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(54) **Lapping head with oscillating toolholders**

(57) Lapping head with oscillating toolholders, with a driving shaft (1), and a plurality of toolholders (6) which are connected to the driving motor (1) by means of first and second drive means for the transmission of motion; wherein the first drive means (3, 5) comprise a first body (5) for supporting the toolholders (6) which is integral with the driving shaft (1) and the second drive means cause the toolholders (6) to oscillate about their axes (7), wherein the second drive means comprise at least

a plurality of first gears (15) pivoted on said plurality of toolholders (6), and a crown gear (12) connected to the driving motor (1) and meshing with said plurality of first gears (15) through two toothings (14, 15') one of which exhibits at least a variation of inclination along its development, and wherein the said toolholders (6) are pivoted on said support body so as to oscillate when the meshing of said toothings takes place in correspondence of a portion thereof exhibiting said variation of inclination (Fig. 1).

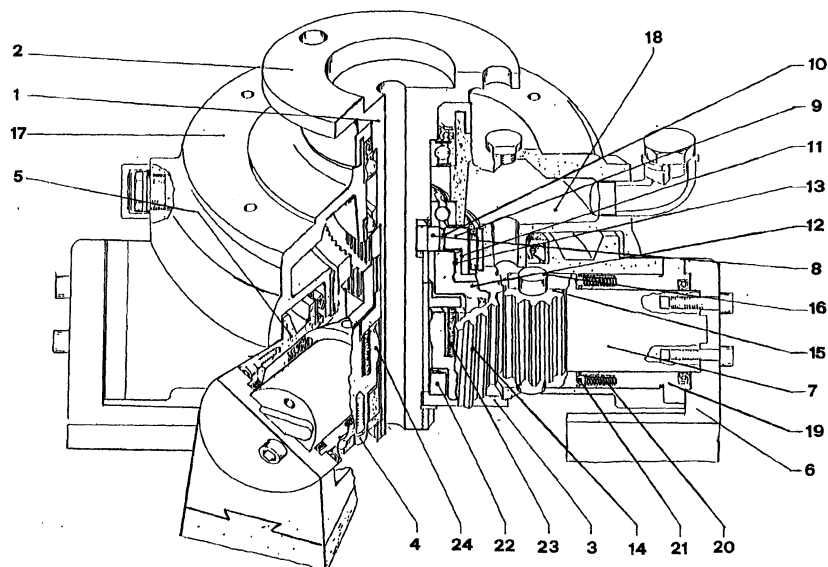


Fig. 1



European Patent
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EUROPEAN SEARCH REPORT

Application Number
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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.6)
A	EP 0 667 210 A (SIMEC SPA) 16 August 1995 (1995-08-16) * column 1, line 4 - line 11 * * column 2, line 330 - line 50 * ---	1-16	B24B41/047 B24B47/12
A	EP 0 737 548 A (COMES SRL) 16 October 1996 (1996-10-16) * the whole document * ---		
A,D	EP 0 571 340 A (COMES SRL) 24 November 1993 (1993-11-24) * the whole document * -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B24B
Place of search	Date of completion of the search	Examiner	
THE HAGUE	5 December 2000	Fiorani, G	
CATEGORY OF CITED DOCUMENTS		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	
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		& : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 83 0162

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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05-12-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0667210 A	16-08-1995	IT 1267682 B	07-02-1997
		DE 69516324 D	25-05-2000
		ES 2147581 T	16-09-2000
EP 0737548 A	16-10-1996	IT FI950066 A	14-10-1996
EP 0571340 A	24-11-1993	IT 1258733 B	27-02-1996
		AT 135276 T	15-03-1996
		DE 69301762 D	18-04-1996
		DE 69301762 T	19-09-1996
		ES 2085754 T	01-06-1996