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(12) # EUROPEAN PATENT APPLICATION

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(54) **Hand-scissors.**

(57) The hand-scissors according to the invention are provided with cutting edges consisting of hard metal, such as tungsten-carbide.

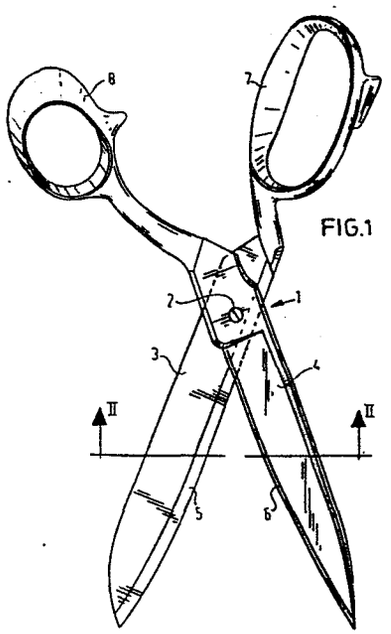

FIG.1

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Short title: Hand-scissors

The invention relates to hand-scissors, comprising two relatively pivotable blades having cooperating cutting edges and operating means adapted to be gripped by the hand.

Such a hand-scissors is known. The disadvantage of the prior art hand-scissors is that in cutting relatively hard materials they become blunt in an intolerably short time, causing the scissors to have to be sharpened over and over, or preventing their use, so that one has to take his refuge in other techniques.

An example is the cutting of fibres, e.g. those which are commercialized under the trade-name Arenka by the Firm Enka Glanzstoff, and Kevlar of the Firm Dupont-de Nemours. Such fibres are used and will in the future in an increasing degree be used for among others reinforcement of glass-fibre cables for telecommunication purposes. For such an application it is necessary that glass-fibre cables can in situ be readily worked for coupling with end-apparatus, connection with other cables etc. Thereto preferably a hand-scissors is used. Prior art scissors are, due to the very high hardness of the fibres involved already after

some cutting operations utterly unusable.

Even the cutting of domestic paper containing fibres gives problems in connection with the rapidly becoming blunt of a hand-scissors.

In order to increase the standing-time of the prior art hand-scissors the cutting angle of the cutting edges is usually chosen only a little smaller than 90^{o}. This causes the effectiveness of the cutting operation to be not very great, so that a relatively large cutting force has to be exerted with the hand.

Purpose of the invention is to relieve the mentioned disadvantages and limitations of the prior art and in view thereof the invention provides a hand-scissors of the type described, of which said cutting edges consist of hardmetal. This hardmetal may be tungsten-carbide.

A very great effectiveness of the cutting operation whilst maintaining a long standing-time is obtained, if the cutting angle of said cutting edges is smaller than 50^{o}.

In order to avoid that the scissors according to the invention will become too expensive by making the blades including the cutting edges fully of hardmetal, advantageously the cutting edges may be made in the form as strips of hard-metal adhered to said blades. In this case e.g. the cutting edges are adhered to said blades by hard-soldering. Also other connecting methods may be used.

The invention will now be explained with reference to the drawing of an arbitrary embodiment.

In the drawing show:

Fig. 1 a perspective view of a hand-scissors;

Fig. 2 a section along the line II-II in Fig. 1;

Fig. 3 a perspective view of a variant; and

Fig. 4 a perspective view of the variant according to Fig. 3 seen from the other side.

Fig. 1 shows a hand-scissors 1, comprising two relatively, round a pivot-shaft 2 pivotable blades 3, 4 having cooperating cutting edges, 5 and 6, respectively,

in which hand-grips 7, 8 are present at the end directed away from the cutting edges 5, 6 relatively to the pivot-shaft 2.

The cutting edges 5, 6 comprise strips 9, 10 of tungsten-carbide. The strips 9, 10 are in the way shown in Fig. 2 embedded in blades 3, 4 and connected therewith by hard-soldering, in such a way that they are fully received in the profile.

At the blade 4 in Fig. 2 the cutting angle 11 is shown. In this embodiment this angle has a value of about 40°.

The hand-scissors 2 can also comprise blades fully consisting of hard-metal. Further the blades may be urged from one another by spring-force, in which the operating means can, in deviation of the embodiment according to Fig. 1, be positioned at the side of the cutting edges relatively to the pivot-middlepoint.

Fig. 3 shows a so-called one-ring-scissors 11 having relatively pivotable blades 12, 13 of synthetic resin, which by means of screws 14 strips 15, 16 of hard-metal are connected. These strips 15, 16 carry cutting edges 17, 18, respectively.

