(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 518 642 A2

# (12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
**30.03.2005 Bulletin 2005/13**

(51) Int Cl.[7]: **B24B 9/06**

(21) Application number: **04077146.1**

(22) Date of filing: **02.08.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
**AL HR LT LV MK**

(30) Priority: **25.09.2003 IT MI20030261**

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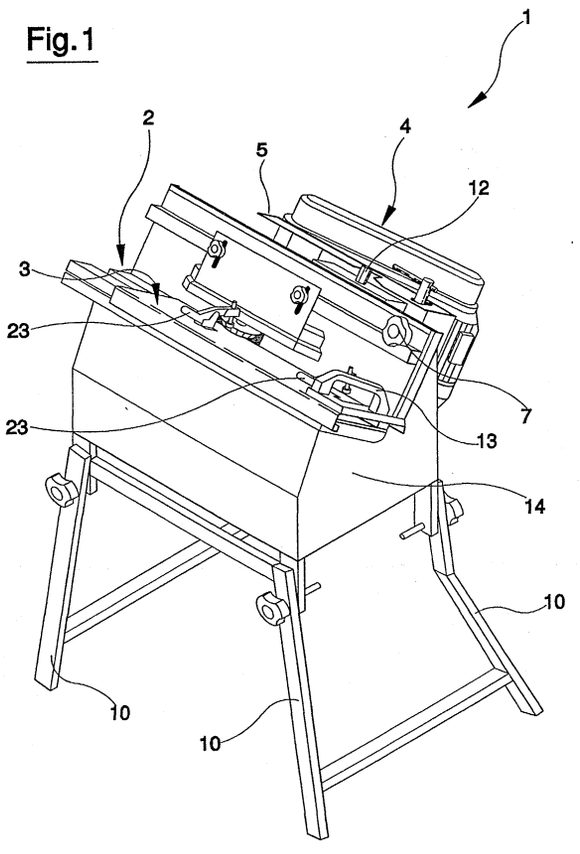
## (54) A Machine for shaping edges of tiles or slabs

(57) The machine comprises: a frame (1) provide with legs for resting on the ground; a work plane (2) which is inclined with respect to the vertical, along which a workpiece slide (3) is mobile and moves the workpiece in an in-feeding direction; a motor head (4) which bears a tool-bearing chuck. The motor head (4) is supported on a motor-head slide (5) to which it is hinged by means of a pivot (6) having an axis which is perpendicular to the work plane (2). The motor-head slide (5) is coupled to the frame (1) and can be adjusted with respect to the frame (1) in a perpendicular direction to the work plane (2).

Fig.1

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## Description

**[0001]** Specifically, though not exclusively, the invention is usefully applicable in edging pieces of tiles or slabs, previously cut from ceramic tiles or slabs destined, for example, to be used as skirting board. The edging is usually a rounded bevelling.

**[0002]** In the prior art the fashioning of special elements such as skirting boards, shaping an edge thereof, for example rounding off, is done in the factory using fixed machine tools and the final user who is laying the tiles receives these ready-made pieces to order.

**[0003]** Sometimes, however, the measurements for the skirting board which are ordered by the user are not available, or indeed there may be a problem in obtaining tones which exactly coincide with the tones of the flooring.

**[0004]** These are not small problems and are very difficult to overcome.

**[0005]** The main aim of the present invention is to obviate the limitations and drawbacks in the prior art by making available, directly in the work-site or the laying site, a machine for shaping edges of tiles or slabs and/or special elements made from the former.

**[0006]** Advantages of the invention are its constructional and functional simplicity.

**[0007]** These aims and advantages and more besides are all achieved by the present invention, as it is characterised in the appended claims.

**[0008]** Further characteristics and advantages of the present invention will better emerge from the detailed description that follows of the invention, illustrated purely by way of a non-limiting example in the accompanying figures of the drawings, in which:

figure 1 is a schematic perspective view of the invention;
figure 2 is part of a schematic section performed according to plane $\alpha$;
figure 3 is part of a schematic view made according to a perpendicular direction to the work plane 2.

