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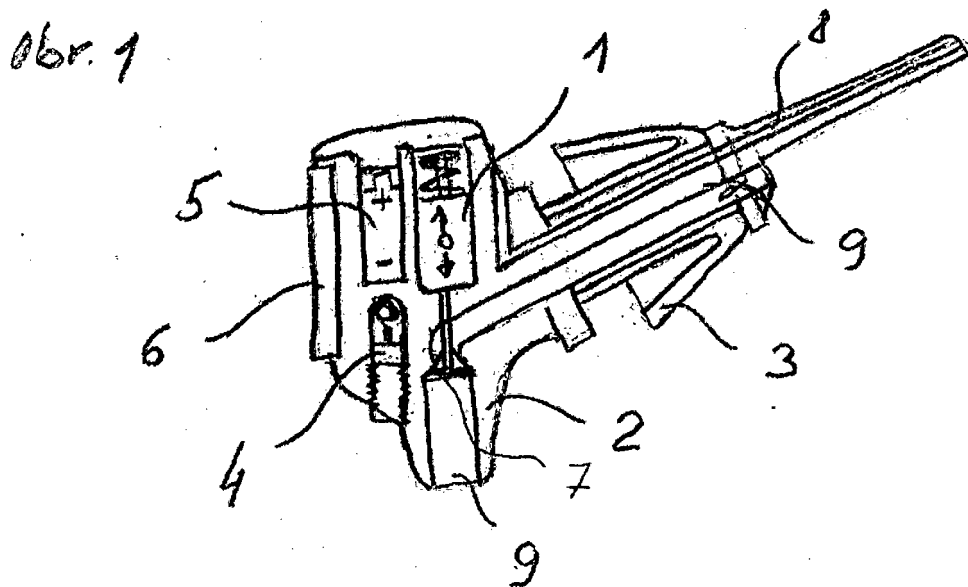
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(54) **ELECTRONIC POURER**

(57) Electronic dispenser for gastronomic purposes that comprises a dosing head, to be mounted onto a bottle, in which the solenoid valve is housed. Furthermore, the dosing head also houses the limit switch that triggers the solenoid valve upon tilting of the bottle such that the

dispensing of the liquid starts. The dosing head comprises its own source of energy, such as batteries, a programmable electronic circuit that i.a. allows to choose the volume to be dispensed and a display indicating the number and sizes of the liquid shots.



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Description

Technology area

[0001] The technical solution relates to a dosage in particular of alcoholic, wine and soft drinks of all sizes of doses used in the gastronomic and drinking establishments, with the possibility of use for other dispensing purposes.

Present condition of technology

[0002] All the already known devices operate on a similar principle, so that they are deployed into the neck of the bottle to the place of the stopper or cork so that it will seal it, if the bottle is in the upright position. By tilting the bottle at an angle of about 45° the contents of the bottle flows into the system of internal overflow ducts. The volume of fluid that leaks into the internal space is given by the length of e.g. the internal tube mandrel. When the internal volume fills, it closes the air vent hole, which is an integral part of each device, after its closure also the flow of the fluid is closed. This will create the dose, which then spontaneously flows out. This is the physical mechanical principle based on the connected vessels.

[0003] After its leakage the vent space is released and the whole process can be repeated, if the bottle will remain in a tilted position.

[0004] Other known solution works on the principle of one or three balls (large and small), which during tilting and leaking the fluid into the internal space, by own weight, fall in the space of the inner tube, so that after the fall into the seat they shall close a supply of liquid and shall close the air supply.

[0005] The disadvantage of these solutions is a complicated structure, in particular that the dosage is not entirely accurate, and depends on the skill of the operator, further to each volumetric dose it is needed a different equipment (with different length of ducts), further after the positioning of the bottle in a vertical position the mentioned devices do not tightly close, i. e. do not cork. Another disadvantage is that they mostly work only on viscosity of alcohol and they are mostly useless for other liquids.

Principle of technical solution

[0006] The above-mentioned disadvantages to a large extent eliminates the construction of an electronic dispenser according to this invention, which consists of a dosing head, which is used for placement of the miniature electromagnet, serving as a valve, which closes and opens the outflow of the fluid. In the dosing head is then positioned the limit switch, which when tilting of the bottle starts the dispensing process. In the dosing head there is then also located a source of voltage e.g. in the form of miniature batteries. At the head of the device there is then placed a programmable electronic plate that con-

trols the whole process and is provided for the operation by a visible display, which shows the size of the dose. The size of the dose can be selected by the use of + button and - button. This electronic dispensing head has, the same as the existing equipment, bleeding and pouring ducts and sealing cork e.g. in the form of a sealing collar at an angle of 45 °

[0007] The main advantage of this technical solution is the fact that on one device it is possible to select any dose and this repeat several times as needed until the bottle is tilted. This means that only one device is sufficient and it is not required other device for each dose.

[0008] Another advantage is that the electronic dispenser, after measuring the dose and after the positioning of the bottle into the vertical position, the system is hermetically sealed and thus stopped/corked. Another advantage is that this device will not be dependent on the viscosity and allow you to dose any alcoholic or non-alcoholic liquids.

[0009] Another advantage is that the entire device will, thanks to the electronic system, dose clearly and the accuracy does not depend on the angle of rotation, on the speed of turning over of bottle, therefore on the skill of the operator as it is in the case with existing devices.

List of pictures in the drawing

[0010] The technical solution will be closer explained using the drawing, where figure 1 illustrates the longitudinal cross-sectional view on the entire device, including the individual components, figure 2 illustrates axonometric view on the entire device including the control display, figure 3 shows the location of the device in a bottle, from which we want to dose.

