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(54) TOOL FOR THE MANUAL GRINDING AND SHARPENING OF CUTTING IMPLEMENTS

(57) The invention relates to an utensil for manually sharpening and setting cutting tools comprising a body (1) defining a handle (2) and head (3) equipped with seats (4a, 4b) for supporting respective hard metal plates (5a, 5b) arranged on top of one another with respective crossed flat edges which can be accessed through a notch (10). A pressure exerted on said crossed flat edges by a cutting tool to be sharpened makes the plates (5a, 5b) pivot in opposing directions around respective first lugs (6a, 6b) inserted into first holes (8a, 8b) in the plates against the thrust from elastic elements (12a, 12b), while second elongated holes (9a, 9b) in the plates slide along second lugs (7a, 7b). The utensil is multipurpose and includes a coupling (14) for coupling different accessories such as a sharpening assembly (15), a can opener, and a peeler. The handle (2) houses a drawer (28) for other complements.

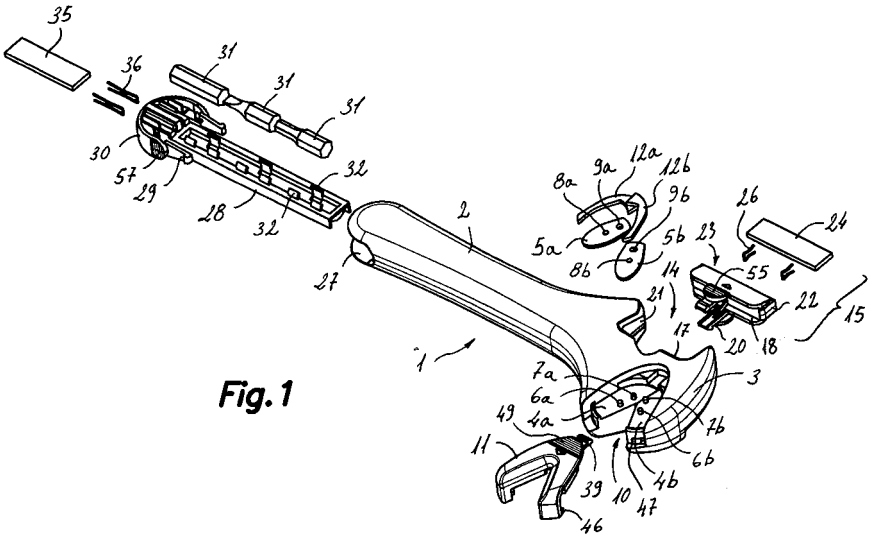

Fig. 1

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Description

Technical Field

[0001] The present invention relates to a utensil for manually sharpening and setting cutting tools, such as knives and other similar cutting edges, by means of superimposed and crossed hard metal plates. The utensil is multipurpose and includes for such purpose a coupling for different accessories, as well as an accessible compartment for housing other complements.

State of Prior Art

[0002] A type of utensil is known for manually sharpening and setting cutting tools using a support to which are fixed two superimposed hard metal plates with respective flat edges crossed at an acute angle, wherein the sharpening area is formed by the crossing area of said crossed flat edges. Pressing and moving the cutting edge of a cutting tool to be sharpened against the mentioned crossing area causes sharp arrises at the flat edges of the hard metal plates to pull material off of both sides of the cutting edge of the cutting tool, thereby sharpening it.

[0003] International patent application WO 03/076137 A1 describes a utensil of this type comprising a body with a head at one end and a handle extending to the other end. The head includes seats in which the mentioned rectangular hard metal plates are assembled, arranged on top of one another and with respective crossed flat edges. In one embodiment, lugs which are inserted in corresponding holes formed in each of the hard metal plates project from each of the seats, whereby the hard metal plates are arranged in fixed positions. The head defines a notch through which the crossing area of the hard metal plates, forming a sharpening area, can be accessed. A removable cover configured to retain the first and second hard metal plates in the head, preventing them from being released from the mentioned lugs, is arranged on the seats of the head.

[0004] The object of the present invention is to provide a utensil for manually sharpening and setting cutting tools incorporating several improvements in relation to the utensil of the prior art.

Disclosure of the Invention

[0005] The multipurpose utensil for manually sharpening and setting cutting tools according to the present invention comprises:

a body defining a head and a handle;
first and second seats located in said head for supporting respectively first and second hard metal plates which are arranged on top of one another with respective crossed flat edges;
linking means for linking each of said first and second hard metal plates to said first and second seats, said linking means comprising a first lug or pin and a first hole coupled to one another by insertion;
a notch in said head through which an crossing area of said crossed flat edges of the first and second hard metal plates can be accessed, said crossing area forming at least one sharpening area; and
a cover adapted to be detachably coupled to the head and configured to retain the first and second hard metal plates in the head.

[0006] Said first and second seats provide sufficient room so as to allow the first and second hard metal plates to pivot in opposing directions around the respective first lugs or pins inserted in the first holes, at least one elastic element being arranged to thrust the first and second hard metal plates towards one another, thereby the first and second hard metal plates are pivoted against the thrust from said at least one elastic element upon pressure exerted by a cutting tool on said crossing area of the crossed flat edges of the first and second hard metal plates.

[0007] According to a first variant of the present invention, the utensil further comprises for each of said hard metal plates guiding and stop means formed by a second lug or pin which is coupled by insertion to a corresponding second elongated and/or enlarged hole, thereby said coupling of said second elongated and/or enlarged holes and lugs allows relative sliding when the first and second hard metal plates pivot.

[0008] It will be understood that the lugs or pins can project from the seats to be inserted in holes of the plates, or they can project from the plates to be inserted in holes of the seats, or combinations thereof, or the pins can be separate parts inserted in holes of the seats and in holes of the plates.

[0009] In a preferred version of the invention, the multipurpose utensil for manually sharpening and setting cutting tools according to the present invention comprises, as is known, a body defining a head and a handle, with first and second seats located in said head for supporting respectively first and second hard metal plates which are arranged on top of one another with respective crossed flat edges. First and second lugs which are inserted in corresponding first and second holes formed in each of said first and second hard metal plates project from each of said first and second seats. A notch is formed in said head through which the crossing area of said crossed flat edges of the first and second hard metal plates can be accessed, said crossing area forming a sharpening and setting area. The head includes a cover adapted to be detachably coupled to the head and configured to retain the first and second hard metal plates in the head. The utensil of the present invention is characterized in that the mentioned second holes of the first and second hard metal plates are elongated and/or enlarged holes, and in that it includes at least one elastic element arranged to thrust the first and second hard metal plates

towards one another. The first and second hard metal plates are therefore suitable for pivoting in opposing directions around the respective first lugs inserted in the first holes against the thrust from said at least one elastic element whereas the second elongated and/or enlarged holes slide on the corresponding second lugs upon pressure exerted by a cutting tool on said crossing area of the crossed flat edges of the first and second hard metal plates.

[0010] The first lugs or pins functioning as pivots about which the corresponding first and second hard metal plates rotate are preferably located closer to the entrance of the notch than the crossing point and than the second lugs, which function as guide and travel limit for the rotations of the corresponding first and second hard metal plates. For this reason, when a cutting tool is pressed on said crossing area, the first and second hard metal plates rotate or pivot against the thrust of the elastic element such that the angle formed by the respective crossed flat edges becomes more acute, whereby the flat edges of the hard metal plates increase the contact with the flanks of the cutting edge of the cutting tool to be sharpened. Thus, the greater the pressure that is exerted with the cutting edge of the cutting tool on the crossing area, the more acute the sharpened cutting edge will be. Therefore, with the pivoting plate sharpening system and depending on the force or pressure exerted by the tool to be sharpened, the plates adapt to the different contours of the knife or tool to be sharpened.

[0011] The respective crossed flat edges of the first and second hard metal plates are convex-curved, which increases the effect of the angle becoming more acute in the crossing area. It must be pointed out that in this case the angle in the crossing area corresponds to the angle formed by the tangents to the crossed convex-curved flat edges in the crossing area. Preferably, each of the first and second hard metal plates has a symmetrical contour in relation to a longitudinal plane centered in the respective first and second holes. According to an embodiment, the mentioned contour of each of the first and second hard metal plates is approximately oval-shaped and optionally has a truncated portion at a longitudinal end closest to the respective second hole, whereas the end closest to the respective first hole is rounded. This configuration allows swapping the positions of the first and second hard metal plates for the purpose of making maximum use of the flat edges thereof susceptible to cross one another in the crossing area. Furthermore, the crossing area experiences movements due to the pivoting of the first and second hard metal plates during the sharpening and/or setting, which provides better use of the material of the crossed flat edges of the hard metal plates as it allows less wear of the hard metal plates since the same sharpening point is not always acted on. Therefore better use is made of the sharpening or setting flat arrises.

