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**EUROPEAN PATENT APPLICATION**

21 Application number: 81200178.2

51 Int. Cl. 3: **B 27 L 7/00**

22 Date of filing: 16.02.81

30 Priority: 03.09.80 SE 8006137

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43 Date of publication of application: 17.03.82  
Bulletin 82/11

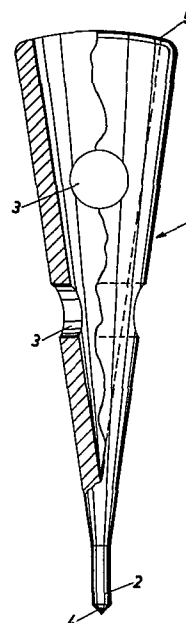
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84 Designated Contracting States: AT BE CH DE FR GB IT LI LU NL

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54 **Cleaving Wedge.**

57 The invention refers to a conical wedge having a circular and/or oval cross-section, and is preferably intended for cleaving pieces of wood and similar. The wedge exerts an automatic splitting effect in the wood substantially perpendicular to the naturally occurring weak zones in the wood, no matter in what direction these run. The wedge having a more or less circular cross-section always has a diametrical plane, in which the cross-sectional dimension of the wedge increases upwards and which extends perpendicular to the direction of an indication of cleavage in the wood.



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When cutting up tree trunks, larger branches and stumps etc. people have since time immemorial been using wedges with plane surfaces, which have been driven into the wood at certain indications of cleavage like cracks, natural or from strokes with an axe, or the like. The wedge has then been driven into the wood e.g. by means of an axe, until the piece of wood has if possible, been split into two pieces.

A wedge, worked with an axe or a sledge-hammer, has a great cleaving effect in wood, but in spite of this it is sometimes very difficult, requires a lot of work, and sometimes it is not even possible to cleave a piece of wood in this way, as it might be difficult or impossible to apply the wedge with its mid plane substantially parallel with a natural crack in the wood (e.g. when dealing with cross-grained wood). It is also well known, that coarse wood is difficult to split in this way.

The object of the invention is to provide a wedge for cutting up pieces of wood according to the above, said wedge not having the implied disadvantages of the previously known flat wedge. This is achieved by the wedge according to the claims.

The invention is further described with references to the attached drawings.

Fig. 1 is a side-view of wedge according to the invention, and

Fig. 2 is a side-view of a wedge, according to the invention, where the wedge is divided into two parts along a cross plane,

Fig. 3 shows a modified embodiment of the wedge provided with a handle.

The wedge according to the invention, shown in fig. 1 does not have the plane surfaces of the previously known wedges. The wedge according to the invention can thus be described as a cone which everywhere has a round or oval cross section. Surprisingly it has been found that, when a wedge of principally this shape, is driven down into a piece of wood, it will automatically have a splitting effect, mainly perpendicular to the naturally occurring weaker and zones in the wood, no matter in what direction these run. This can be explained by the fact that a wedge, which has a more or less circular cross section, always has a diametrical plane, in which the cross dimension of the wedge is increasing upwards, and which runs perpendicular to a zone of the wood, that is of such a character, that a crack can arise. In case the cross sections of the wedge are not circular or ovals, the plane containing the major axis can be located, from the beginning, substantially perpendicular to the direction of a visible indication of cracking, to get the greatest splitting effect.

The pointed, bottom part 2 of the wedge 1 can be made cylindrical or given a smaller angle of taper than the rest of the wedge and also be provided with an edge 4 in order to

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facilitate the driving of the wedge. Preferably the wedge is also provided with transversal, more or less radially running, borings, possibly all through, which can be distributed in different ways along the wedge. The borings offer a holder in the wood for the wedge and also make it possible to insert a chain or the like for pulling up e.g. a wedge which is stuck in a stump. The borings also reduce the weight of the wedge, and for this purpose the wedge can also be made hollow and in that way pileable as is shown in fig. 1.

The hollow wedge may be provided with one or more inner, radial connection walls, which can also offer a larger impact surface at the base 5 of the cone-shaped wedge. This surface should be convex independent of the wedge being massive or hollow.

