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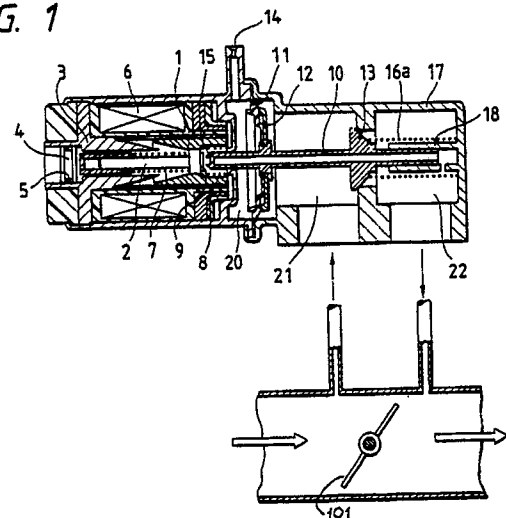
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c/o Ladas & Parry Isartorplatz 5
D-8000 Munich 2(DE)(54) **An idling engine speed control valve and a method of improving characteristics thereof.**

(57) An idling engine speed control valve has an electromagnetic coil (6), a plunger (1) adapted to be attracted to the electromagnetic coil, a spring (7) urging the plunger so as to apply thereto a force balancing with the attractive force of the electromagnetic coil, a pilot valve seat (9) provided on an end surface of the plunger, a hollow shaft (10) formed separately from the plunger with a main valve (13) and a diaphragm (11) mounted fixedly thereon, and a pilot valve (15) formed at one end of the hollow shaft so as to be opposed to the pilot valve seat. The hollow shaft is supported so that it can be slid in the axial direction thereof, and the end of the hollow shaft carrying the pilot valve (15) is in contact with the diaphragm and positioned in a chamber (20) communicating with the atmosphere via an orifice (14), the end of the hollow shaft which is on the opposite side of the pilot valve-carrying end thereof communicating with the portion of a throttle unit which is on the downstream side of a throttle valve (101). The control valve has a means, for example spring (16a;16b), for applying to the main valve a

force large enough to fill any diminution of valve opening force in an engine starting operation under low-temperature conditions.

FIG. 1



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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.5)
A	EP-A-229315 (HITACHI, LTD.) * column 8, line 32 - column 9, line 57; figure 6 *	1, 5	F02M3/07
A	EP-A-133445 (VDO ADOLF SCHINDLING AG)		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			F02M
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11 APRIL 1990	Examiner ALCONCHEL Y UNGRIA J
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			