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(12) # EUROPEAN PATENT APPLICATION

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(54) **Automatic nozzle (for fuel economy) destined for carburators of internal combustion engines of vehicles.**

(57) The present invention relates to an automatic nozzle for fuel economy suitable for all types of vehicles, which is mounted at the carburator and feeds, limits and stops the mixture or increases the air supply through the nozzle to the engine, when the diaphragm of the accelerator (I8) of the carburator closes and braking of the car is performed.

According to a preferable embodiment of the invention, the invented automatic nozzle is made, in turn of assembly, from a housing (I), a diaphragm or piston (2), a king-pin (3), a main body (4), a spring (5), a fitting part (6), a spring regulator or regulator for the displacement of the diaphragm or for the displacement of the needle (7), a nut (8) of the spring regulator, tightening nuts of the regulators (23) and (24), a clip-connector (9) of the needle, a needle (I0), a nozzle (II), an underpressure speed member (I2), a conductor (I3), an electrical switch (I6) and a control lamp (I7).

The automatic nozzle works using the suction of the engine supplied through the pipe (I3), where one end of the said pipe is fitted at the suction (I4) of the engine and the other end at the automatic nozzle, on the underpressure speed member (I2). When the diaphragm (I8) of the accelerator of the carburator is closed, the suction in the chamber of the automatic nozzle is increased, and forces the diaphragm (2) to move the king-pin (3) which is connected to the needle (I0) and closes the hole (IIb), stopping the flow of the mixture (nozzle of Figure I), or the opposite i.e. opens the hole (IIb), allowing more air to stop the flow of mixture (nozzle of Figure 7).

The said automatic nozzle may also operate electrically using an electromagnet (Figure 4).

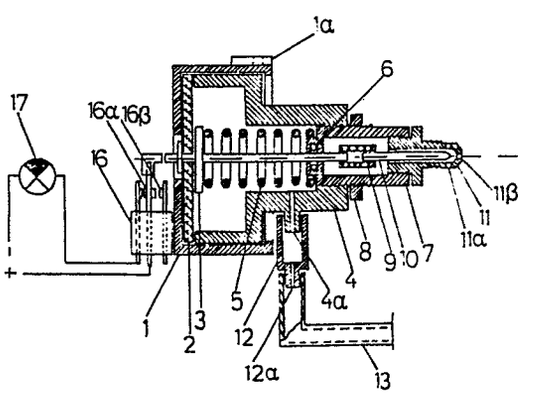

FIG.1

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EP 82 10 6641

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. ³)
X	FR-A-2 300 898 (FESQUET) * Page 1, lines 24-43; page 2, lines 1-4; page 3, lines 1-12; figures *	1,3,5	F 02 M 3/04
X	DE-C- 807 146 (BALVE) * Page 2, lines 18-48; page 3, lines 8-47; figure *	1,2	
Y	BE-A- 555 101 (OFNER) * Page 1, paragraph 1; page 2, last paragraph; page 3, 1st paragraph; figure 1 *	1	
Y	US-A-2 094 555 (VON HILVETY) * Page 1, left-hand column, lines 1-6; right-hand column, lines 7-33, 39-55; page 2, left-hand column, lines 1-4, 13-16, 44-59, 72-75; right-hand column, lines 1-18; figures 1,4 *	1,5	TECHNICAL FIELDS SEARCHED (Int. Cl. ³) F 02 M
Y	RESEARCH DISCLOSURE , no. 148, August 1976, pages 34,35, no. 14844, Industrial Opportunities Ltd., Homewell, Havant, Hampshire, GB "Carburetor" * Page 34, right-hand column, 5th paragraph; figures *	1	

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	13-01-1984	JORIS J.C.

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
Y	FR-E- 41 783 (FUSCALDO) * Page 1, lines 1-20 *	1	

TECHNICAL FIELDS SEARCHED (Int. Cl. ³)

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