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(71) Applicant: **Slijptechniek B.V., Groenloseweg 28, NL-7151 HW Eibergen (NL)**

(72) Inventor: **Nijhoff, Leendert Dirk, Grotestraat 106, NL-7151 BE Eibergen (NL)**

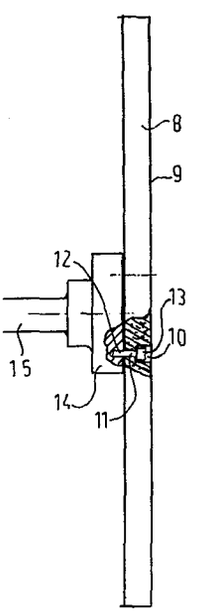
(74) Representative: **Schumann, Bernard Herman Johan et al, OCTROOIBUREAU ARNOLD & SIEDSMA Sweelinckplein 1, NL-2517 GK The Hague (NL)**

(54) Cutting-off disc.

(57) The invention relates to a cutting-off disc having in its free, operative side face at least one recess and at least one bore adjoining said recess for accomodating in countersunk position a member for fastening the disc to a driving shaft.

A disadvantage of the known disc is that due to the very high speeds in cutting-off and to the relatively large dimensions of the disc the centrifugal forces in the disc may become very high. As a result of the dish-shaped central part 7 the force occurring may be so heavy that the disc may exhibit certain elastic deformations, whilst there is furthermore the risk that the disc has to absorb forces in a direction in which it is not sufficiently capable of doing so, which results in rupture. This means a necessary replacement of an expensive disc.

The novel technique proposes to avoid the abovementioned disadvantages by providing a cutting-off disc of the kind set forth in the preamble, which has the shape of a flat disc.



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Short title: Cutting-off disc.

The invention relates to a cutting-off disc having in its free, operative side face at least one recess and at least one bore adjoining said recess for accommodating in countersunk position a member for fastening the disc to a driving shaft.

Such a cutting-off disc is known.

Fig. 1 shows a known cutting-off disc 1. The operative front face thereof is quite smooth over an important part. In the middle is provided a recess 3 with an adjoining central bore 4 so that a bolt 5 can pass through the central bore 4 and the head 6 of the bolt does not project in front of the operative front face 2 of the disc 1.

The cutting-off disc 1 has a shape such that it has a dish-shaped central part 7.

A disadvantage of this known design is that the known cutting-off disc requires a special method of manufacture so that it is relatively expensive.

A further disadvantage of the known disc is that due to the very high speeds in cutting-off and to the relatively large dimensions of the disc the centrifugal forces in the disc may become very high. As a result of the

dish-shaped central part 7 the force occurring may be so heavy that the disc may exhibit certain elastic deformations, whilst there is furthermore the risk that the disc has to absorb forces in a direction in which it is not sufficiently capable of doing so, which results in rupture. This means a necessary replacement of an expensive disc, whilst the rupture of a disc may be extremely hazardous to the staff and may cause damage to material and machinery:

The novel technique proposes to avoid the above-mentioned disadvantages by providing a cutting-off disc of the kind set forth in the preamble, which has the shape of a flat disc.

The invention will be described more fully with reference to the drawing of some arbitrary embodiments.

The drawing shows in

Fig. 1 a known cutting-off disc in a fragmentary side view,

Fig. 2 a fragmentary side elevation of a cutting-off disc of the type proposed and

Fig. 3 a detail of a second embodiment.

Fig. 1 shows a known cutting-off disc having a dish-shaped central part as described above.

Fig. 2 shows a new type of cutting-off disc 8 having a plurality of recesses 10 opening out in the operative front face 9 and adjoining bores 11 for receiving in countersunk position as shown a screw 12 having a head 13, which head does not project in front of the operative front face 9.

As will be apparent from Fig. 2 the bores 11 serve to pass the shanks of the screws 12, which co-operate with a stretching flange 14 arranged at the end of a driving shaft 15.

Fig. 3 shows a cutting-off disc 16 connected with a clamping flange 17 by using bolts 18 screwed tight by means of nut 22 to the clamping flange 17, the bolts having heads 20 countersunk in recesses 19. With respect to the recesses 19 the heads 20 have a size such that they do not project in front of the front face 23 of the cutting-off disc 16.