The blade 12 carries a ring 19, which is intended to receive the ring-finger, and a flat part 20 for cooperation with the middle-finger and fore-finger. The blade 13 carries a flat part 21 intended to receive a pressure exerted thereof by the thumb. Blades 12, 13 are urged away from one another by a screw-spring 22 indicated by dotted lines in Fig. 4.

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CLAIMS

1. Hand-scissors, comprising two relatively pivotable blades having cooperating cutting edges and operating means adapted to be gripped by the hand characterized in that said cutting edges consist of hard-metal.

2. Hand-scissors according to claim 1, characterized in that said hardmetal is tungsten-carbide.

3. Hand-scissors according to anyone of claims 1 and 2, characterized in that the cutting angle of said cutting edges is smaller than 50^{o}.

4. Hand-scissors according to anyone of the preceding claims characterized in that said cutting edges are in the form as strips of hardmetal adhered to said blades.

5. Hand-scissors according to claim 4, characterized in that said cutting edges are adhered to said blades by hard-soldering.

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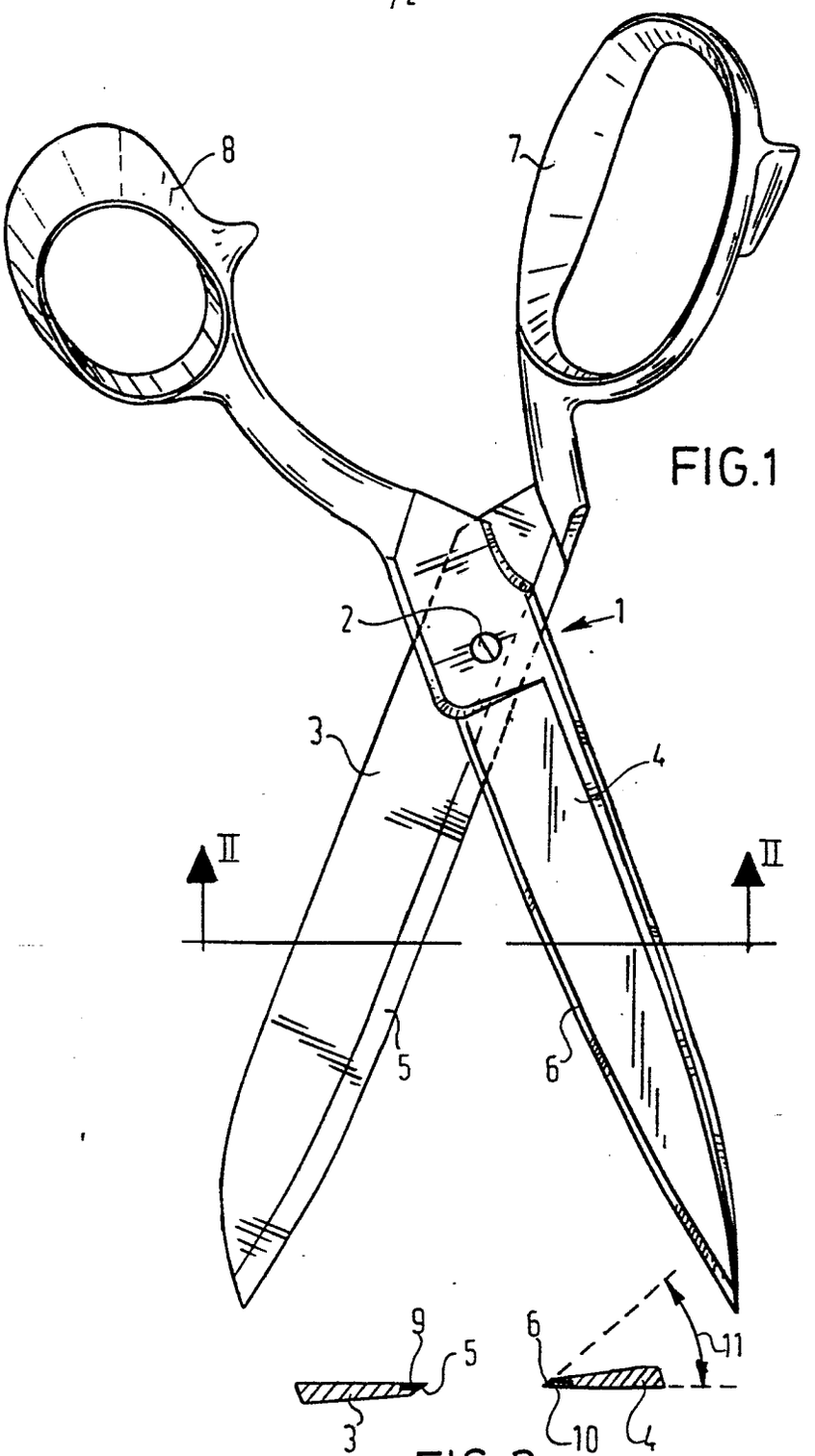


