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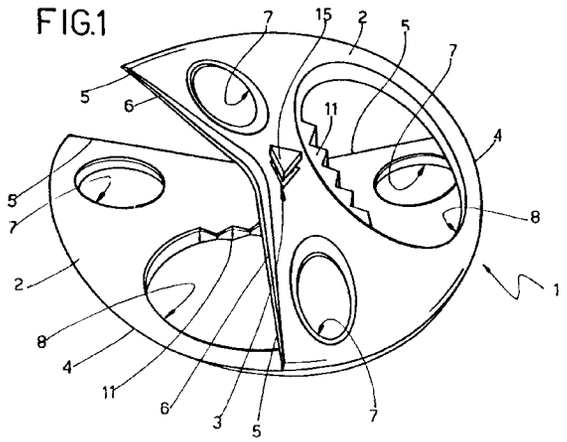
(54) **Scissors of improved type.**

(57) The scissors of the improved type comprise two identical portions (2), a base portion and an upper portion, respectively, revolving around the same axis and of a substantially flat shape, whose profile consists of a first length (4) tracing an arc whose center is represented by the above-mentioned axis of rotation and at least one rectilinear length (5) along which there is defined a cutting blade (6) ; each portion (2) presenting at least one grip eyelet (7).

FIG.1



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The present invention relates to a pair of scissors of the improved type.

As it is well known, the scissors currently on the market consist of two levers hinged to each other in a central manner and presenting a portion wherein an eye is obtained and used for gripping, and a second tapered portion whose inner edge is sharp so as to form a cutting blade.

One of the main drawbacks of the scissors currently on the market consists in the pointed shape thereof that may be dangerous for users, in particular for children. Indeed, an appallingly huge number of household accidents has been observed to occur owing to an incorrect use of such scissors, so much so that they may be regarded as actual weapons; the so-called "cold steel". Hence, the need for such scissors to be kept out of the children's reach and preferably in suitable cases. A further drawback caused by the pointed shape of the scissors in question consists in that, in the event of their being dropped, their tip may break or else chip thus damaging the object on to which they may fall, such as a wooden piece of furniture, a couch, etc..

Aim of the present invention is the embodiment of a pair of scissors that may obviate to said drawbacks, i.e., that may not be dangerous for users and that, in the event of a fall, may neither damage their cutting blades nor the objects they may fall upon.

Further aims and advantages of the present invention shall be pointed out hereinafter.

The present invention relates to the embodiment of a pair of scissors characterized in that it comprises two similar portions, a base portion and an upper portion, respectively, revolving around the same axis and of a substantially flat shape, whose profile consists of a first length tracing an arc, preferably having as its center said axis of rotation and at least a further rectilinear length along which a cutting edge is defined; each of said portions presenting at least one grip eyelet.

The present invention will be better described by way of a non-limiting example, with reference to the accompanying drawings, in which:

Fig. 1 shows a perspective view, in the cutting position, of a pair of scissors according to the present invention;

Fig. 2 shows a perspective view of the pair of scissors in Fig. 1 in a different position;

Fig. 3 shows a plan view of the pair of scissors in Fig. 1;

Fig. 4 shows a section along lines IV-IV in Fig. 3; and

Fig. 5 shows a large scale section of a detail of the pair of scissors in Fig. 4.

According to Fig. 1, number 1 shows a pair of scissors in its whole, of an overall lenticular shape and comprising two identical portions 2, which may be defined, for clarity's sake, as a base portion and an upper portion, respectively, and a system 3 enabling portions 2 to rotate with respect to the same axis or else one portion 2 to be stopped over the other. Scissors 1 further present two opposed cutting lines which, as described hereinafter, may be either similar, so that scissors 1 may be utilized by both right-handed and left-handed users, or else different (for instance, one cutting line may be a ratchet-tooth line or have a different thickness) so as to be suitable for cutting objects made of a variety of materials or having varying thickness.

With reference to Fig. 1 to 4, each portion 2 consists of a plate presenting a flat surface facing the relevant flat surface of the other portion 2 and a convex surface facing outwards. The profile of each portion 2 consists of an extended length 4 tracing an arc and of two rectilinear length 5, of equal extension, joining each other in the neighbourhood of the center of said circle. The arc relevant to length 4 subtends an angle larger than 180°. Along length 5 there is defined a relevant cutting edge constituting a real cutting blade 6. Each portion 2 presents two eyelets 7, each of them being obtained in the neighbourhood of a relevant length 5, and an opening 8, presenting a large surface extension, defined between said center and the portion of length 4 between eyelets 7. The latters, as shown in Fig. 4, are flared from the flat surface to the convex surface. Furthermore, a section 11 of opening 8, next to said center, is ratchet-tooth like for aesthetics reasons.

