



(11) Publication number : **0 608 625 A3**

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number : **93310463.0**

(51) Int. Cl.⁵ : **B24B 27/00, B24B 21/00, B24B 41/00**

(22) Date of filing : **23.12.93**

(30) Priority : **28.12.92 JP 349109/92**
28.12.92 JP 89346/92
28.12.92 JP 89347/92

(43) Date of publication of application :
03.08.94 Bulletin 94/31

(84) Designated Contracting States :
DE FR GB IT

(88) Date of deferred publication of search report :
19.10.94 Bulletin 94/42

(71) Applicant : **RYOBI LTD.**
No. 762, Mesaki-cho
Fuchu-shi, Hiroshima-ken (JP)

(72) Inventor : **Wada, Tatsuya, c/o Ryobi Limited**
No. 3-15-1, Sotokanda,
Chiyoda-ku
Tokyo-to (JP)
 Inventor : **Miyamoto, Kouichi, c/o Ryobi Limited**
No. 3-15-1, Sotokanda,
Chiyoda-ku
Tokyo-to (JP)

Inventor : **Shiotani, Takeshi, c/o Ryobi Limited**
No. 3-15-1, Sotokanda,
Chiyoda-ku
Tokyo-to (JP)

Inventor : **Takahashi, Shoji, c/o Ryobi Limited**
No. 3-15-1, Sotokanda,
Chiyoda-ku
Tokyo-to (JP)

Inventor : **Sato, Mitsumasa, c/o Ryobi Limited**
No. 3-15-1, Sotokanda,
Chiyoda-ku
Tokyo-to (JP)

Inventor : **Kouchiyama, Katsutoshi, c/o Ryobi Limited**
No. 3-15-1, Sotokanda,
Chiyoda-ku
Tokyo-to (JP)

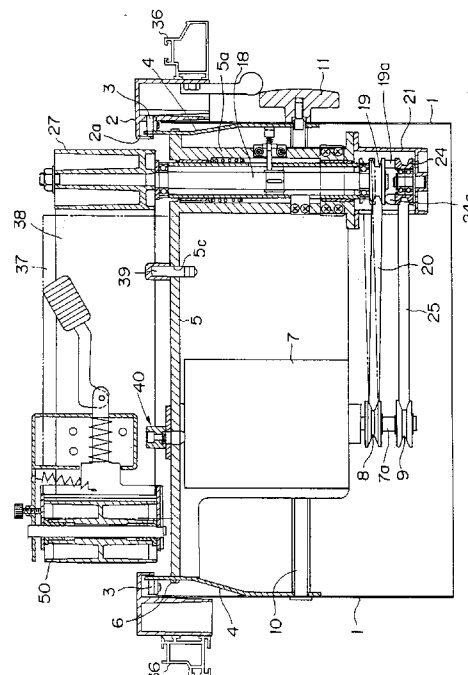
Inventor : **Omaha, Shinji, c/o Ryobi Limited**
No. 3-15-1, Sotokanda,
Chiyoda-ku
Tokyo-to (JP)

(74) Representative : **Fry, Alan Valentine et al**
FRY HEATH & SPENCE,
St. Georges House,
6 Yattendon Road
Horley, Surrey RH6 7BS (GB)

(54) **Grinding machine.**

(57) A grinding machine in which both a belt sander and a spindle sander may be selectively used, a base is mounted on a holder member when the belt sander is used and the base is removed away from the holder member when the spindle sander is used. A fastening pin rotatably penetrates the base. An operational section is provided for rotating the fastening pin. An eccentric portion having a center at an eccentric position relative to a rotational center of the operational section and having a taper shape is formed in the fastening pin on a side of the holder member. A slanting hole into which the eccentric portion of the fastening pin may be inserted is formed in the holder member. An angle of the slanting hole is smaller than a taper angle of the eccentric portion of the fastening pin.

FIG. 1





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 93 31 0463

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.5)
Y	US-A-3 133 384 (LIARD) * column 1, line 46 - line 51; figures * * column 2, line 32 - line 51 * ---	1,7	B24B27/00 B24B21/00 B24B41/00
Y	US-A-4 201 254 (FEHRIC) * column 3, line 20 - column 4, line 4; figures 3,4 * ---	1,7	
A	DE-A-37 37 636 (WESERO) * column 9, line 41 - column 10, line 48; figure 4 * ---	2,4	
A	US-A-2 416 493 (NEWTON) * column 2, line 16 - column 3, line 5; figure 3 * ---	5	
A	US-A-4 346 536 (BRYDEN) * abstract * ---	1	
A	US-A-4 662 116 (ERANI) * abstract * -----	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.5) B24B
Place of search THE HAGUE		Date of completion of the search 21 April 1994	Examiner GARELLA, M
CATEGORY OF CITED DOCUMENTS 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 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			

EPO FORM 1503 03.92 (P04C01)



European Patent
Office

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions.

namely:

See sheet -B-

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.

namely claims: 1-7