Figure 2 shows a wedge, divided into two parts along a cross plane, said wedge consisting of a cone-shaped bottom part 1a and an upper part 1b, which has the shape of a truncated cone. The basis 6 of the part 1a corresponds to matches the small end surface 7 of the part 1b. These two surfaces can also have complementary shapes i.e. if one of them is convex, the other one is concave. The bottom cone-shaped part 1a has preferably a circular cross section, while the upper part changes from a round cross section at the small end surface 7 to an oval cross section. The advantage of the edge according to fig. 2 is the fact that after the circular cone-shaped bottom part 1a of the wedge is driven into the wood, it is usually quite easy to decide in what directions the piece of wood tends to crack. The upper part 1b of the wedge is then located on to the bottom part with the major axis placed in such a direction that the best splitting effect can be achieved. Expressions like "downwards" relate to the direction, in which the wedge is driven into the wood.

The bores 3 may also serve to receive a handle, which easily can be taken off, e.g. an axe handle as shown in fig. 3. This makes it easier to drive the wedge into the wood.

C l a i m s

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1. A wedge preferably for cleaving pieces of wood and the like,  
c h a r a c t e r i z e d t h e r e b y  
that said wedge has the shape of a cone, the cross sections of which are circular and/or oval and have practically no plane side surfaces at all.

2. A wedge according to claim 1,  
c h a r a c t e r i z e d t h e r e b y  
that it is provided with one or more, mainly radially running, preferably through borings (3), located along and round the envelope surface of the wedge.

3. A wedge according to claim 1 or 2,  
c h a r a c t e r i z e d t h e r e b y  
that the pointed part (2) of the wedge is cylindrical and has less angle of taper than the rest of the wedge.

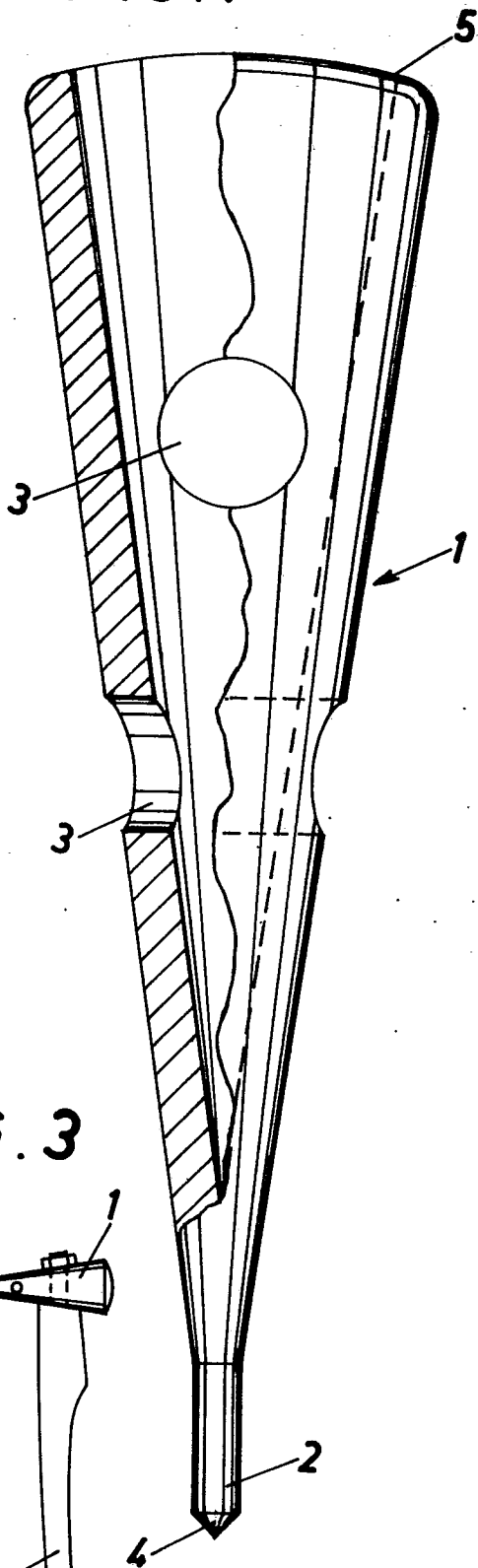
4. A wedge according to any of the previous claims,  
c h a r a c t e r i z e d t h e r e b y,  
that the impact surface (1) of the wedge is convex or concave.

5. A wedge according to any of the previous claims,  
c h a r a c t e r i z e d t h e r e b y  
that it is divided into two parts along a cross plane, at which one part (1a) is conical and has circular cross sections and is intended to be driven first into the piece of wood that is to be cloven, and the other part (1b) has the shape of a truncated cone with oval cross sections and is intended to be placed onto said one part, when this has been driven into the piece of wood, and then be knocked in.