With reference to Fig.s 1 and 3, scissors 1 present two cutting lines, each defined by a blade 6 of one portion 2 and by a blade 6 of the other portion 2. In order to cut an object along one cutting line, eyelets 7, opposed to blade 6 of that specific cutting line, are utilized. Fingers are inserted, of course, into eyelets 7, setting portions 2 into rotation against each other. The aim of openings 8, therefore, is that of enabling one finger to be inserted into eyelet 7 of base portion 2 without hindering the finger inserted into eyelet 7 of upper portion 2. Thanks to one portion 2 being able to rotate with respect to the other, cutting may clearly be carried out in an independent manner, along either cutting line.

With reference to Fig. 4, a through hole is obtained in each portion 2, in connection with said center, defined by a first length 12, having a triangular section, in connection with the convex surface, and by a second cylindrical length 13 proceeding into the flat surface. System 3 is schematically shown in Fig. 4, whereas Fig. 5 shows it in detail. System 3 comprises a first pin 14, angularly rigid with base portion 2, and a second pin 15, manually translatable between a first position, wherein it is angularly constrained to pin 14 and angularly free from upper portion 2, and a second position, wherein it is angularly constrained to both pin 14 and upper portion 2.

Pin 14 comprises a head 16, having a triangular

section, housed in length 12 of the hole of base portion 2 and a cylindrical hollow shank 17, threaded in its interior, housed in length 13 of base portion 2 and in a part of length 13 of upper portion 2. System 3 comprises a third pin 18 presenting a cylindrical hollow shank 21, threaded on its exterior, and a cylindrical hollow head 22, whose diameter is bigger than shank 21. The latter being screwed inside shank 17 until head 22 abuts against the free end of shank 17 and against an annular shoulder 23 obtained along length 13 of the central hole of upper portion 2. Both fitting and shape of pins 14 and 18 prevent same from being extracted from said holes and allow for the relative rotation of portions 2. Pin 15 comprises a head 24, having a triangular section, and a cylindrical shank 25 slidable inside pin 18 between two positions. Shank 25 presents two toroidal projections 27, integral therewith. Shank 25 further presents, at its free end, an axial protrusion 28 having a limited longitudinal extension and a square section.

In a first position, head 24 of pin 15 is external to length 12 of the central hole of upper portion 2 and protrusion 28 is to be found at a predetermined distance from head 16 of pin 14. In such a first position, the closest among projections 27 to head 24 snaps into a first annular groove 31 obtained inside pin 18. In this position, being head 24 of pin 15 external to relevant length 12, the latter does not hinder the relative rotation of portions 2.

In the second position, pin 15 is axially translated along pin 18 until its head 24 engages relevant length 12, the farthest among projections 17 from head 24 snapping into a further annular groove 31, obtained inside pin 18, and protrusion 28 engaging hole 32, having a square section and obtained in the central part of head 16 of pin 14. In such a second position, due to the fittings described hereinabove, any relative rotation of portions 2 around said axis is clearly prevented.

Fig. 1 shows scissors 1 in one of the two possible cutting positions, namely in that corresponding to said first position of pin 15, the latter's head 24, as it has been pointed out, being external to relevant length 12. To bring scissors 1 into a safety position, portions 2 are rotated so that eyelets 7 of one portion may overlap eyelets 7 of the other portion. In such a position, cutting blades 6 of a first portion 2 are covered by second portion 2 and vice versa. This latter position corresponds to said second position of pin 15.

On the grounds of the foregoing, the advantages offered by the embodiment of the present inventions are clear.

In particular, a pair of scissors has been obtained, having two alternative cutting lines and two positions, namely, a cutting position along any line whatsoever and a closing position, wherein said scissors take on a disc-like shape. The cutting blades tips lie inside said disc, so that both said tips may be protected against possible drop impacts and the surfaces of the pieces of furniture whereon scissors 1 may fall may be prevented from coming into contact therewith. Furthermore, the shape of scissors 1 does not allow for them to be gripped as a knife so as to constitute a weapon, as it happens, on the contrary, with the scissors currently on the market. Scissors 1, therefore, are totally safe, so much so that children may handle them with no danger for themselves and for the others. Since scissors 1 consist of two identical portions, both manufacture and assembly thereof clearly do not present any difficulties whatsoever. Along with all above-mentioned advantages as regards cutting, safe use and manufacture, it is to be pointed out that production costs of said scissors 1 are decidedly lower, also due to the remarks contained hereinafter.