[0012] Optionally, each of the first and second hard metal plates has a rounded edge in the confluence of a first major face with a perimetric flat edge defining said convex-curved flat edge, and a sharp arris in the confluence of a second opposing major face with the mentioned flat edge. In an operative position, the first and second hard metal plates are arranged with the first face of one on the second face of the other, therefore the mentioned rounded edge of one of the plates is adjacent to said sharp arris of the other plate. So when the cutting edge of a cutting tool is pressed against the crossing area and moved along one direction against the two sharp arrises of the crossed flat edges, the sharp arrises sharpen the cutting edge, and then when the cutting edge is moved in the opposite direction against the two rounded edges, the rounded edges set the previously sharpened cutting edge.

[0013] In the head, the notch is oriented towards a first side of said handle where the utensil has a widening. This configuration makes the cutting edge of the cutting tool being sharpened not be aimed towards the hand gripping the utensil by the handle, but rather perpendicular to the handle, which reduces the risk of cuts and accidents. The elongated body further has a planar lower part which is suitable for being supported on a planar base, such as a table or the like. This planar lower part has a shoulder suitable for acting as a stop against a flat edge of said planar base and thereby withstanding the pressure exerted by a cutting tool on the crossing area. This configuration reduces the effort to be exerted and increases safety in handling the utensil.

[0014] In a second side of the handle, opposite said first side, the head comprises a coupling adapted to detachably receive and secure an accessory such as, for example, a sharpening assembly with a first sharpening plate, a can opener, or a peeling assembly, among others. The accessory includes one or more elastic tabs which interlock in corresponding retaining configurations of the coupling. In order to guide the insertion of the accessory and withstand a torque of the accessory in relation to the handle, the coupling comprises guide configurations cooperating with corresponding guide configurations existing in a coupling portion of the accessory.

[0015] In a possible embodiment, the handle includes a housing extending along same. This housing has, at one end of the handle opposite the head, an opening to receive a drawer or tray inserted therein which can house at least one complement, such as a tool tip, a Japanese sharpening stone, a set of tool tips, or a household utensil such as a pineapple slicer or a spoon. This drawer or tray, next to an outer end thereof, has at least one elastic tab which can be inserted and retained in a retaining configuration of the handle, and an end wall which can close said opening of the housing when the drawer or tray is housed in the handle. The drawer or tray further has a seat with an opening in said end wall to secure the tool tip in the operative position. Optionally, the drawer or tray further has a cavity with an opening in said end wall to receive inserted therein a rear portion of a second sharpening plate, such that a front portion thereof projects out-

wardly from the end wall. Both the first sharpening plate mentioned above and this second sharpening plate are secured and retained in their respective cavities by elastic clamps having outer parts able to press against inner surfaces of the cavity and inner parts able to press against outer surfaces of the sharpening plates.

Brief Description of the Drawings

[0016] The aforementioned and other advantages and features will be more fully understood from the following detailed description of an exemplary embodiment with reference to the attached drawings, in which:

Figure 1 is an exploded perspective view of a multipurpose utensil for manually sharpening and setting cutting tools according to an embodiment of the present invention, with an accessory forming a sharpening assembly mounted in a coupling of the utensil;

Figure 2 is a perspective view of an enlarged detail showing the assembly of first and second hard metal plates in a head of the utensil of Figure 1;

Figure 3 is an enlarged perspective view of one of said hard metal plates;

Figures 4 and 5 are partial plan views showing the operation of a sharpening and setting area of the head before and during a sharpening and/or setting operation;

Figure 6 is a plan view of the utensil of Figure 1;

Figures 7, 8 and 9 are cross-sectional views taken along lines VII-VII, VIII-VIII and IX-IX of Figure 6, respectively;

Figure 10 is a partial enlarged cross-sectional view taken along line X-X of Figure 6;

Figure 11 is a rear view of the utensil of Figure 1 showing the end of the handle farthest from the head;

Figure 12 is a partial plan view showing alternative assembly means for assembling the first and second hard metal plates in the head;

Figures 13 and 14 are plan and side views of an utensil such as the one in Figure 1 in which the accessory forming a sharpening assembly is replaced with a can opener accessory;

Figure 15 is a perspective view of an enlarged detail showing the can opener accessory arranged to be installed in the coupling of the utensil;

Figure 16 is a perspective view of an enlarged detail showing an accessory forming an alternative peeling assembly arranged to be installed in the coupling of the utensil; and

Figures 17 to 20 are views illustrating several ways of gripping the utensil, demonstrating the ergonomics thereof.

Detailed Description of Exemplary Embodiments

[0017] Referring first to Figure 1, an exploded view of a multipurpose utensil for manually sharpening and setting cutting tools is shown, the utensil comprising a body 1 defining a head 3 at one end and a handle 2 extending from the head 3 to the other end. The mentioned head 3 has a widening in a first side of said handle 2 in which a notch 10 oriented at approximately 90 degrees in relation to the longitudinal direction of the handle 2 is formed. On each side of the mentioned notch 10 in the head 3 there are formed first and second seats 4a and 4b on which first and second hard metal plates 5a and 5b, identical to one another, are respectively assembled, as best shown in Figure 2.

[0018] Each of the first and second hard metal plates 5a and 5b (see the first plate 5a illustrated in Figure 3 as an example) has a first major face 43, a second opposing major face 44 and a perimetric flat edge 45 defining a contour, and has formed therein a first circular hole 8a, 8b and a second elongated hole 9a, 9b having a curved trajectory with its center in said first circular hole 8a, 8b. The mentioned contour is symmetrical in relation to a longitudinal plane centered in the respective first and second holes 8a, 8b and 9a, 9b. The first and second seats 4a, 4b in the head 3 are at different levels, such that the first and second hard metal plates 5a and 5b are arranged on top of one another and with respective crossed flat edges. The crossing area of said crossed flat edges of the first and second hard metal plates 5a and 5b, which forms a sharpening and setting area, can be accessed through the mentioned notch 10 formed in the head 3.

[0019] In the embodiment shown, the contour of each of the first and second hard metal plates 5a and 5b is approximately oval-shaped, with a truncated portion in a longitudinal end closest to the respective second hole 9a, 9b, thereby the respective crossed flat edges are convex-curved. The mentioned truncated portion is optional. The confluence of the mentioned first face 43 with said perimetric flat edge 45 (Figure 3) forms a rounded edge 37 and the confluence of said second face 44 with the perimetric flat edge 45 forms a sharp arris 38. The difference of levels between the first and second seats 4a, 4b is equal to the thickness of the plates, and the first and second hard metal plates 5a and 5b are arranged such that the first face 43 of one of them is placed against the second face 44 of the other, so said rounded edge 37 of one of the plates 5b is adjacent to said sharp arris 38 of the other plate 5a. The first faces 43 of both first and second hard metal plates 5a and 5b are supported on their respective first and second seats 4a, 4b in the head 3 (see also Figure 10).

[0020] First and second lugs 6a, 6b and 7a, 7b project from each of the first and second seats 4a and 4b, said first and second lugs 6a, 6b and 7a, 7b being adapted to be inserted in the corresponding first and second holes 8a, 8b and 9a, 9b formed in each of the first and second hard metal plates 5a and 5b. Arranged over the first and second hard metal plates 5a and 5b, once they are mounted in the first and second seats 4a and 4b, there is a cover 11 adapted to be detachably coupled to the

head 3 by means of an elastic tab 39, which can be inserted and retained in a retaining configuration 40 of the head 3 (see also Figure 7), and flanges 46 formed in the cover 11 which are able to be inserted in corresponding recesses 47 of the head 3 (see also Figure 8). This cover 11 has ribs 48 configured to be supported on the first and second hard metal plates 5a and 5b for the purpose of retaining them in the head 3, as shown in Figure 7. The cover 11 includes a press down area 49 which can divert the elastic tab 39 when it is pressed down (Figure 7) in order to allow the release of the elastic tab 39 from the retaining configuration 40.

[0021] As shown in the embodiment of Figures 4 and 5, the head 3 includes elastic elements 12a, 12b formed by respective pieces of elastomeric material arranged between the respective first and second hard metal plates 5a and 5b and surfaces of the head 3 to thrust the first and second hard metal plates 5a and 5b towards one another. According to the elongated configuration of the mentioned second holes 9a, 9b of the first and second hard metal plates 5a and 5b, the first and second hard metal plates 5a and 5b are suitable for pivoting in opposing directions around the respective first lugs 6a, 6b inserted in the first holes 8a, 8b, whereas the second elongated and/or enlarged holes 9a, 9b slide on the corresponding second lugs 7a, 7b upon pressure exerted by a cutting tool H on said crossing area of the crossed flat edges of the first and second hard metal plates 5a and 5b. It can be observed that the first lugs 6a, 6b and corresponding first holes 8a, 8b are located closer to the entrance of said notch 10 than the crossing point and than the second lugs 7a, 7b and corresponding second holes 9a, 9b. Therefore the rotation of the first and second hard metal plates 5a and 5b upon pressure exerted by a cutting tool H on the crossing area tends to close this crossing area, making the angle formed by the crossed flat edges of the first and second hard metal plates 5a and 5b more acute. Alternatively, the second holes 9a, 9b could simply be enlarged so as to allow movement of the first and second hard metal plates 5a and 5b in relation to the second lugs 7a, 7b.