**[0009]** With reference to the figures of the drawings, 1 denotes in its entirety a frame having legs 10 for resting on the ground. A work plane 2 is supported on the frame 1, which work plane 2 is inclined with respect to the vertical, along which a workpiece slide 3 moves; the workpiece slide 3 feeds the workpiece to the machine. In particular, in the preferred embodiment, the frame 1 and the legs 10 are predisposed so that when the legs 10 rest on a horizontal surface, the angle of inclination P of the work plane 2 with respect to the vertical is of about 60° and the direction of motion of the workpiece slide 3 is horizontal.

**[0010]** The workpiece slide 3 is provided with a handle 13 for translating in a horizontal direction and is provided with a blocking organ i.e. a lever 23 which blocks the workpiece 11 to the slide or the table; in the embodiment the workpiece 11 is a special element, previously cut away from a tile or slab.

**[0011]** A motor head 4 is constrained on a portion of the frame 1 arranged at 90° to the work plane 2. The motor head 4 bears a tool-bearing chuck as well as the motor itself, and the transmission for the motor.

**[0012]** In particular, the motor head 4 is supported on a motor slide 5, to which it is hinged by a pivot 6 having an axis which is perpendicular to the work plane 2. The motor slide 5 is coupled to the frame 1 and can be translated and adjusted regarding its position with the frame 1 in a perpendicular direction to the work plane 2.

**[0013]** The adjustment of the position of the motor slide 5 is made possible by the predisposing of a screw device 12 of known type, which is easily manoeuvrable from outside and enables achievement of a precise positioning along the direction of the tool-bearing chuck on the motor head 4, and therefore a precise positioning also of the tool in the chuck.

**[0014]** In particular, the tool-bearing chuck is made to bear a cutting tool which in the preferred embodiment is a grinder 9.

**[0015]** To adjust the position of the tool and therefore the grinder 9 in a perpendicular direction to the movement direction of the workpiece slide 3, the whole motor head 4 is mobile in rotation about the pivot 6, so that an angular position thereof can be adjusted.

**[0016]** The position is determined by a screw 7, operating between the frame 1 and the motor head 4, which screw 7 acts against elastic means 8, also operating between the frame 1 and the motor head 4.

**[0017]** The screw 7 is used to adjust the position of the grinder 9 in a perpendicular direction to the workpiece slide 3 motion direction, and a parallel direction to the work plane 2. Adjustment of the position of the grinder 9 in a parallel direction to the rotation axis of the grinder 9 and perpendicular to the workpiece slide 3 and the work plane 2 is done by adjusting the motor slide 5. The grinder 9 is powered in the cutting direction, while the in-feeding of the workpiece 11 is done manually using the handle 13, with the workpiece 11 blocked on the workpiece slide 3.

**[0018]** The inclination to the vertical of the work plane 2 means that the work can be done very simply, as the force of gravity is used to achieve a correct reference orientation of the workpiece 11 with respect to the grinder 9.

**[0019]** The inclination further enables the cutting liquid (water) to be easily collected, as it falls by gravity into the underlying tray 14 fixed to the frame 1.

## Claims

1. A machine for shaping edges of tiles or slabs, **characterised in that** it comprises: a frame (1) provided with legs (10) for resting on the ground; a work plane (2), inclined with respect to a vertical, along which

work plane (2) a workpiece slide (3) is mobile, which workpiece slide (3) performs an in-feeding motion of a workpiece; a motor head (4) which bears a tool-bearing chuck; the motor head (4) being supported on a motor-head slide (5) to which it is hinged by means of a pivot (6) having an axis which is perpendicular to the work plane (2); the motor-head slide (5) being coupled to the frame (1) and being adjustable thereto in a perpendicular direction to the work plane (2).

2. The machine of claim 1, **characterised in that** the workpiece slide (3) is mobile along a horizontal or nearly-horizontal direction.

3. The machine of claim 2, **characterised in that** it comprises a screw (7) operating between the frame (1) and the motor head (4), which screw (7) contrasts with elastic means (8), also operating between the frame (1) and the motor head (4) in order to perform, by means of an adjustment of an angular position of the motor head (4) about the pivot (6), an adjustment of a distance of the tool-bearing chuck from the workpiece slide (3).

4. The machine of claim 3, **characterised in that** the tool-bearing chuck supports a circular cutting tool.

5. The machine of claim 4, **characterised in that** the circular cutting tool is a grinder (9).

6. The machine of claim 1, **characterised in that** the workpiece slide (3) is provided with a handle (13) for translating the workpiece slide (3) in an in-feeding direction.