Finally, the present invention described and shown herein may be modified, in such a way, though, as may still fall within the scope of protection of the present invention.

In particular, portions 2 may be made of a different material, for instance, chromium-plated, nickel-plated or stainless sheet steel may be used. In this event, portions 2 may be obtained by pressing or shearing. Portions 2 may be made of plastic material, for instance, by injection molding. The two pairs of blades 6 may be similar or may present different thickness or profiles, in order to adjust to either material or thickness of the object to be cut. Blades 6 may be obtained directly along lengths 5 or else may be inserted and fixed on to relevant lengths 5 by means of a bonding agent or of a mechanic joint, screw or pin lock. In the event of blades 6 of a same portion 2 being inserted, then, they may be made up of either separate parts or of a single piece.

Claims

1.- A pair of scissors of the improved type characterized in that it comprises two similar portions (2), a base portion and an upper portion, respectively, revolving around the same axis, and of a substantially flat shape, whose profile consists of a first length (4) tracing an arc, preferably having as its center said axis of rotation and at least a second rectilinear length (5) along which there is defined a cutting blade (6); each of said portions (2) presenting at least one grip eyelet (7).

2.- A pair of scissors as claimed in Claim 1, characterized in that it comprises a device (3), that may be operated manually between two positions, in one of which said portions (2) are free to rotate around said axis of rotation and, in the second of which, said portions (2) are prevented from carrying out their relative rotation.

3.- A pair of scissors as claimed in Claim 2, char-

acterized in that said device (3) is installed along a through hole obtained in each of said portions (2) in connection with said axis of rotation.

4.- A pair of scissors as claimed in Claim 3, characterized in that said device (3) comprises a first pin (14), angularly rigid with said base portion (2) and a second pin (15), translatable between a first position, in which it is angularly constrained to said first pin (14) and angularly free from said upper portion (2), and a second position in which it is angularly constrained to both said first pin (14) and said upper portion (2).

5.- A pair of scissors as claimed in Claim 4, characterized in that said second pin (15) axially snaps, in said axial positions, on to said first pin (14).

6.- A pair of scissors as claimed in Claim 4, characterized in that in said second position of said second pin (15), said upper portion (2) completely covers said cutting blade (6) of said base portion (2) and vice versa.

7.- A pair of scissors as claimed in at least one of the previous Claims, characterized in that in each of said portions (2) two of said second lengths (5) have equal extension and join each other in the neighbourhood of the center of said circle so as to define two pairs of said blades (6), thus defining two alternative cutting lines.

8.- A pair of scissors as claimed in Claim 7, characterized in that each of said portions (2) presents two of said eyelets (7), each of which is obtained in the neighbourhood of a relevant said second length (5) and an opening (8), having ample surface extension, defined between said center of rotation and the part of first length (4) between said eyelets (7); said opening (8) being capable of making it easier for the fingers to be inserted into one said eyelet (7) of said base portion (2) and into one said eyelet (7) of said upper portion (2).

9.- A pair of scissors as claimed in at least one of the previous Claims, characterized in that each of said portions (2) consists of a plate presenting a flat surface facing the relevant flat surface of the other said portion (2) and a convex surface facing outwards.

10.- A pair of scissors as claimed in at least one of the previous Claims, characterized in that said first length (4) subtends an angle larger than 180°.

11.- A pair of scissors as claimed in at least one of the previous Claims, characterized in that said portions (2) are made of metallic material.

12.- A pair of scissors as claimed in at least one of the previous Claims, characterized in that said portions (2) are made of plastic material.

13.- A pair of scissors as claimed in at least one of the previous Claims, characterized in that said cutting blades (6) are obtained directly on said portions (2).

14.- A pair of scissors as claimed in at least one of the previous Claims, characterized in that said cutting blades (6) are inserted on to said portions (2) and fixed thereto by means of either bonding agent or joint, screw or pin locking, according to the choice made.

15.- A pair of scissors as claimed in Claim 14, depending on Claim 7, characterized in that said blades (6) of one said same single portion (2) are made up of a single piece.

16.- A pair of scissors as claimed in Claim 14, depending on Claim 7, characterized in that said blades (6) of one said same single portion (2) are made up of two separate pieces.