[0022] As is best seen in Figure 7, the elongated body 1 has a planar lower part 13 suitable for being supported on a planar base P and said planar lower part 13 has a shoulder 41 suitable for acting as a stop against an edge M of said planar base P and whereby withstanding said pressure exerted by a cutting tool H on the crossing area.

[0023] Figure 12 shows an alternative embodiment comprising an elastic metal strip 50 arranged to thrust the first and second hard metal plates 5a and 5b towards one another instead of the mentioned pieces of elastomeric material. In another alternative embodiment, that is not shown, the function of thrusting the first and second hard metal plates 5a and 5b towards one another is carried out by a torsion spring, or a pair of compression springs, or another functionally equivalent known means.

[0024] In a second side of the handle 2 opposite said first side towards which the notch 10 is oriented, the head 3 comprises a coupling 14 adapted to detachably receive and secure an accessory. In the embodiment shown in Figures 1 to 11 the mentioned accessory is a sharpening assembly 15 especially adapted to sharpen scissors, though it can be applied to other types of cutting edges, and other accessories such as a can opener 16 and a peeling assembly 42, which will be described below, have also been provided. All the accessories can be swapped and to that end the mentioned coupling 14 of the head 3 comprises a housing 17 to receive a coupling portion 18 common in any of said accessories, and at least one retaining configuration 19 adapted to receive and retain at least one elastic tab 20 of the accessory. Guide configurations 21 are further arranged in said housing 17 to cooperate with corresponding guide configurations 22 of said coupling portion 18 of the accessory so as to guide the insertion of the accessory and withstand a torque of the accessory in relation to the handle 2 when the accessory is coupled in said coupling 14. Advantageously, the mentioned guide configurations 22 are mutually parallel and as far apart as possible in a plane parallel to the longitudinal direction of the handle 2 (Figure 14). Therefore, the guide configurations 22 define a plane for inserting the accessory into the housing 17 of the head 3. Each accessory further includes a press down area 55 which can divert the elastic tab 20 when it is pressed down (Figure 8).

[0025] The accessory consisting of a sharpening assembly 15 is illustrated in Figures 1 and 2 and in Figures 6 to 9. The sharpening assembly 15 comprises a support 23 including said coupling portion 18, a pair of said elastic tabs 20 with their corresponding press down areas 55, and said guide configurations 22. The mentioned support 23 has a cavity 25 formed therein adapted to house a rear portion of a first sharpening plate 24 having a front portion projecting outwardly from said support 23. In order to secure and retain the first sharpening plate 24 in the cavity 25, approximately U shaped first elastic clamps 26 are arranged, said first elastic clamps 26 having outer parts able to press against opposing inner surfaces of said cavity 25 and inner parts able to press at the same time against opposing outer surfaces of said first sharpening plate 24, as shown in Figure 9. Next to said coupling 14, the body 1 of the utensil has a protuberance defining an inclined plane 58 (Figure 6) with a predetermined degree of inclination in relation to an outer edge of the first sharpening plate 24, said inclined plane functioning as a support for a cutting tool to be sharpened, especially scissors.

[0026] In relation to Figures 13, 14 and 15, the accessory consisting of a can opener 16 is described below, said accessory comprising a support 51 including, like all the mentioned accessories, said coupling portion 18, a pair of said elastic tabs 20 with their corresponding press down areas 55, and said guide configurations 22. In this embodiment the can opener 16 is rotational and comprises a rotating shaft 56 perpendicular to an insertion plane defined by the guide configurations 21 for in-

serting the accessory into said housing 17. Accordingly, the rotating shaft 56 of the can opener 16 is perpendicular to the longitudinal direction of the handle 2. The mentioned rotating shaft 56 is connected to an actuation knob 52 located in a position offset towards one side in relation to the body 1 such that it can be comfortably gripped and actuated without interferences (Figures 14, 15 and 20).

[0027] The accessory consisting of a peeling assembly 42 is described now in relation to Figure 16. The mentioned peeling assembly 42 comprises a support 53 including, like all the mentioned accessories, said coupling portion 18, a pair of said elastic tabs 20 with their corresponding press down areas 55, and said guide configurations 22. The mentioned support 53 defines a yoke pivotably supporting a peeler blade 54.

[0028] Referring again to Figure 1, the handle 2 comprises an inner housing extending along same. The mentioned housing has an opening 27 at one end of the handle 2 opposite the head 3 to receive a drawer or tray 28 inserted therethrough which can house one or more complements, such as a series of tool tips 31. The mentioned drawer or tray 28 has elastic flanges 32 adapted to secure said tool tips 31 in storage position. The drawer or tray 28 has, next to an outer end thereof, an end wall 30 which can close said opening 27 when the drawer or tray 28 is housed in the handle 2. A pair of elastic tabs 29 which can be inserted and retained in a retaining configuration formed in the handle 2 extends from the side ends of said end wall 30. Each elastic tab 29 has associated thereto a press down area 57 which can divert the elastic tab 29 when it is pressed down in order to allow the release of the elastic tabs 29 from the retaining configuration of the handle 2.

[0029] As conventional, each of said tool tips 31 has a coupling portion with a polygonal section, and in said end wall 30 is formed a seat 33 having an opening through which said coupling portion of any of the tool tips 31 can be inserted to secure the tool tip 31 in the operative position aligned with the longitudinal direction of the handle 2. The mentioned seat 33 has a polygonal section conjugated with said polygonal section of the coupling portion of the tool tip 31 to transmit thereto a torque applied on the handle 2.

[0030] As shown in Figure 11, the drawer or tray 28 additionally has a cavity 34 having an opening in said end wall 30. Said cavity 34 is adapted to receive a rear portion of a second sharpening plate 35 inserted therein, such that a front portion of said second sharpening plate 35 projects outwardly from the end wall 30 in the operative position. In order to secure and retain the second sharpening plate 35 in the mentioned cavity 34, second elastic clamps 36 having outer parts able to press against opposing inner surfaces of said cavity 34 and inner parts able to press against opposing outer surfaces of the second sharpening plate 35 are arranged.

[0031] Referring now to Figures 17 to 20, different possibilities for gripping the utensil are show. The handle 2 is designed from an ergonomic point of view so that it can be gripped with one hand in different ways adapted to the use of the sharpener and the different accessories. Figure 17 shows a way of gripping the handle 2 that is suitable for using the accessory forming a sharpening assembly 15 coupled to the head 3. Figure 18 shows a way of gripping the handle 2 that is suitable for using the sharpening and setting area defined by the notch 10 of the head 3. Figure 19 shows a way of gripping the handle 2 that is suitable for using a tool tip 31 mounted in the end wall 30 of the drawer or tray 28 located at the end of the handle 2 farthest from the head 3. Finally, Figure 20 shows a way of gripping the handle 2 that is suitable for using the can opener accessory 16 coupled to the head 3 to open a can L.

[0032] A person skilled in the art will be able to introduce variations and modifications in the exemplary embodiments shown and described without departing from the scope of the present invention as defined in the appended claims.

Claims

1. A utensil for manually sharpening and setting cutting tools, comprising:

a body (1) defining a head (3) and a handle (2);
first and second seats (4a) and (4b) located in said head (3) for respectively supporting first and second hard metal plates (5a) and (5b) which are arranged on top of one another with respective crossed flat edges;
linking means for linking each of said first and second hard metal plates (5a) and (5b) to said first and second seats (4a) and (4b), said linking means comprising a first lug or pin (6a, 6b) and a first hole (8a, 8b) coupled to one another by insertion;
a notch (10) in said head (3) through which an crossing area of said crossed flat edges of the first and second hard metal plates (5a) and (5b) can be accessed, said crossing area forming at least one sharpening area;
a cover (11) adapted to be detachably coupled to the head (3) and configured to retain the first and second hard metal plates (5a) and (5b) in the head (3);

wherein said first and second seats (4a) and (4b) provide sufficient room so as to allow the first and second hard metal plates (5a) and (5b) to pivot in opposing directions around the respective first lugs or pins (6a, 6b) inserted into first holes (8a, 8b), at least one elastic element (12a, 12b, 50) being arranged to thrust the first and second hard metal plates (5a) and (5b) towards one another, thereby the first and second hard metal plates (5a) and (5b) are pivoted against the thrust from said at least one

elastic element (12a, 12b, 50) upon pressure exerted by a cutting tool (H) on said crossing area of the crossed flat edges of the first and second hard metal plates (5a) and (5b).