FIG.1

FIG.2

FIG.3

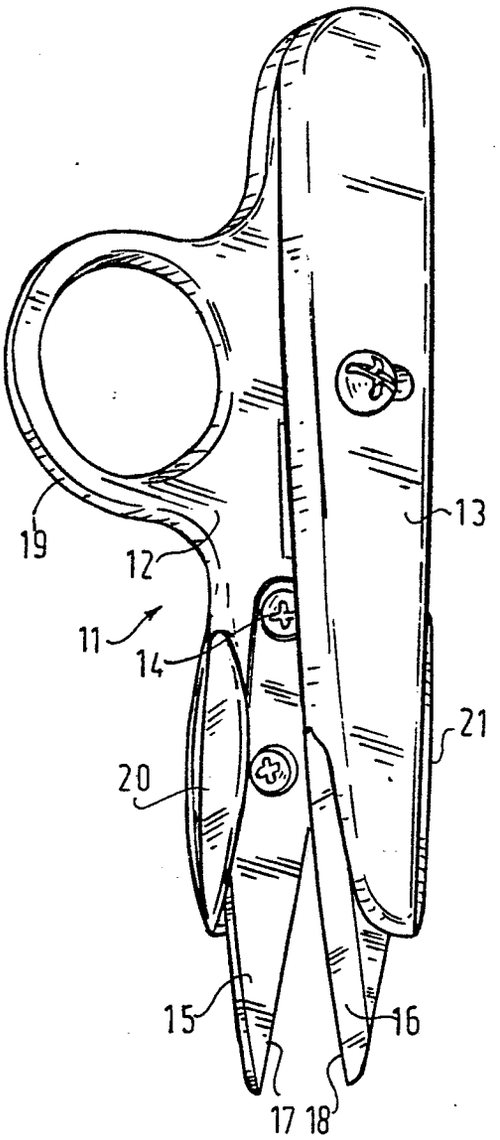
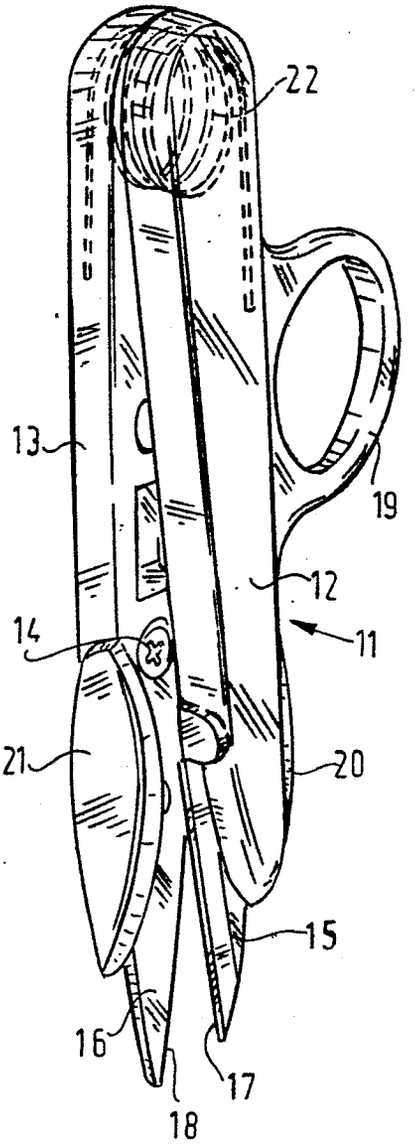


FIG.4



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EUROPEAN SEARCH REPORT

0115358
Application number

EP 84 20 0001

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. ³)
X	DE-A-1 553 695 (FELD-WERKZEUG FAB.) * Whole document *	1,4,5	B 26 B 13/06
Y	FR-A-2 495 041 (HUGONOIT) * Page 1, lines 15-26; figures 3,4 *	1,2,5	
Y	DE-A-1 602 780 (GENERAL ELECTRIC COMPANY) * Page 4, lines 1-6 *	1,2,5	
A	US-A-2 873 526 (O. VISCONTI) * Column 3, lines 50-58; figure 6 *	3	
A	US-A-1 846 867 (HERSHEY)		TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
A	DE-B-2 529 305 (WOLF-GERAETE)		B 26 B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	13-04-1984	WOHLRAPP R.G.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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