FIG.1

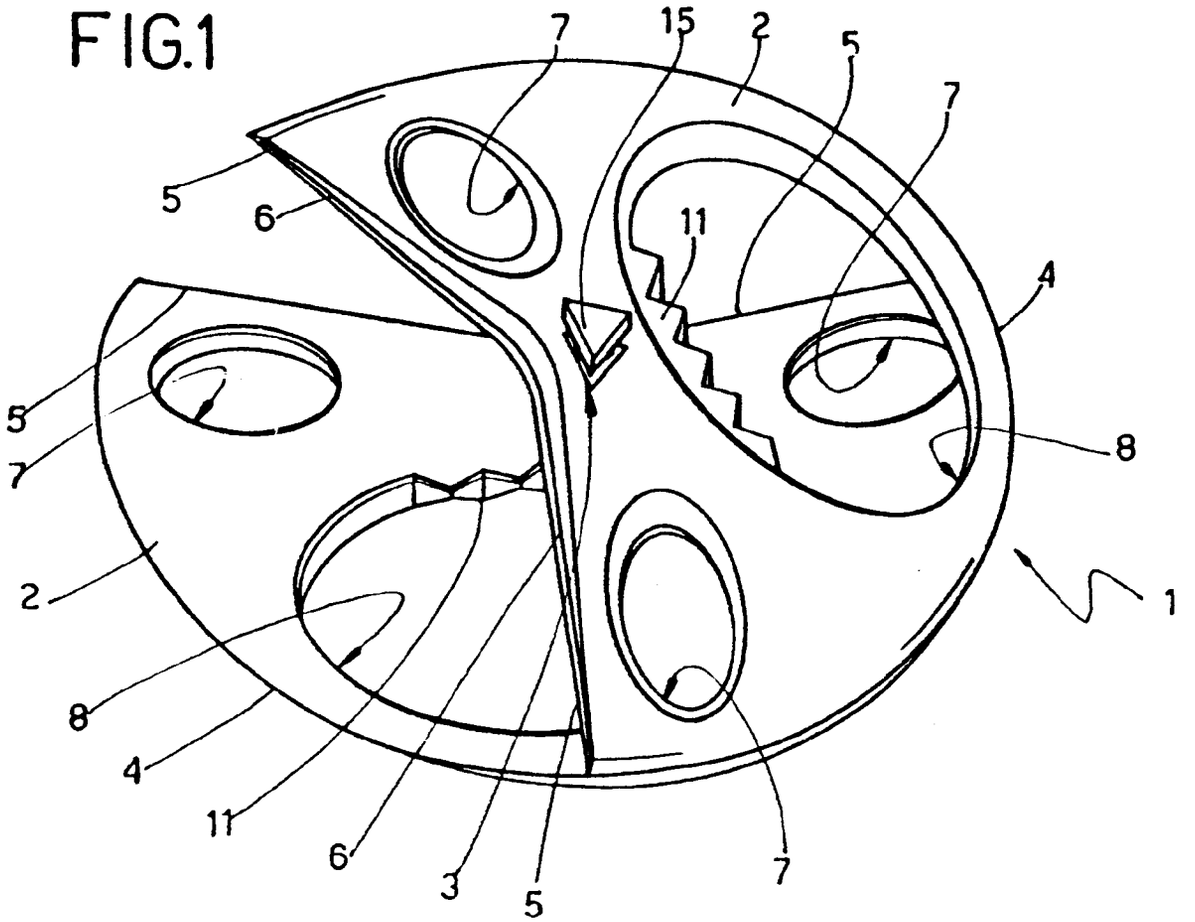


FIG.2

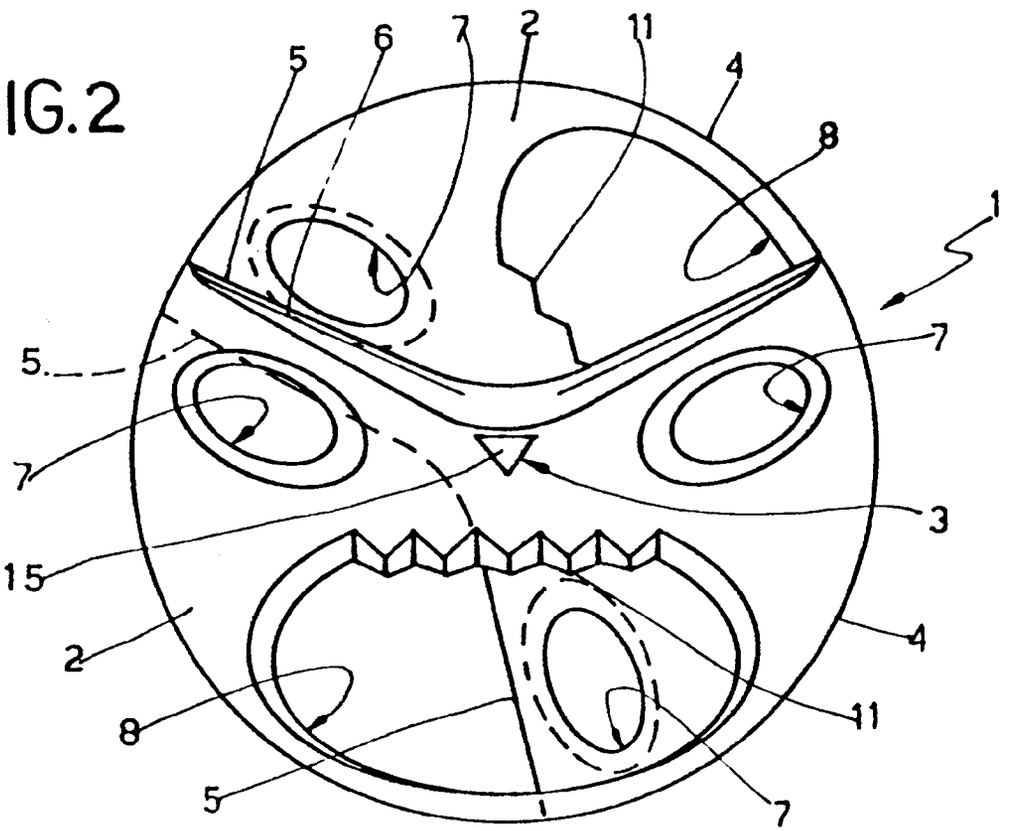


FIG.5

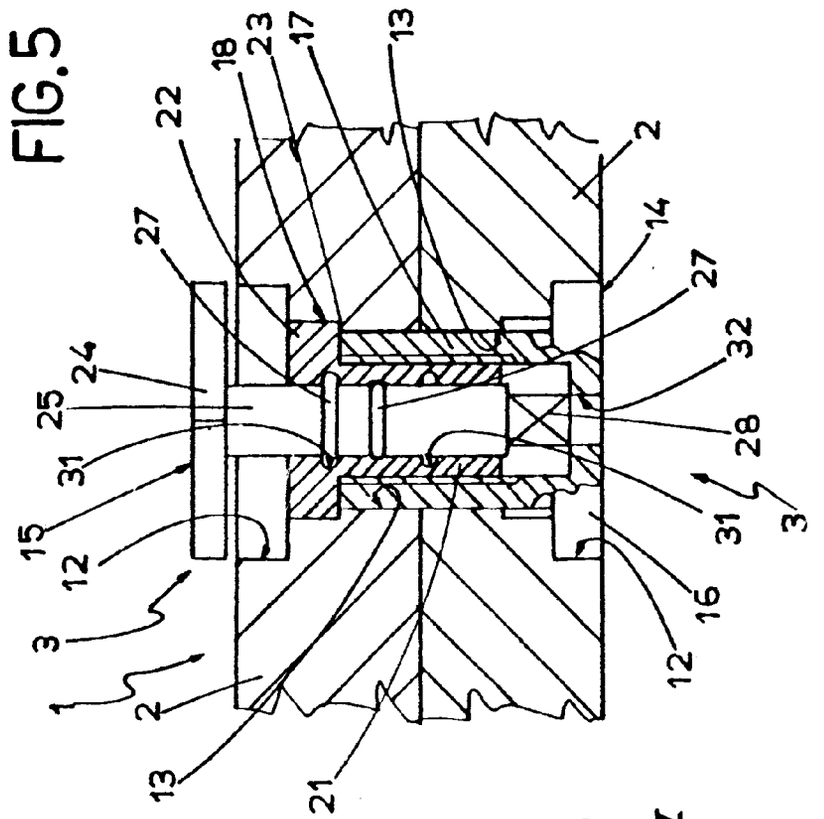


FIG.3

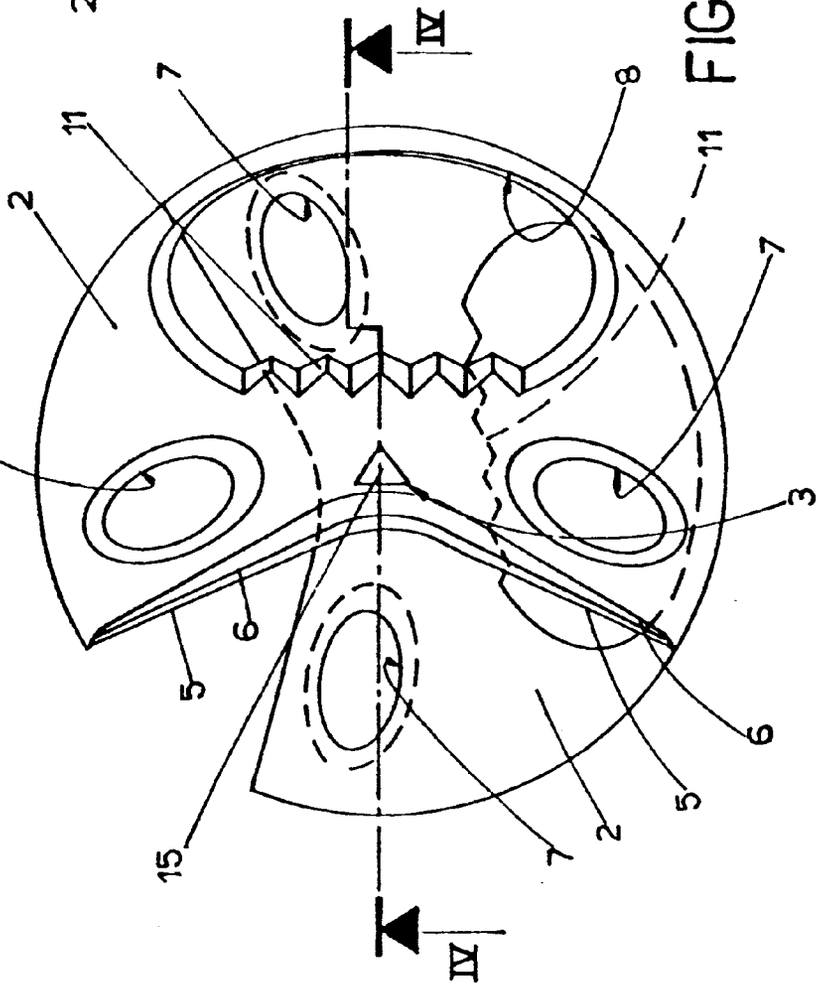
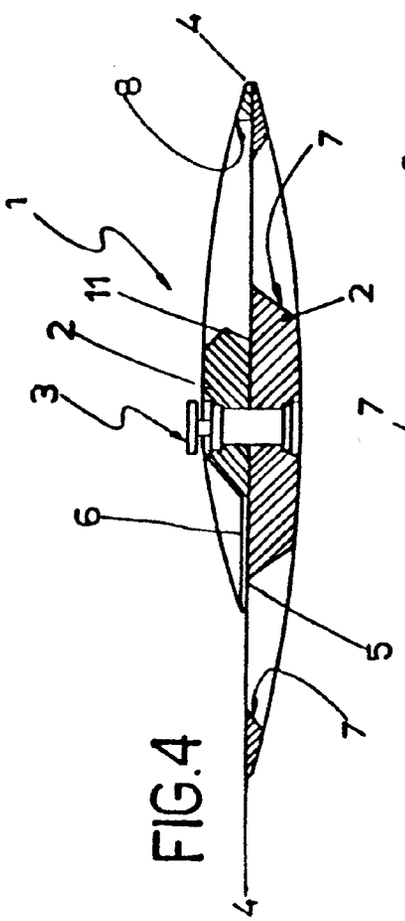


FIG.4



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EUROPEAN SEARCH REPORT

Application Number
EP 93 10 2157

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X Y A	DE-A-4 042 360 (D. WABNITZ) * the whole document *	1-3 4,6 14,15	B26B13/20 B26B13/06
Y	DE-A-4 014 269 (D. WABNITZ) * column 4, line 1 - line 58; figures 1-3 *	4,6	
A	US-A-1 529 237 (K. BRCECINSKI) * page 1, line 61 - line 72; figure 5 *	7-9,13	
A	US-A-2 591 740 (W.M. STILWELL ET AL) * column 1, line 1 - column 2, line 21; figures 1,2 *	1,10-12	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B26B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	29 APRIL 1993	RAVEN P.

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