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71 Applicant: **ELTON CHEMICAL S.p.A.**
Via Mauro Macchi, 54
I-20124 Milano(IT)

72 Inventor: **Tosca, Eugenio**
Via Novara, 15
Legnano (Milano)(IT)

74 Representative: **Cicogna, Franco**
Ufficio Internazionale Brevetti Dott. Prof. Franco Cicogna
Via Visconti di Modrone, 14/A
I-20122 Milano(IT)

54 **A device for delivering metered quantities of liquid products to a utiliser.**

57 A device for delivering metered quantities of liquid products to a utiliser (8) comprises a plunger-type pump (6) and a pump control means (7) including a programmable memory of any type, such as a memory card by means of which the number of strokes of the plunger of the pump (6) and consequently the quantity of liquid delivered thereby can be determined.

The pump (6) is connected at its suction side to a plurality of liquid containers (1) by a network of pipes (2) each having a controllable valve (4) the opening and closing of which can be controlled by the pump control means (7) in dependence on the programme stored in the programmable memory.

A typical utiliser (8) for such device is an industrial washing machine which can thus receive metered quantities of liquid detergents and other additives in place of powders used conventionally without recourse to liquid metering devices of other type and greater complexity.

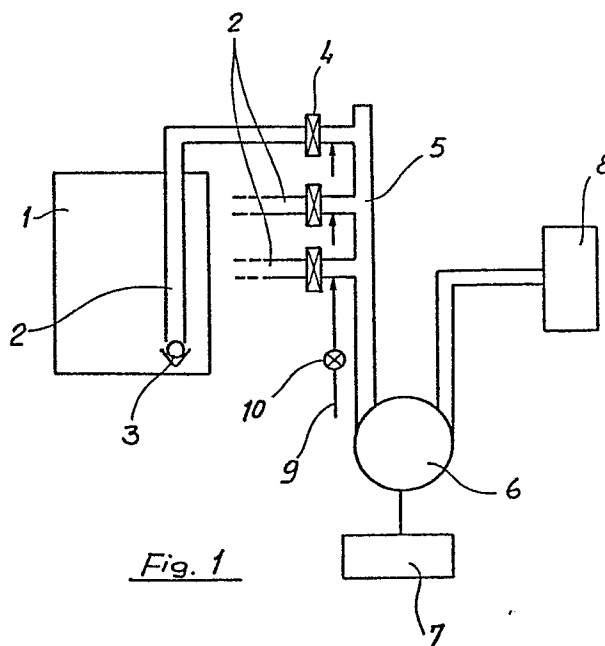


Fig. 1



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EUROPEAN SEARCH REPORT

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EP 85 83 0306

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-4 090 475 (P.H. KWAN) * whole content *	1	D 06 F 39/02 G 01 F 11/06
A		2, 3, 14 , 15	
Y	FR-A-2 118 289 (M. DELBERGUE) * whole content *	1	
A	DE-A-3 302 891 (BOSCH-SIEMENS) * whole content *	1, 3, 4, 8	
A	FR-A-2 536 184 (BOSCH-SIEMENS) * whole content *	1, 9	
A	US-A-3 771 333 (O. JURJANS) * whole content *	1, 7, 14 , 15	TECHNICAL FIELDS SEARCHED (Int. Cl.4) D 06 F 39/00 G 01 F 11/00 G 01 F 15/00 A 47 L 15/00
A	DE-A-2 719 601 (GRACO INC.) * whole content *	1	
A	DE-A-2 944 869 (ITALTINTO INDUSTRIA VERNICI) * whole content *	1	

The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 14-07-1987	Examiner DEPRUN
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			