Examples of technical solution conduct

[0011] An electronic dispenser / device consists of the electromagnet 1 to control the closing valve 7. Into the dosing head 2, after the tilting, the liquid flows from the bottle through the duct 9. The bleeding duct 8 then allows the outflow of the liquid after the opening of the system. The sealing collar 3 secures the tightness of the bottle even after its tilt to 45 °. Limit switch 4 then, after tilting the bottle, turns on the whole system and starts the process of dosing. The voltage source 5 then supplies during the dosage the energy to the control and control unit. The control unit with a display 6 connected with the control unit with the display 6 can then be used with the buttons + and - to adjust the size of the dose, and to visual inspection of the device. Valve 7 is then used for closing and opening of the system.

Industrial efficiency

[0012] This technical solution is usable for small, medium and large gastronomic facilities, where it is necessary to quickly and well dose liquids of various types.

List of reference numbers

[0013]

1	Electromagnet	5
2	Dosing head	
3	Sealing collar	
4	Limit switch	
5	Voltage source/battery	
6	Display with control board	10
7	Closing valve	
8	Bleeding duct	
9	Outflow duct	

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Claims

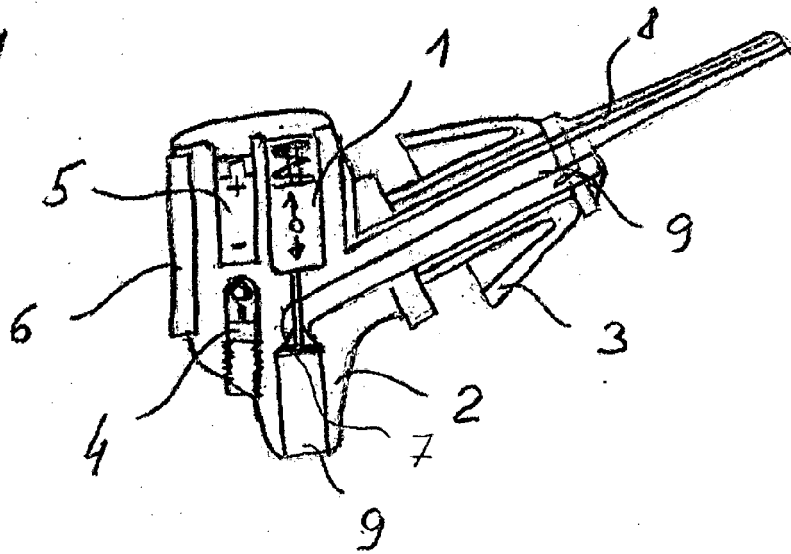
1. Electronic dispenser for gastronomic purposes, **characterized in that** consists of the electromagnet (1) to control the closing valve (7) designed for closing and opening of the outflow duct (9). 20
2. Electronic dispenser for gastronomic purposes according to the claim 1, **characterized in that** it is provided with limit switch (4) which is connected with control board with display (6) for its activation, this is connected with electromagnet (1) for control of the valve (7). 25
3. Electronic dispenser for gastronomic purposes according to the claim 1, **characterized in that** on the dosing head (2) there is on a visible position placed the control display (6) to allow the setting of any dose and visual control of the values of the numerical view of the size of the dose. 30 35
4. Electronic dispenser for gastronomic purposes **characterized in that** it is provided with a separate source of energy (5). 40

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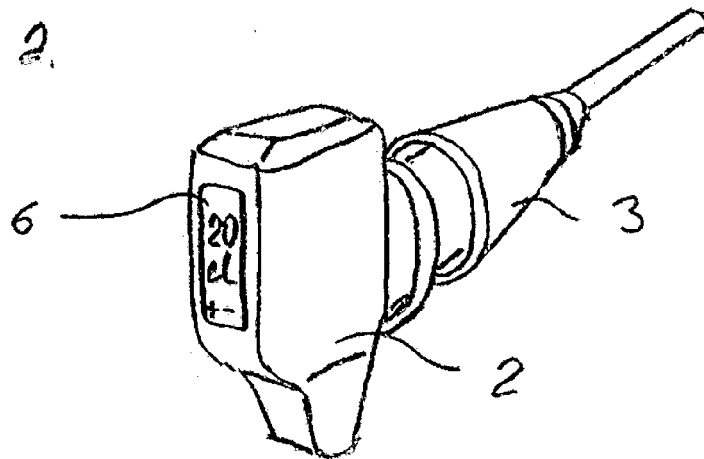
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Obr. 1



Obr. 2.



Obr. 3.





EUROPEAN SEARCH REPORT

Application Number
EP 16 46 6004

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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 (IPC)
X	US 6 036 055 A (MOGADAM MASOUD M [US] ET AL) 14 March 2000 (2000-03-14) * column 3, lines 28-67 * * column 6, lines 3-44 * * column 8, lines 31-59; figures * -----	1-4	INV. B67D3/00
X	WO 2007/144002 A1 (WIRCON APS [DK]; LINDBERG PETER [DK]) 21 December 2007 (2007-12-21) * page 5, line 24 - page 6, line 4; figures 1-4a * -----	1	
A	US 6 427 871 B1 (SUERO ANTHONY [US]) 6 August 2002 (2002-08-06) * column 3, lines 19-49; figures * -----	3	
			TECHNICAL FIELDS SEARCHED (IPC)
			B67D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 26 September 2016	Examiner Müller, Claus
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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EPO FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 16 46 6004

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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26-09-2016

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82