2. A utensil according to claim 1, **characterized in that** it further comprises for each of said first and second hard metal plates (5a) and (5b), guiding and stop means formed by a second lug or pin (7a, 7b) which is coupled by insertion in a corresponding second elongated and/or enlarged hole (9a, 9b), thereby said coupling of said second elongated and/or enlarged holes (9a, 9b) and lugs (7a, 7b) allows relative sliding when the first and second hard metal plates (5a) and (5b) are pivoted.

3. A utensil according to claim 1, **characterized in that** it comprises first and second lugs (6a, 6b) and (7a, 7b) which project from each of said first and second seats (4a) and (4b) and which are inserted in corresponding first and second holes (8a, 8b) and (9a, 9b) formed in each of said first and second hard metal plates (5a) and (5b), and **in that** the mentioned second holes (9a, 9b) of the first and second hard metal plates (5a) and (5b) are elongated and/or enlarged, and at least one elastic element (12a, 12b, 50) is arranged to thrust the first and second hard metal plates (5a) and (5b) towards one another, therefore the first and second hard metal plates (5a) and (5b) are able to pivot in opposing directions around the respective first lugs (6a, 6b) inserted in the first holes (8a, 8b) against the thrust from said at least one elastic element (12a, 12b, 50) whereas the second elongated and/or enlarged holes (9a, 9b) slide on the corresponding second lugs (7a, 7b) upon pressure exerted by a cutting tool (H) on said crossing area of the crossed flat edges of the first and second hard metal plates (5a) and (5b).

4. A utensil according to claim 2 or 3, **characterized in that** the first lugs (6a, 6b) and corresponding first holes (8a, 8b) are located closer to the entrance of said notch (10) than the crossing point.

5. A utensil according to claim 4, **characterized in that** the respective crossed flat edges of the first and second hard metal plates (5a) and (5b) are convex-curved.

6. A utensil according to claim 5, **characterized in that** each of the first and second hard metal plates (5a) and (5b) has a symmetrical contour in relation to a longitudinal plane centered in the respective first and second holes (8a, 8b) and (9a, 9b).

7. A utensil according to claim 6, **characterized in that** said contour of each of the first and second hard metal plates (5a) and (5b) is approximately oval-shaped with a truncated portion at a longitudinal end closest to the respective second hole (9a, 9b).

8. A utensil according to claim 7, **characterized in that** each of the first and second hard metal plates (5a) and (5b) has a first major face (43), a second opposing major face (44), and a perimetric flat edge (45) defining said convex-curved flat edge, comprising a rounded edge (37) in the confluence of said first face (43) with said perimetric flat edge (45) and a sharp arris (38) in the confluence of said second face (44) with the perimetric flat edge (45).

9. A utensil according to claim 8, **characterized in that** the first and second hard metal plates (5a) and (5b) are arranged with the first face (43) of one of them on the second face (44) of the other, so said rounded edge (37) of one of the plates (5b) is adjacent to said sharp arris (38) of the other plate (5a), such that according to the forward movement direction of the cutting tool (H) on said crossing area, the utensil either sharpens or sets.

10. A utensil according to claim 1, **characterized in that** said at least one elastic element (12a, 12b, 50) is selected from a group comprising a piece of elastomeric material, an elastic metal strip or a spring.

11. A utensil according to claim 1, **characterized in that** said notch (10) is oriented in said head (3) towards a first side of said handle (2), wherein the utensil has a widening.

12. A utensil according to claim 11, **characterized in that** the notch (10) is oriented approximately 90 degrees in relation to the longitudinal direction of the handle (2).

13. A utensil according to claim 11, **characterized in that** the head comprises, in a second side of the handle (2) opposite said first side, a coupling (14) adapted to detachably receive and secure an accessory selected from a group comprising a sharpening assembly (15), a can opener (16) and a peeling assembly(42), among others.

14. A utensil according to claim 13, **characterized in that** said coupling (14) comprises a housing (17) for receiving a coupling portion (18) of said accessory, and at least one retaining configuration (19) adapted to receive and retain at least one elastic tab (20) of said accessory, guide configurations (21) being arranged in said housing (17) to cooperate with corresponding guide configurations (22) of said coupling portion (18) of the accessory so as to guide the insertion of the accessory and withstand a torque of the accessory in relation to the handle (2) when the accessory is coupled to said coupling (14).

15. A utensil according to claim 14, **characterized in that** said sharpening assembly (15) comprises a support (23) including said coupling portion (18), said at least one elastic tab (20), and said guide configurations (22), and a first sharpening plate (24) having a rear portion adapted to be housed in a cavity (25) of said support (23) and a front portion projecting outwardly from said support (23), there being arranged first elastic clamps (26) having outer parts able to press against said cavity (25) and inner parts able to press against said first sharpening plate (24) so as to secure and retain the first sharpening plate (24) in the cavity (25).

16. A utensil according to claim 14, **characterized in that** said can opener (16) comprises a support (51) including said coupling portion (18), said at least one elastic tab (20), and said guide configurations (22), said can opener (16) being rotational and comprising a rotating shaft (56) perpendicular to an insertion plane for inserting the accessory in said housing (17) and perpendicular to the longitudinal direction of the handle (2).

17. A utensil according to claim 16, **characterized in that** said can opener (16) comprises an actuation knob (52) offset towards one side in relation to the body (1).

18. A utensil according to claim 14, **characterized in that** said peeling assembly (42) comprises a support (53) including said coupling portion (18), said at least one elastic tab (20), and said guide configurations (22), said support (53) defining a yoke supporting a peeler blade (54).

19. A utensil according to claim 1, **characterized in that** said handle (2) comprises a housing extending therealong, said housing having an opening (27) at one end opposite the head (3) to receive a drawer or tray (28) inserted therein which can house at least one complement, said drawer or tray (28) having next to an outer end at least one elastic tab (29) which can be inserted and retained in a retaining configuration formed in the handle (2) and an end wall (30) able to close said opening (27) when the drawer or tray (28) is housed in the handle (2).

20. A utensil according to claim 19, **characterized in that** said complement is a tool tip (31) having a coupling portion with a polygonal section, and the drawer or tray (28) has elastic flanges (32) adapted to secure said tool tip (31) in the storage position and a seat (33) with an opening in said end wall (30) to secure the tool tip (31) in the operative position, said seat (33) having a polygonal section conjugated with said polygonal section of the coupling portion of the tool tip (31) to transmit thereto a torque applied to the handle (2).

21. A utensil according to claim 19, **characterized in that** said drawer or tray (28) has a cavity (34) with an opening in said end wall (30) to receive a rear portion of a second sharpening plate (35) inserted therein such that a front portion thereof projects outwardly from the end wall (30), there being arranged second elastic clamps (36) having outer parts able to press against said cavity (34) and inner parts able to press against said second sharpening plate (35) so as to secure and retain the second sharpening plate (35) in the cavity (34).

22. A utensil according to claim 1, **characterized in that** said cover (11) includes an elastic tab (39) which can be inserted and retained in a retaining configuration (40) of the head (3).

23. A utensil according to any of the previous claims, **characterized in that** the elongated body (1) has a planar lower part (13) suitable for being supported on a planar base (P) and said planar lower part (13) has a shoulder (41) suitable for acting as a stop against an edge (M) of said planar base (P) and thereby withstand said pressure exerted by a cutting tool (H) on the crossing area.

24. A utensil according to claim 19, **characterized in that** said complement is selected from a group comprising a Japanese sharpening stone, a set of tool tips, a household utensil such as a pineapple slicer, and one or more spoons, among others.

