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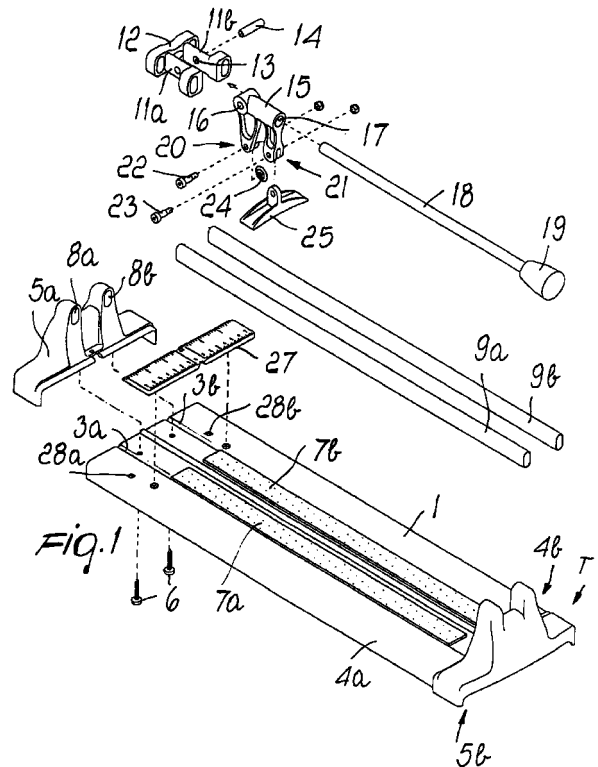
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(54) **Board with sliding lever arm for manually scoring and cutting tiles**

(57) A board (T) with sliding lever arm for manually scoring and cutting tiles, having a base (1) constituted by a flat element in which a bending process forms at the centerline and in an upward region a raised rib (2) and, laterally thereto, two lower stiffening ribs (3a, 3b), and a guide constituted by a pair of co-planar tubular profiled elements (9a, 9b), each of which has a cross-section substantially shaped like two semicircles connected by two substantially vertical straight parallel portions.



EP 1 072 371 A2

Description

[0001] The present invention relates to a board with sliding lever arm for manually scoring and cutting tiles.

[0002] Conventional boards with a sliding lever arm for manually scoring and cutting tiles consist of an elongated base board on which the tile to be cut is arranged and above which a longitudinal guide is supported for the sliding of an upper sliding block; a support for a tile scoring wheel, or for a transverse breaker for splitting the tile along the scoring line, is pivoted to the sliding block about a substantially horizontal axis and lies on a plane at right angles to the surface of the board; the end of a lever arm is associated with the support, and its actuation allows to score the tile at a first pass; at a later time, the lever arm is actuated after moving the transverse breaker to an active configuration and the tile is split at the previously formed scoring line.

[0003] Boards with a conventional lever arm have shortcomings in relation to the considerable weight or limited strength of the board and of the guide and to the number of components, which is usually rather large thus demanding labor-intensive and expensive assembly operations.

[0004] The aim of the present invention is to obviate the above drawbacks of conventional devices, by providing a board for manually scoring and cutting tiles, which has a light and sturdy structure.

[0005] Within the scope of this aim, an object of the present invention is to achieve the above aim with a structure which is simple, relatively easy to provide in practice, safe in use, effective in operation and having a low cost.

[0006] This and other objects are achieved by the present board with sliding lever arm for manually scoring and cutting tiles, characterized in that the board has a base constituted by a flat element in which a bending process forms at the centerline and in an upward region a raised rib and, laterally thereto, two lower stiffening ribs, and having a guide constituted by a pair of co-planar tubular profiled elements, each of which has a cross-section substantially shaped like two semicircles which are connected by two substantially vertical straight parallel portions.

[0007] Further features of the invention will become better apparent from the detailed description of a preferred but not exclusive embodiment of a board with sliding lever arm for manually scoring and cutting tiles according to the invention, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is an exploded perspective view of a board according to the invention;

Figure 2 is an exploded perspective view of a movable angle gauge for the board of Figure 1.

[0008] With reference to the above figures, the ref-

erence letter T generally designates a board with a sliding lever arm for manually scoring and cutting tiles according to the invention.

[0009] The base 1 of the board is constituted by a flat rectangular element which is advantageously made of metal plate and in which a bending process forms, at the centerline and in an upward region, a raised rib 2 and, laterally thereto, two lower stiffening ribs 3a, 3b; the base 1 is laterally provided with two stiffening edges 4a, 4b which are folded downward at 90°.