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CLAIM

A cutting-off disc having in the free, operative side face at least one recess with at least one adjoining bore for receiving, in countersun, position, a member for fastening the disc to a driving shaft characterized in that the cutting-off disc is constructed in the form of a flat disc.

FIG.1

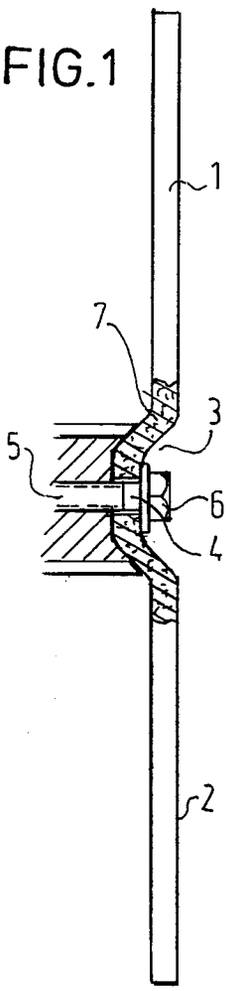


FIG.2

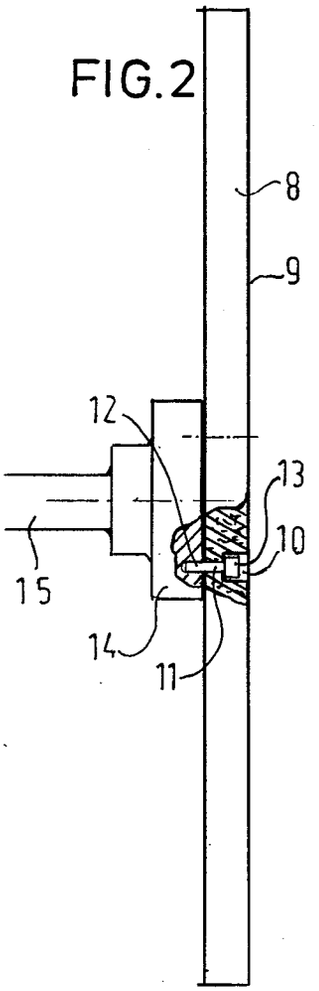
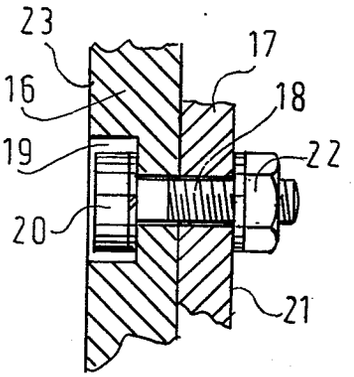


FIG.3



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EUROPÄISCHER RECHERCHENBERICHT

Nummer der Anmeldung

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EINSCHLÄGIGE DOKUMENTE

Kategorie	Kennzeichnung des Dokuments mit Angabe, soweit erforderlich, der maßgeblichen Teile	Betrifft Anspruch	KLASSIFIKATION DER ANMELDUNG (Int. Cl. ³)
X	FR - A - 2 193 342 (ZEITLIN) * Fig. 1,2 * --	1	B 24 D 7/16
A	GB - A - 914 315 (MINING) * Fig. 1,2 * --	1	
A	DE - C - 578 989 (HANCHETT) * Fig. 1-5 * --	1	
A	AT - B - 330 006 (TYROLIT) * Fig. 1-3 * ----	1	

RECHERCHIERTE SACHGEBIETE (Int. Cl. ³)

B 24 D 5/00
B 24 D 7/00
B 24 D 13/00
B 24 B 45/00
B 24 B 27/00

Der vorliegende Recherchenbericht wurde für alle Patentansprüche erstellt.

Recherchenort	Abschlußdatum der Recherche	Prüfer
WIEN	20-06-1984	FUCHS

KATEGORIE DER GENANNTEN DOKUMENTEN

X : von besonderer Bedeutung allein betrachtet
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