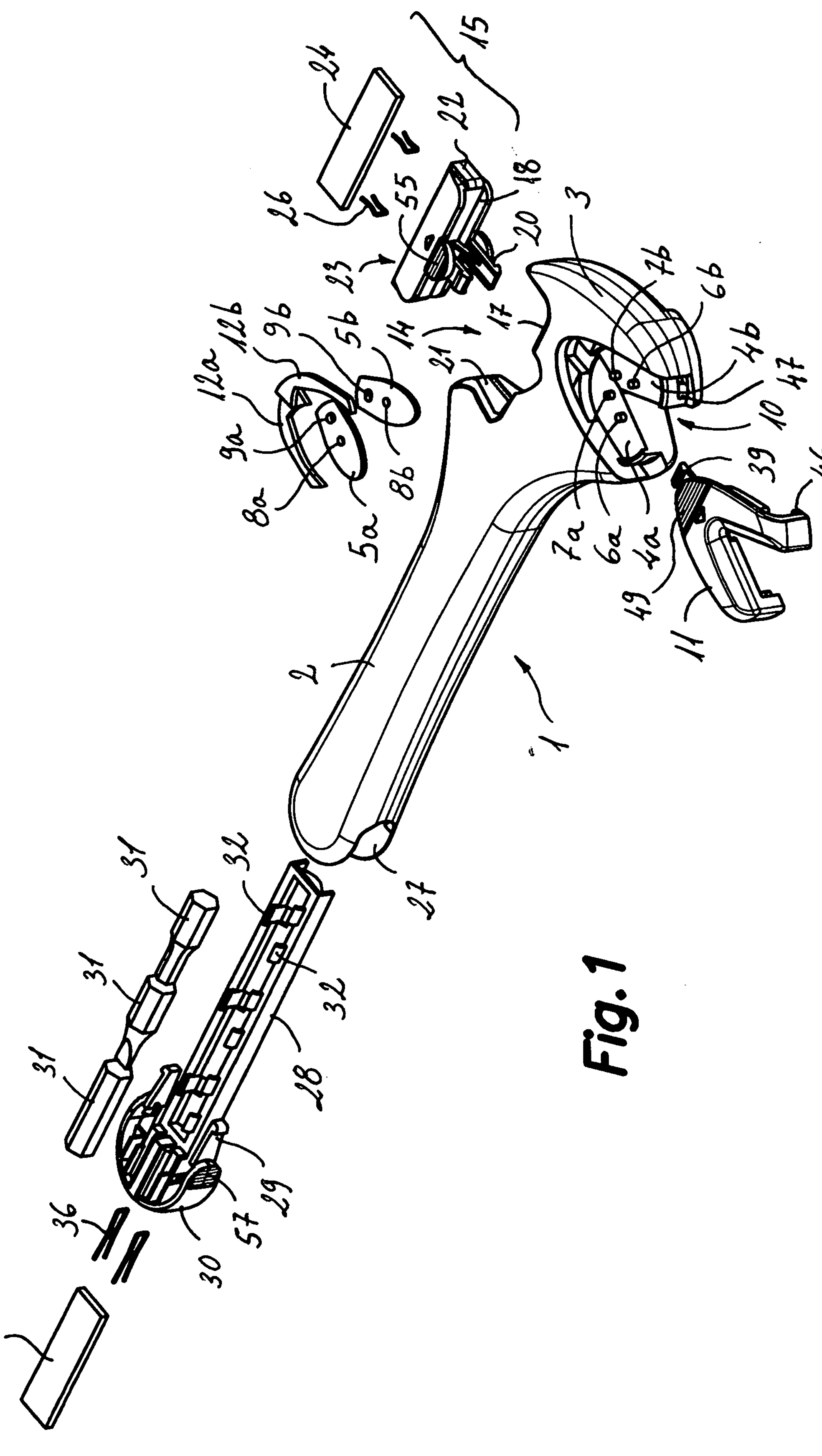
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Fig. 1

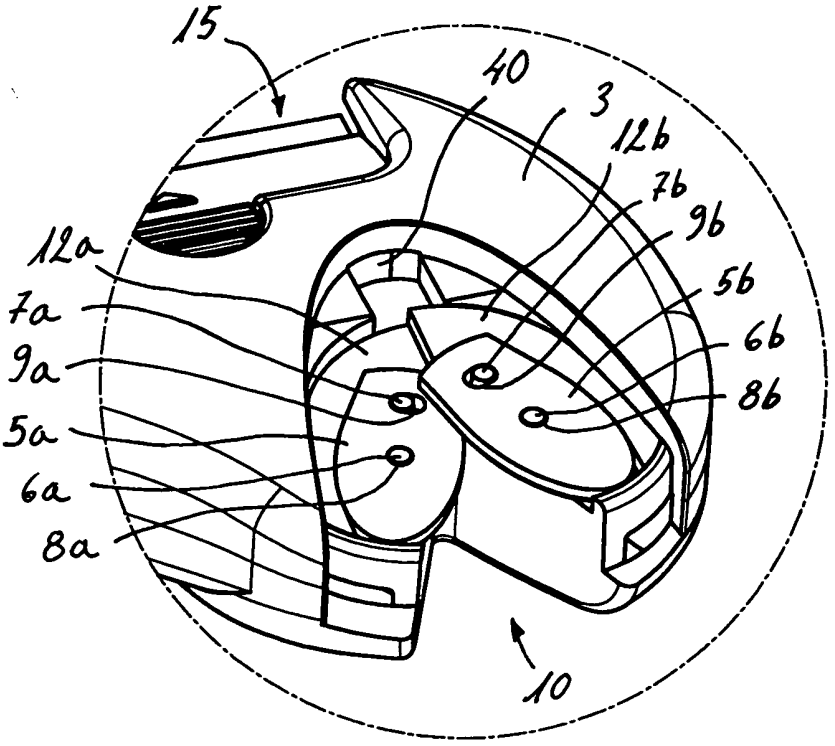


Fig.2

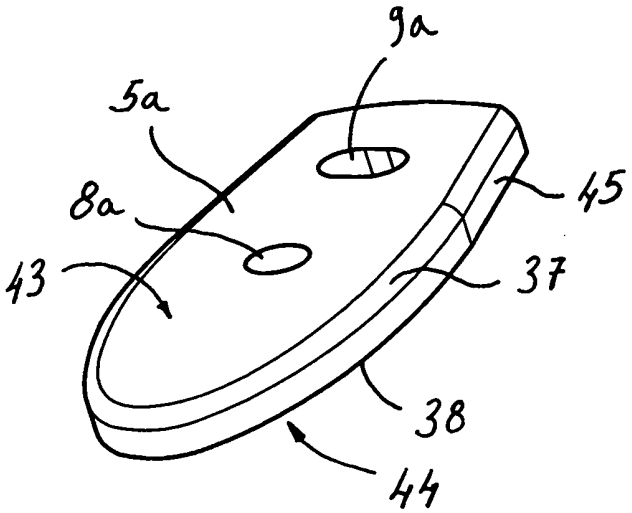
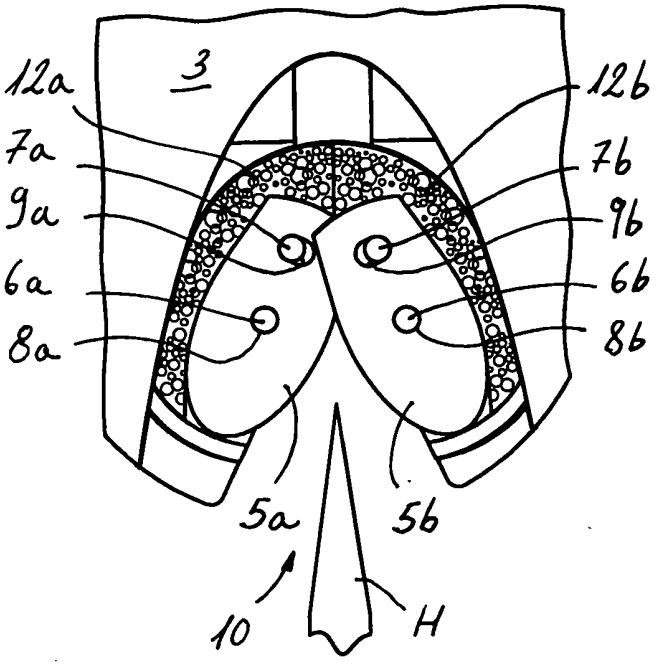


Fig.3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8a
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5b
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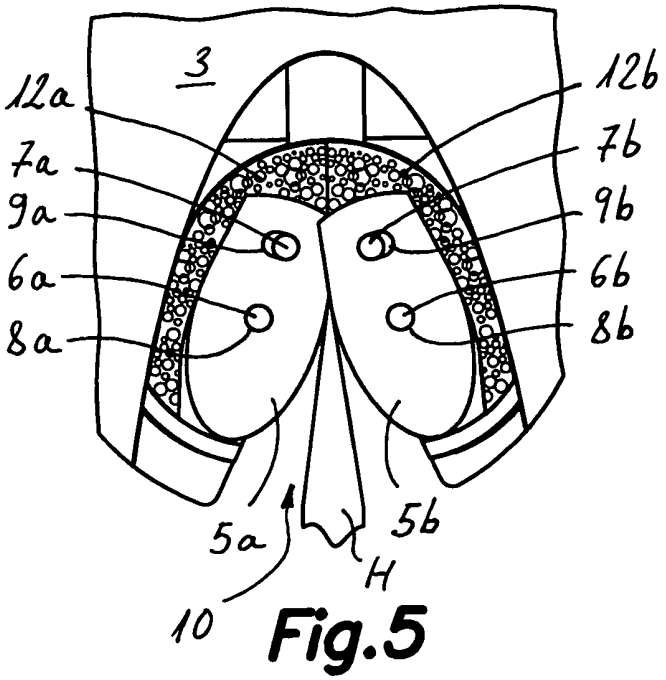
H

