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(72) Inventor: **Fukuda, Takanori**  
**Shimizu-shi Shizuoka-ken (JP)**

(74) Representative: **Enskat, Michael Antony Frank  
Saunders & Dolleymore,  
9, Rickmansworth Road  
Watford, Hertfordshire WD18 0JU (GB)**

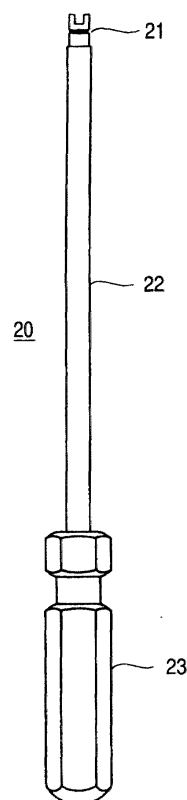
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(71) Applicant: **Alma Trading Incorporated**  
**Shimizu-Shi, Shizuoka-ken (JP)**

(54) **Valve core mounting and dismounting tool**

(57) A tire air valve (core) mounting and dismounting tool (20) includes a tool head portion (21), a shank portion (22) and a grip portion (23). The tool head portion (21) has a slot (32) for seizing and holding a valve core head portion (16), an axial bore (33) for accepting a valve core shaft portion (14) and its enlarged end (14a). The tool head portion (21) also has annular groove (34) formed along a cylindrical peripheral surface thereof. Balls (36) are retained in second bores (35) which are open to the annular groove (34) and also communicate with the axial bore (33) through openings (37) of a reduced diameter to allow the balls (36) to partially protrude into the axial bore (33). A coil spring (38) is anchored and fastened in the annular groove (34) to act to normally bias the ball (36) radially inwards and leave the balls (36) protruding into the axial bore (33). When the balls (36) are hit and pushed down by the valve core shaft's enlarged end (14a), the elasticity of the coil spring (38) allows the balls (36) to move radially outwards, permitting the valve core shaft end (14a) to move deeper beyond the balls (36) and then permitting the balls (36) to restore their biased state, thereby holding the valve core shaft end (14a) against moving back. Thus, the valve core is caught by the tool.

*Fig.4A*



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# EUROPEAN SEARCH REPORT

Application Number  
EP 00 30 1317

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The present search report has been drawn up for all claims			
Place of search <b>MUNICH</b>		Date of completion of the search <b>21 February 2003</b>	Examiner <b>Kühn, T</b>
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	

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Application Number  
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<p><b>CATEGORY OF CITED DOCUMENTS</b></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  .....  &amp; : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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