Fig.1

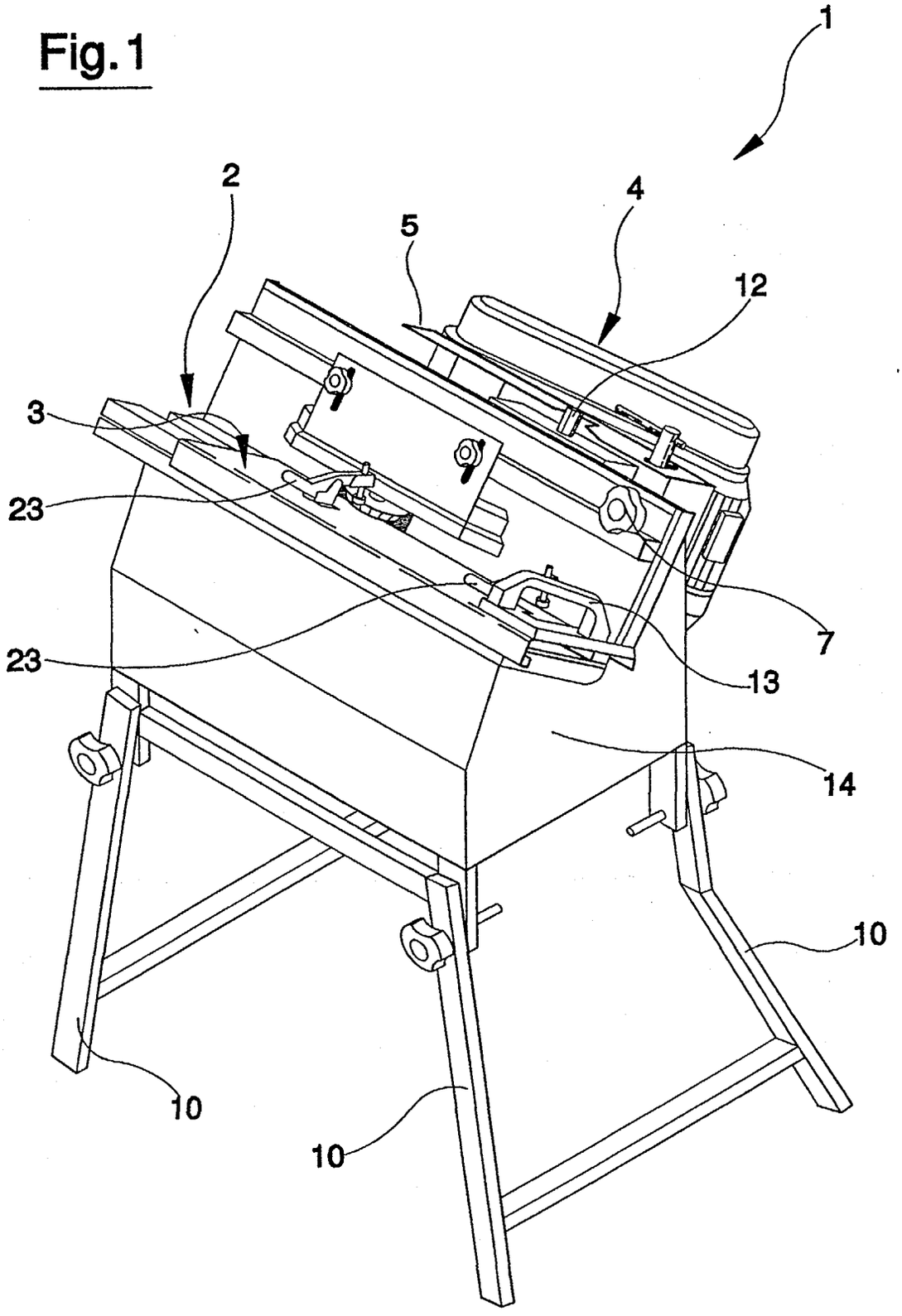
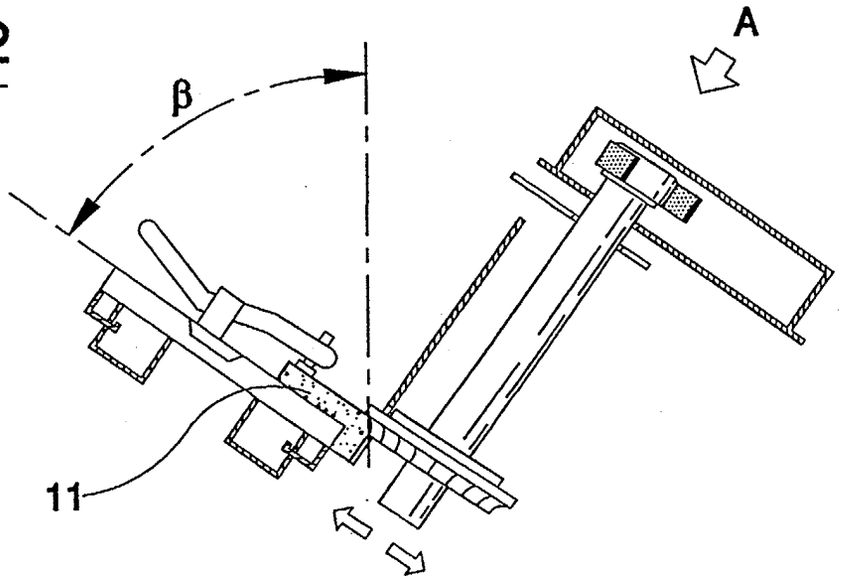