Fig.4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H
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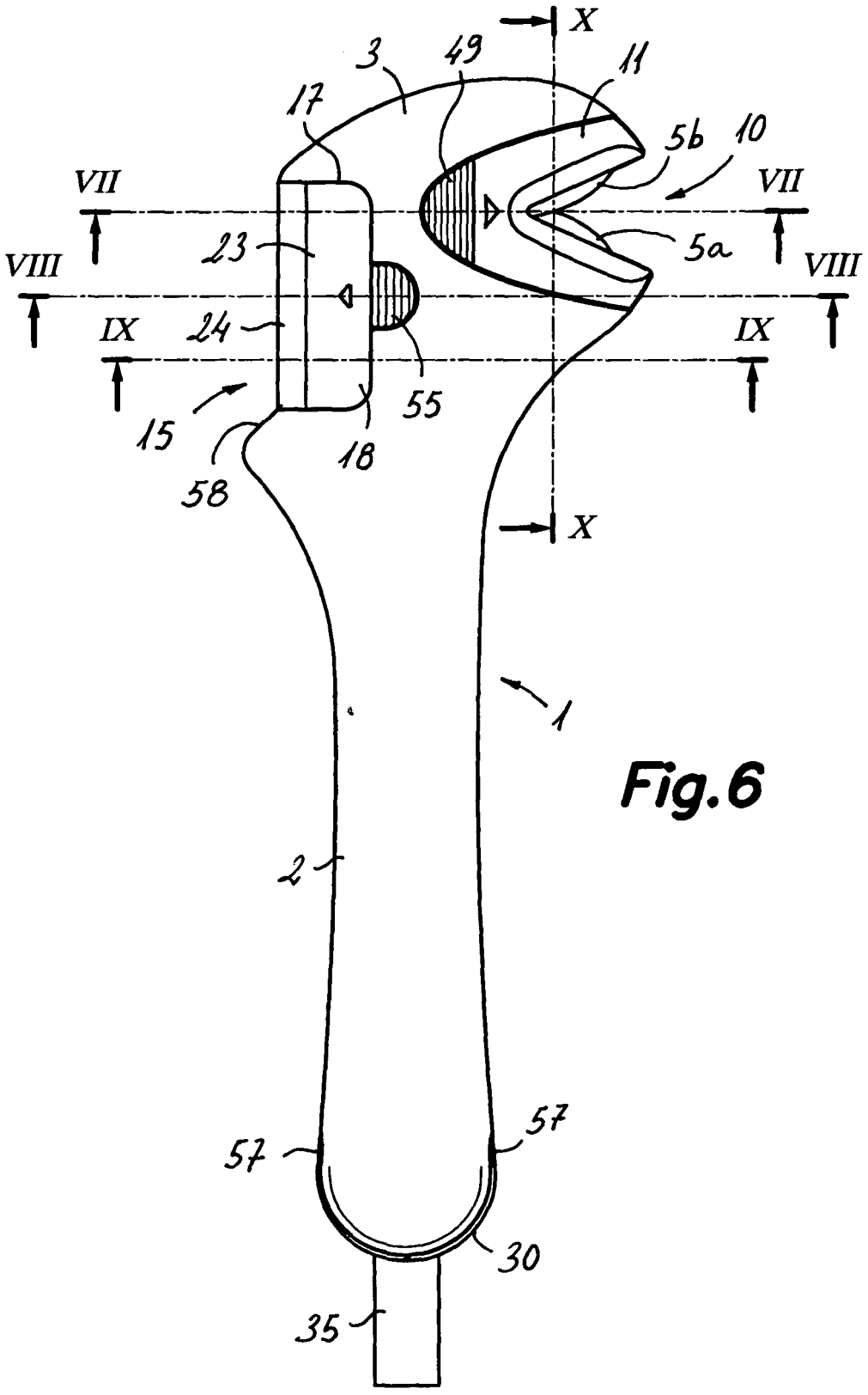
Fig.5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17
5b
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VII
VII
VIII
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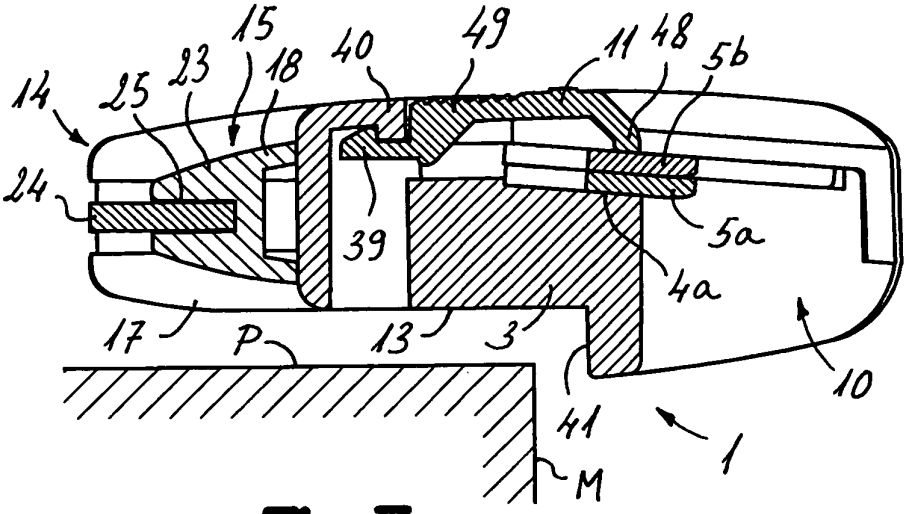
Fig.6



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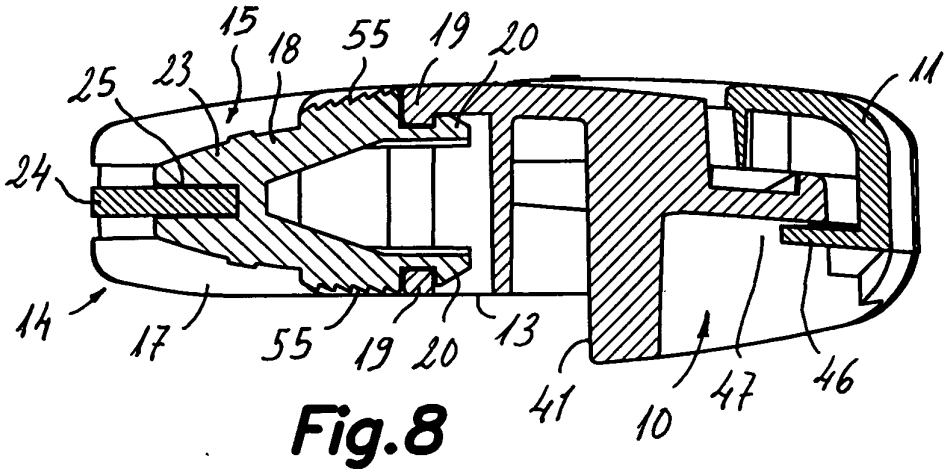

