

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number:

0 039 373
A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 80107644.9

(51) Int. Cl.³: **E 02 F 3/66**
B 06 B 3/00

(22) Date of filing: 04.12.80

(30) Priority: 02.05.80 US 145921

(43) Date of publication of application:
 11.11.81 Bulletin 81/45

(88) Date of deferred publication of search report: 01.12.82

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

(71) Applicant: **RESONANT TECHNOLOGY COMPANY**
 470 Dunn Circle
 Sparks Nevada 89431(US)

(72) Inventor: **Gurries, Raymund Albert**
 1420 Eli Drive
 Reno Nevada 89511(US)

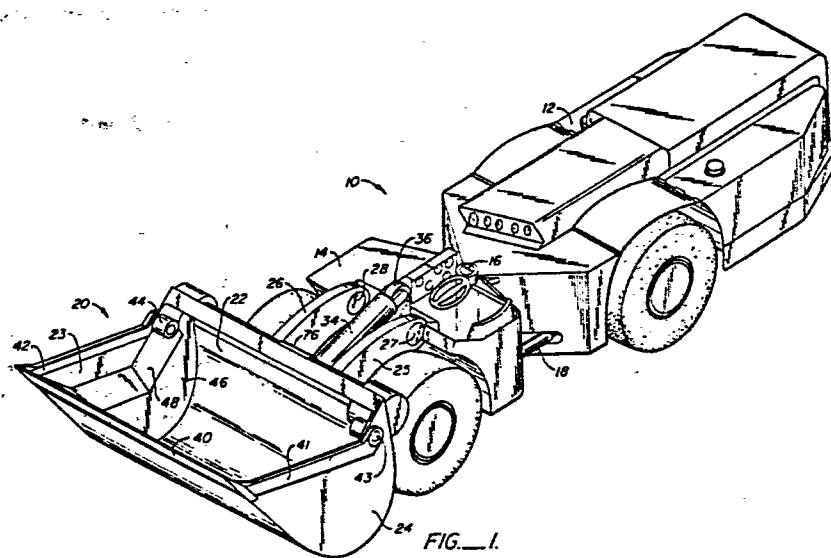
(72) Inventor **Stormon, Harry Jay**
 908 Camino real Drive
 Sparks Nevada 89431(US)

(74) Representative **Patentanwälte Dipl.-Ing. A. Grunecker,**
Dr.-Ing. H. Kinkeldey, Dr.-Ing. W. Stockmair,
Dr. rer. nat. K. Schumann, Dipl.-Ing. P.H. Jakob, Dr. rer.
nat. G. Bezold Maximilianstrasse 43
D-8000 München 22(DE)

(54) Compact resonance drive for earth-working equipment.

(57) A mechanism for resonantly driving a moveable cutter blade located at the base of a concave tool is disclosed. An angulate beam (50) has first (51) and second (52) legs meeting at a juncture (54) at an included angle of less than 180°. The beam includes a mounting flange which extends inwardly from the juncture between the legs. The beam has a resonant frequency, when restrained at the mounting flange, with a node at the juncture and first and second anti-nodes at the ends. One end of the beam receives a vibratory input (58) at or near the resonant frequency so that the second end vibrates about a neutral position. The mounting flange is attached to the tool so that the angulate beam conforms to the concave shape of the tool. The neutral position of the second end of the beam is spaced from the back of the cutter blade (72) within striking distance of the blade. The input vibration at the first end of the beam causes the second end to vibrate about its neutral position and impart forward impulses to the cutter blade to drive the blade intermittently forward.

./...



0039373



European Patent
Office

EUROPEAN SEARCH REPORT

Application number

EP 80 10 7644

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)
A	WO-A-7 901 066 (GURRIES) * Page 6, line 19 - page 9, line 7 *	1,3-6	E 02 F 3/66 B 06 B 3/00
A	US-A-3 645 021 (SONERUND) * Whole document *	1,5,6,8	
A	US-A-3 238 646 (OLDENBURG) * Whole document *	8,10-12	
A	US-A-3 077 999 (SVOBODA) * Column 3, lines 13-26; figures 6,7 *	8,10,11	
A	US-A-3 867 987 (SEABERG)		TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
A	US-A-3 857 447 (ADAMS)		E 02 F B 06 B A 01 B E 21 F
A	US-A-3 795 070 (BRONSON)		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 30-08-1982	Examiner PAUCNIK B.
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			