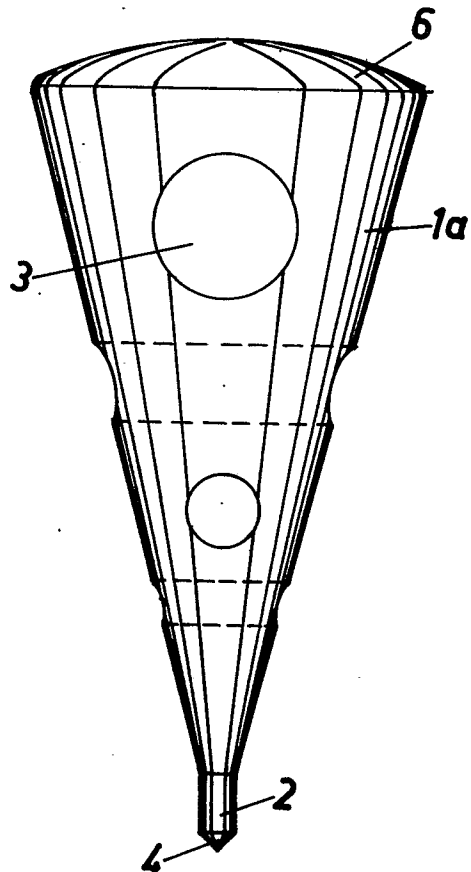
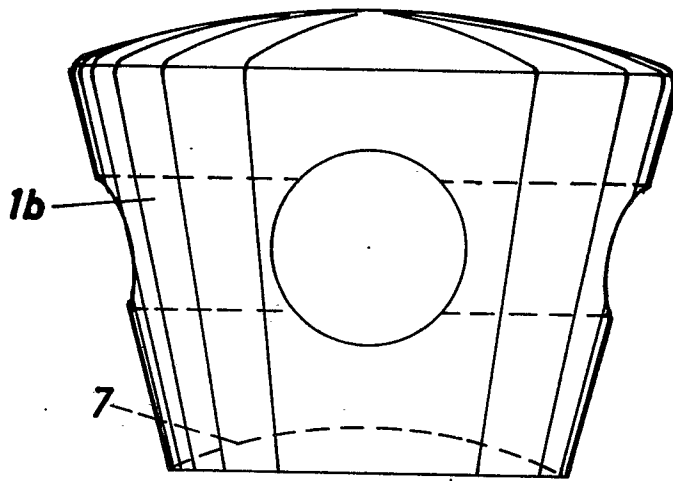
6. A wedge according to claim 5,  
c h a r a c t e r i z e d t h e r e b y  
that the base (6) of said one wedge part (1a) substantially matches the small end surface (7) of said other part (1b), these matching surfaces also having complementary shapes, i.e one of them being convex and the other concave.

7. A wedge according to any of the claims 2-6,  
c h a r a c t e r i z e d t h e r e b y  
that the boring, which is closest to the cone base, is designed for receiving a pulling-up device and/or a shaft (8).

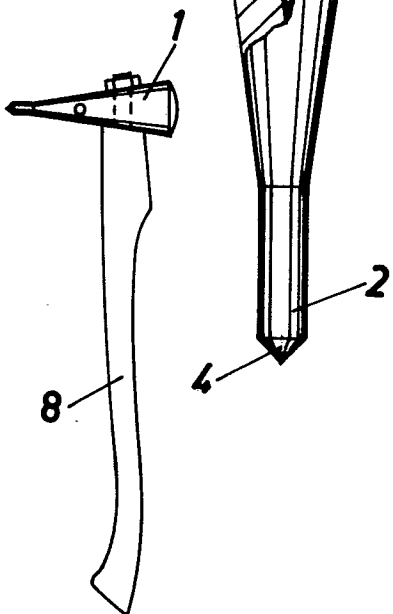
**FIG. 1**



**FIG. 2**



**FIG. 3**





DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	<u>GB - A - 2 026 938</u> (OMARK) * Whole document *	1-4,7	B 27 L 7/00
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A	<u>US - A - 1 356 413</u> (STAUB) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl.)
			B 27 L 7/00
			CATEGORY OF CITED DOCUMENTS
			X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
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<input checked="" type="checkbox"/> The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
The Hague	23-11-1981	DE GUSSEM	