Fig.8

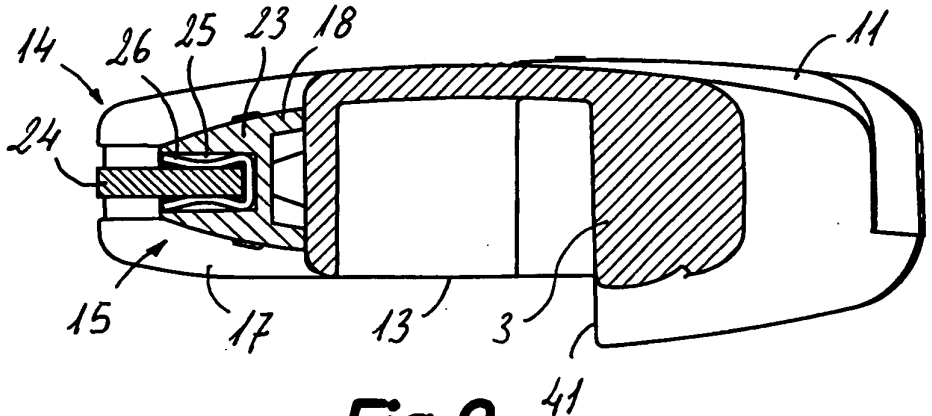

Fig.9

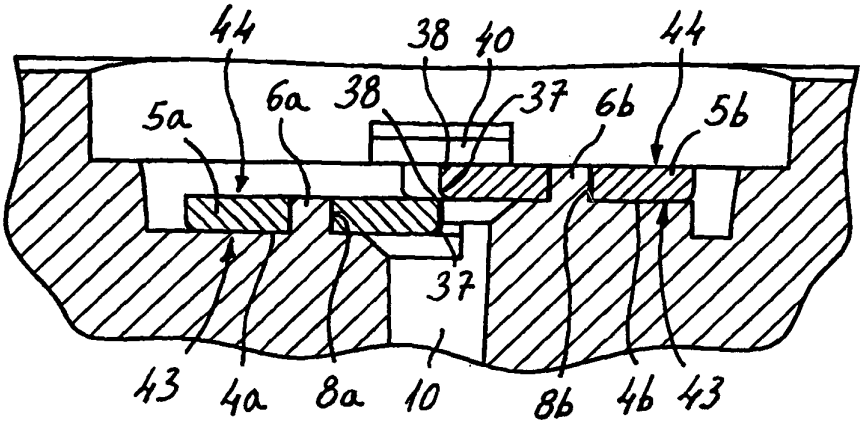

Fig. 10

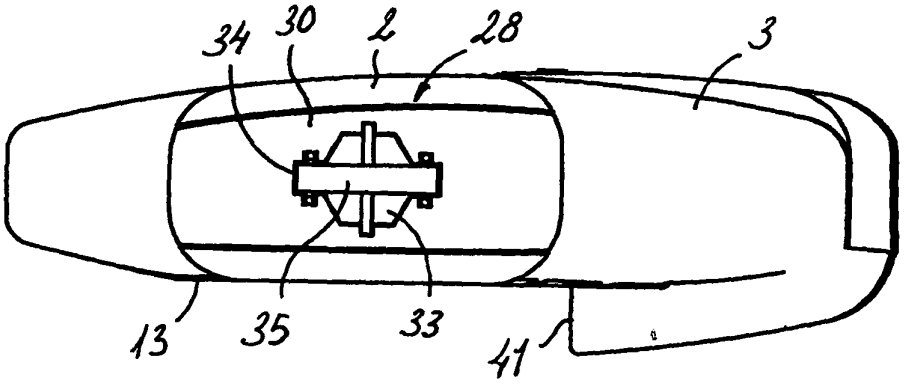

Fig. 11

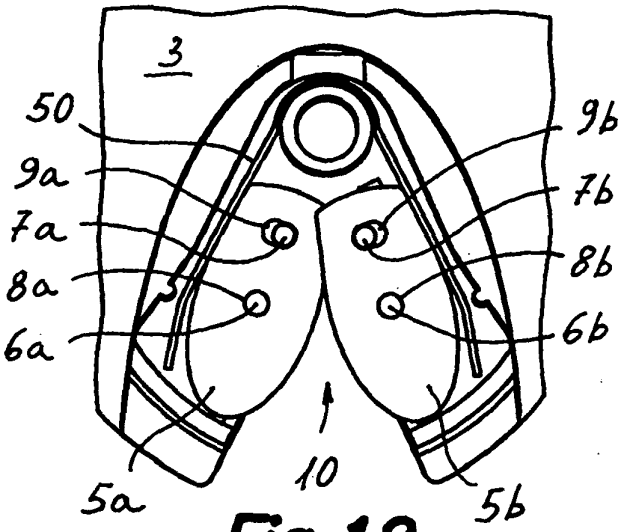

Fig. 12

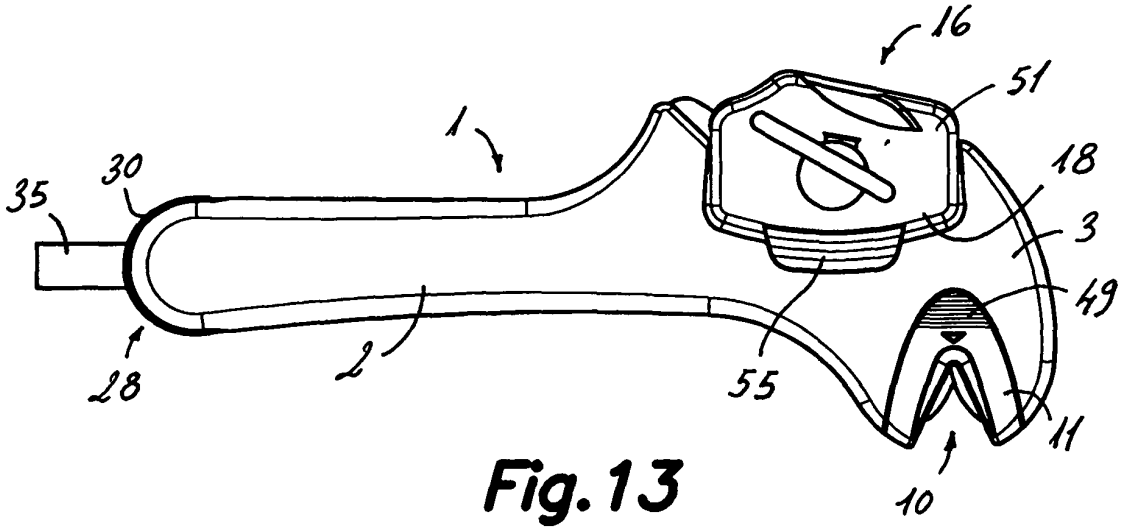
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Fig. 13

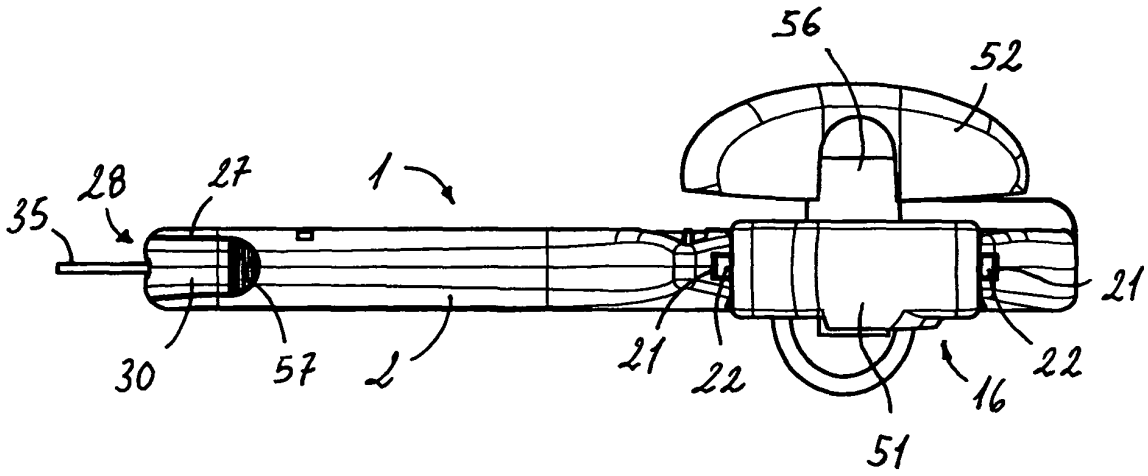
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Fig. 14