Fig. 2



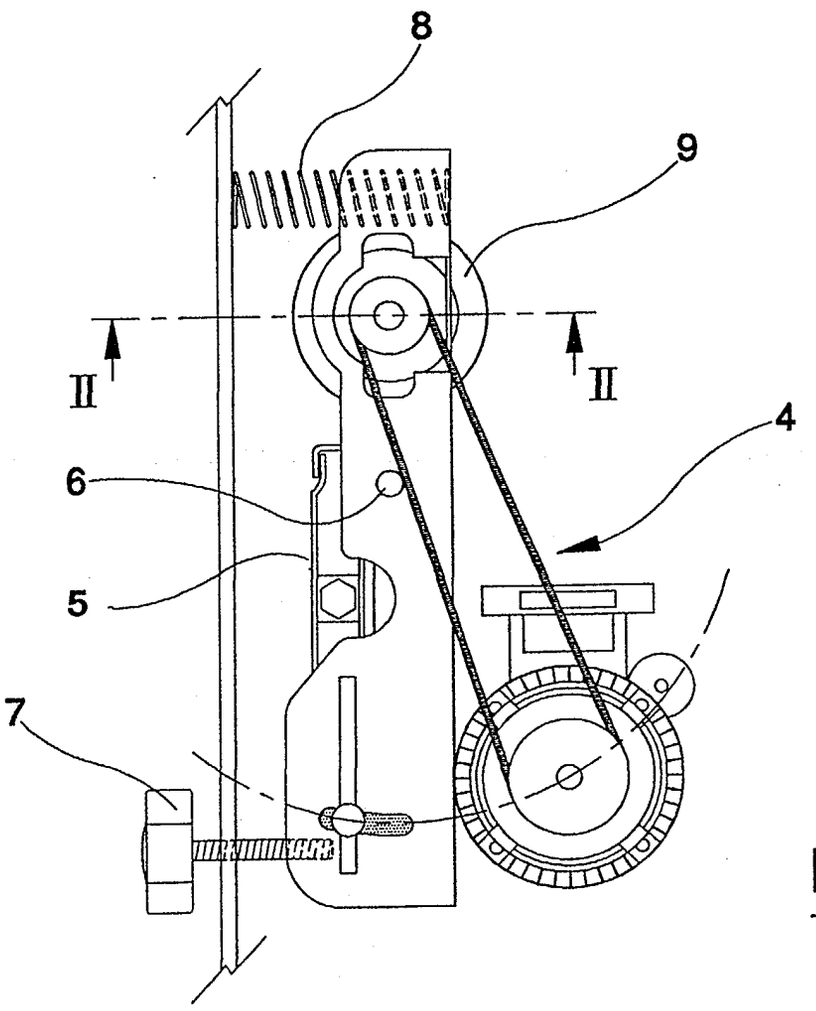




Fig. 3