[0010] Two opposite supports 5a, 5b are interlocked frontally and in an upward region at the two ends of the base 1 and are advantageously formed by molding materials of the type known by the trade-name Nylon; the supports 5a, 5b have lower regions which are shaped so as to replicate the profile of the base 1 and are fixed to the base by means of respective pairs of screws 6.

[0011] Two strips 7a, 7b made of a material such as rubber are fixed to the base 1 on either side of the rib 2.

[0012] The supports 5a, 5b each have, in an upward region, two seats 8a, 8b for the respective ends of a pair of tubular profiled elements 9a, 9b which constitute a sliding guide: each one of the two co-planar tubular profiled elements has substantially a cross-section formed by two semicircles connected by two substantially vertical straight parallel portions.

[0013] A sliding block 10 is mounted along the pair of tubular profiled elements 9a, 9b so that it can slide longitudinally and is constituted by two U-shaped elements 11a, 11b which are connected by a cross-member 12. The U-shaped elements are crossed by respective holes 13 for a pivot 14 for pivoting about an axis which lies transversely to the guides of a support 15: it is noted that differently from the prior art, the pivot 14 has not to be rigidly coupled to the U-shaped elements, since its extraction is prevented by the tubular guides 9a, 9b.

[0014] The support 15 has, in an upward region, a transverse hole 16 for the pivot 14 and a longitudinal hole 17 for coupling the end of a lever arm 18 for actuation which ends with a knob 19: the lever arm 18 is rigidly coupled to the hole 17 and to the knob 19 by simple force-fit interference.

[0015] In a downward region, the support 15 has two fork-shaped lugs 20, 21 which are crossed by respective holes for two screws 22, 23 for the articulation of, respectively, a wheel 24 for scoring the tile and a transverse breaker 25 which oscillates (between a raised noninterference configuration and a lowered active position) for splitting the tile along the scoring line.

[0016] In an upward region, and proximate to one of the ends of the base 1, it is possible to fix, by means of pins, a gauge 27 which is provided, in a downward region, with a longitudinal slot for centering on the rib 2.

[0017] Two square holes 28a, 28b are formed between the gauge 27 and the support 5a in the base 1

in order to fix a pivot 29 with a wing nut 30 and washers 31 of an angle gauge 32 which comprises a measurement arm 33, with numeric markings and a longitudinal slot 33a for sliding, and an arm 34, which is articulated by means of a wing nut and screw assembly 35 and in which with the second half 34 is bent onto a lower plane for resting on the tile.

[0018] It has thus been observed that the invention achieves the intended aim and objects, and in particular that a light and sturdy structure has been provided with the method for producing the base and with the particular cross-section of the guides, and that it has a smaller number of components allowing quick and elementary assembly operations.

[0019] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0020] All the details may furthermore be replaced with other technically equivalent ones.

[0021] In practice, the materials used, as well as the shapes and dimensions, may be any according to requirements without thereby abandoning the scope of the protection of the appended claims.

[0022] The disclosures in Italian Utility Model Application No. BO99U000091 from which this application claims priority are incorporated herein by reference.

[0023] 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 interpretation of each element identified by way of example by such reference signs.

Claims

1. A board with sliding lever arm for manually scoring and cutting tiles, characterized in that it comprises a base constituted by a flat element in which a bending process forms at the centerline and in an upward region a raised rib and, laterally thereto, two lower stiffening ribs, and having a guide constituted by a pair of co-planar tubular profiled elements, each of which has a cross-section which is substantially shaped like two semicircles which are connected by two substantially vertical straight parallel portions.

2. The board according to claim 1, characterized in that said flat element is laterally provided with two stiffening edges which are folded downward at 90°.

3. The board according to claim 1, characterized in that two opposite supports for the respective ends of said pair of tubular profiled elements are frontally interlocked at the ends of said flat element.

4. The board according to claim 1, characterized in

that a sliding block is mounted so that it can slide longitudinally along said pair of tubular profiled elements, a support for a tile scoring wheel and for an oscillating transverse breaker for splitting the tile along the scoring line being pivoted to said sliding block on an axis which lies transversely to the guides, the end of said lever arm being rigidly coupled to said support.

5. The board according to claim 4, characterized in that said sliding block is constituted by two U-shaped elements connected by a cross-member, and in that said U-shaped elements are crossed by respective holes for a pivot for pivoting about an axis which lies transversely to the guides of said support, said tubular elements preventing the escape of said pivot.