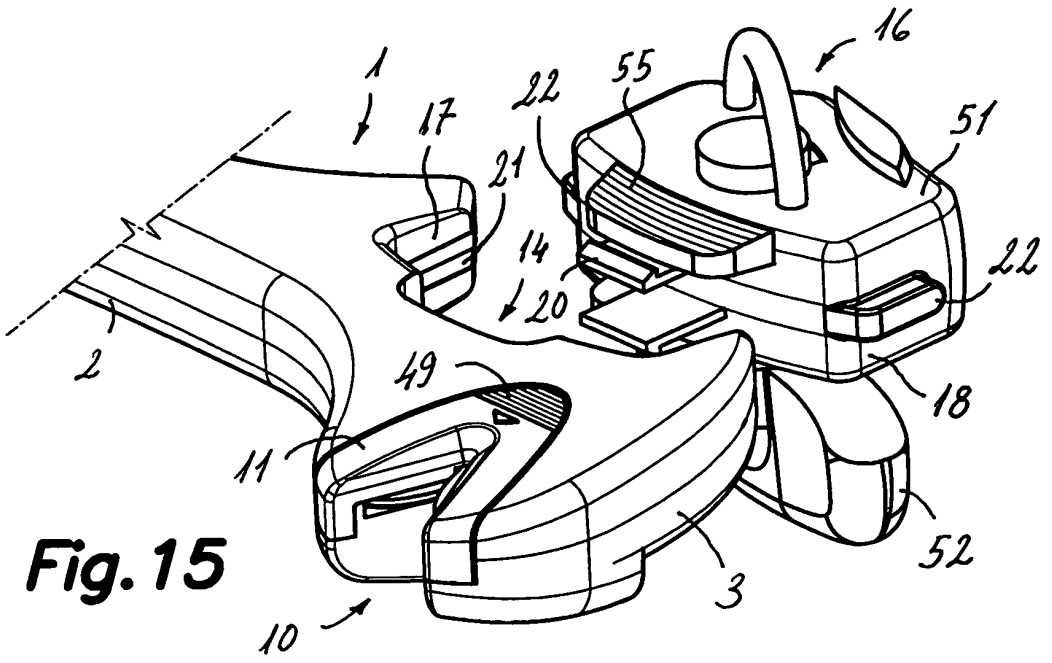
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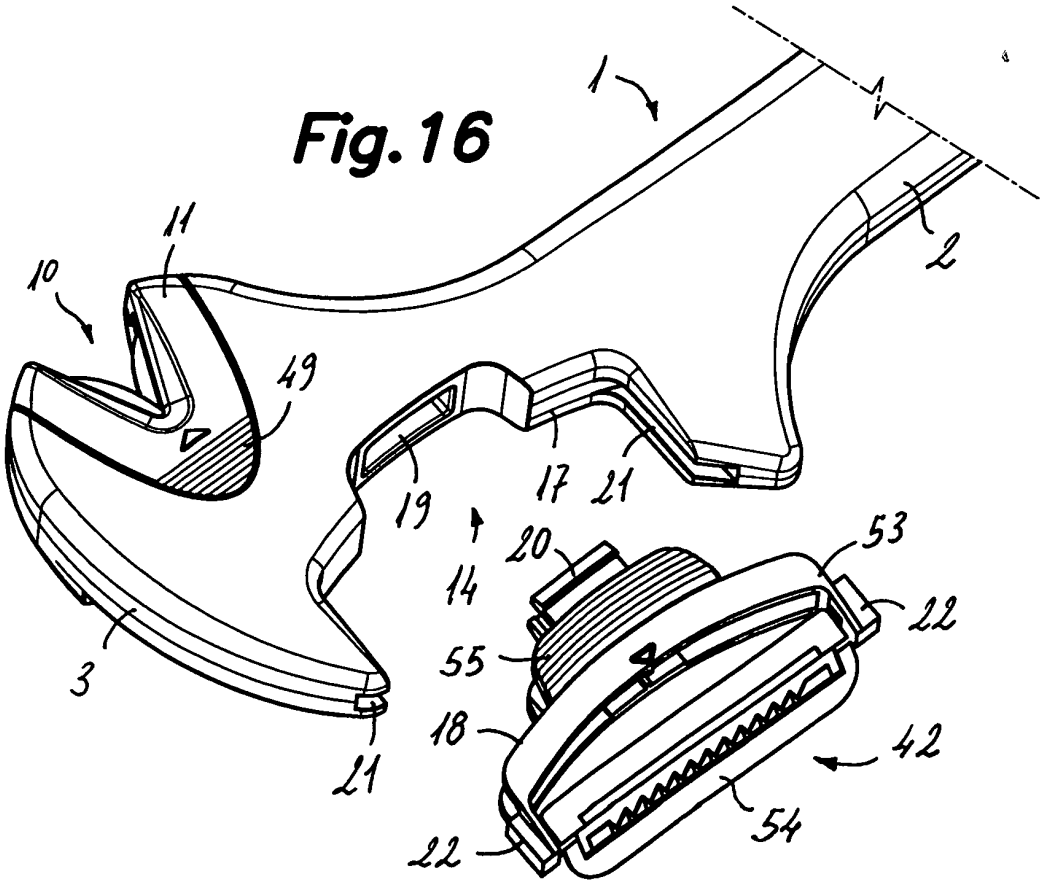
Fig. 15

Fig. 16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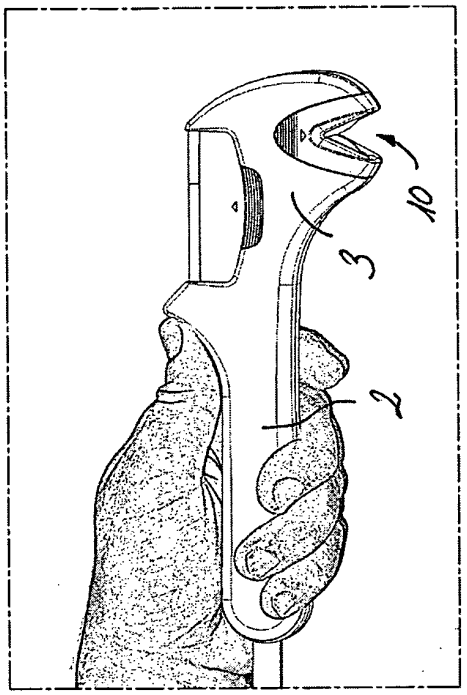

Fig.18

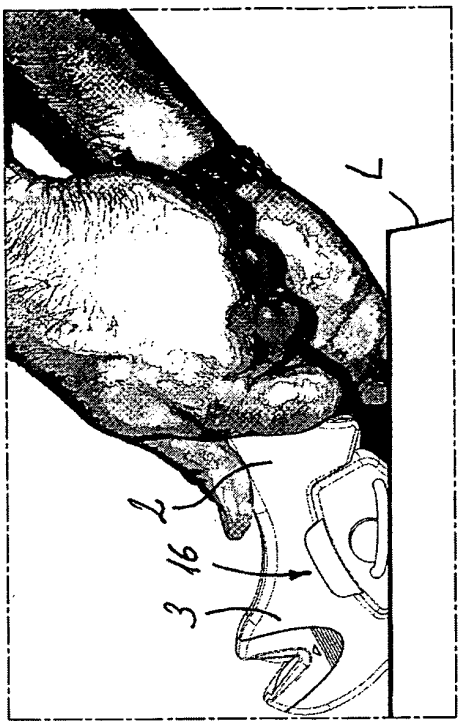

Fig.20

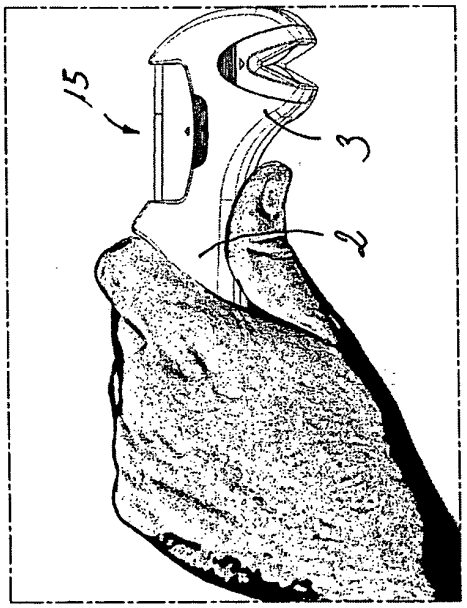

Fig.17

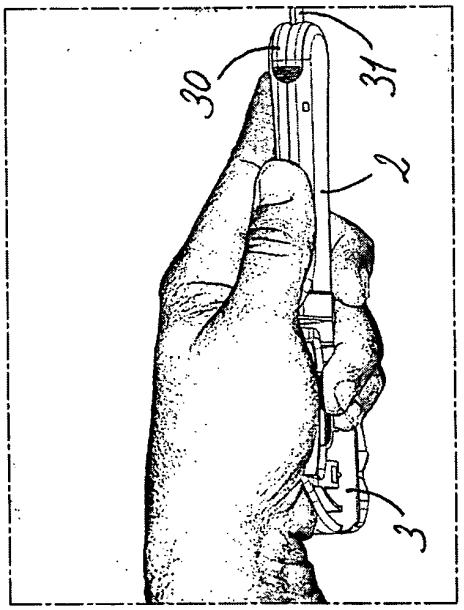

Fig.19

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ ES 2006/000522

A. CLASSIFICATION OF SUBJECT MATTER

B24D 15/08 (2006.01)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CIBEPAT,EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6142038 A (KENESKY et al.) 07.11.2000, the whole document.	1
A	US 5291805 A (BYERS et al.) 08.03.1994, the whole document.	1
A	DE 10052439 C1 (SPREITZ et al.) 31.10.2001 the whole document.	1
A	US 2432231 A (ELPHEE) 09.12.1947, the whole document.	1

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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"O" document referring to an oral disclosure use, exhibition, or other means
"P" document published prior to the international filing date but later than the priority date claimed
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 January 2007 (18.01.2007)	(07-02-20007)
Name and mailing address of the ISA/ O.E.P.M. Paseo de la Castellana, 75 28071 Madrid, España. Facsimile No. 34 91 3495304	Authorized officer A. Gómez Sánchez Telephone No. +34 91 349 53 26

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/ ES 2006/000522

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
US 6142038 A	07.11.2000	US 6393946 B	28.05.2002
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US5291805A A	08.03.1994	NONE	----------
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		JP 2004512186 T	22.04.2004
US2432231A A	09.12.1947	NONE	----------

Form PCT/ISA/210 (patent family annex) (April 2005)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- WO 03076137 A1 **[0003]**