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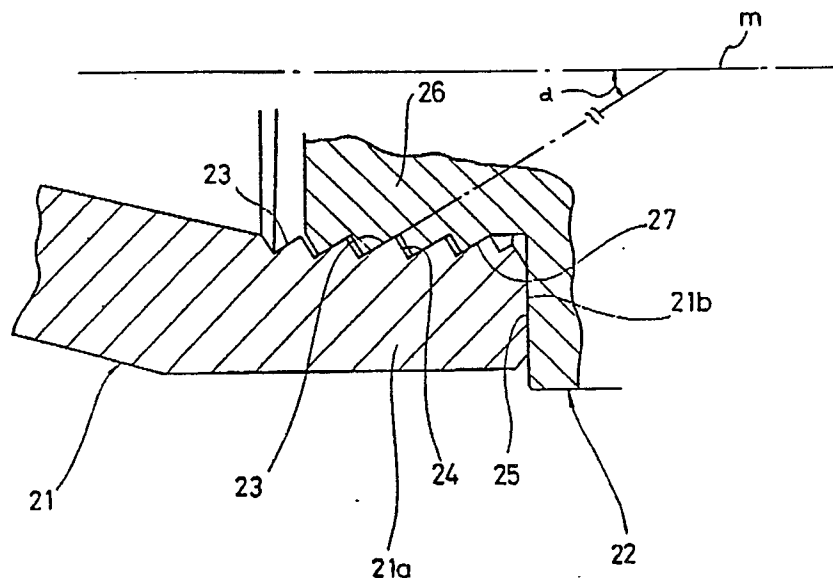
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# EUROPEAN PATENT APPLICATION

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**22.02.89 Bulletin 89/08**(71) Applicant: **SHIMADZU CORPORATION**  
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**REDDIE & GROSE 16 Theobalds Road**  
**London WC1X 8PL(GB)**(54) **Fluid energy converter.**

(57) In a fluid pump or motor, particularly one of the radial piston type, a main casing 21 is screwed to an end cover 22 by a mating helical screw formation using a taper plane 23 which is at an angle  $\alpha$  of less than  $45^\circ$  to the axis  $m$ . An external thread in the boss 26 of the cover 22 is screwed into the internal thread of the part 21a until surfaces 21b and 25 are engaged to determine the axial position.

**FIG. 4**



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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. 4) |
| Y  | US-A-2 620 736 (OVERBEKE)<br>* Figure 1; column 4, lines 4-39 *<br>---        | 1,2  | F 01 B 13/06<br>F 16 B 33/02                   |
| Y  | GB-A-1 070 808 (SIEMENS)<br>* Figure 7; page 3, lines 14-56 *<br>---          | 1,2  |  |
| Y  | US-A-4 307 816 (HERSEY)<br>* Figures 1,2; column 2, lines 5-28 *<br>---       | 1,2  |  |
| A  | FR-A-2 327 438 (HOLMES)<br>* Figures 3-5; page 11, lines 18-30 *<br>-----     | 1,2  |  |
|  |   |  | TECHNICAL FIELDS SEARCHED (Int. Cl. 4)         |
|  |   |  | F 01 B<br>F 16 B                               |
| The present search report has been drawn up for all claims   |   |  |  |
| Place of search<br>THE HAGUE   |   | Date of completion of the search<br>02-12-1988 | Examiner<br>WASSENAAR G.                       |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |   |  |  |