- 55

FIG.1

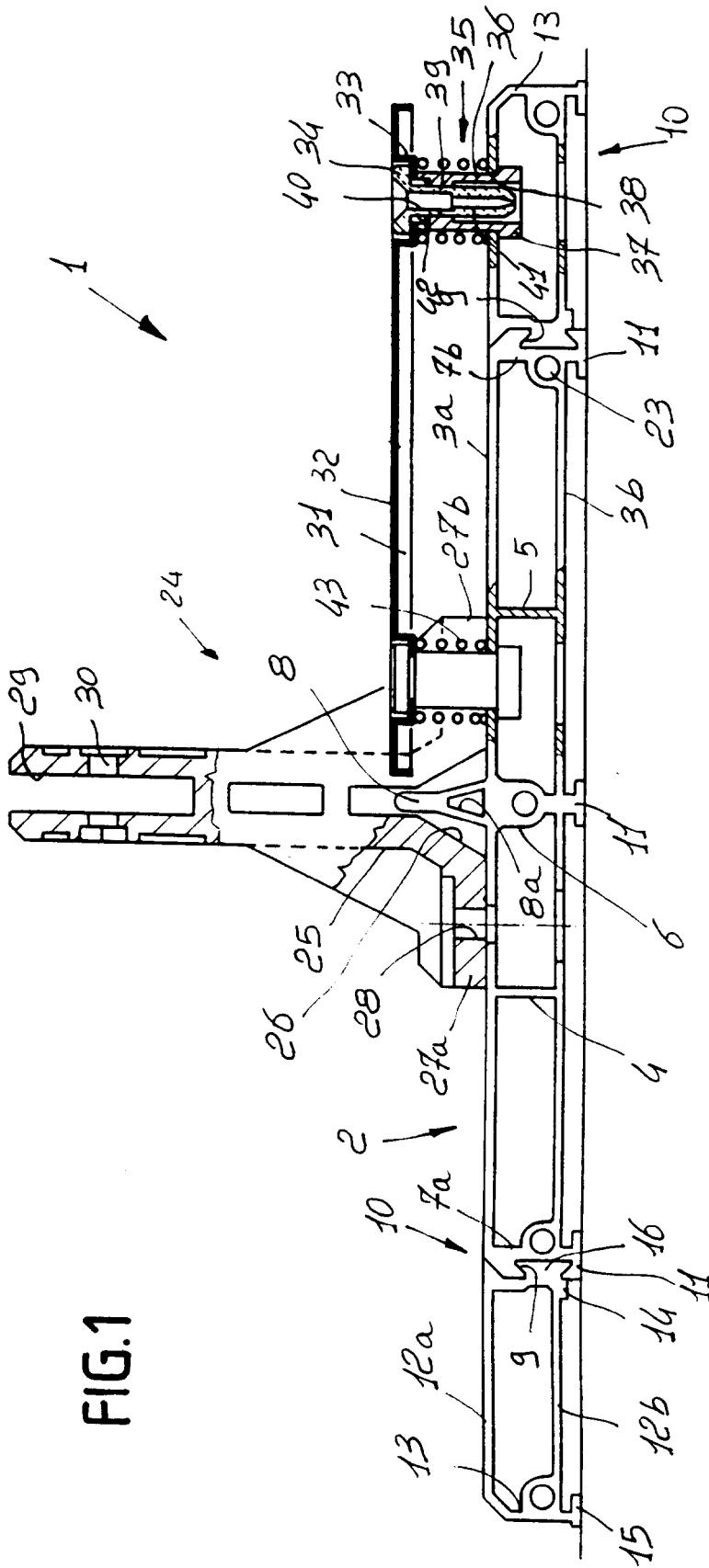


FIG.3

