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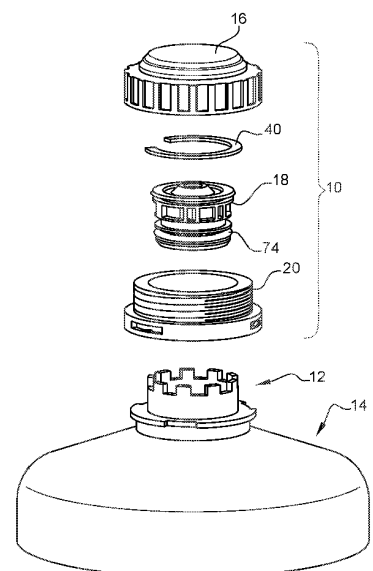
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(54) **SAFETY CAP FOR A LIQUID RESERVOIR FOR A MOTOR VEHICLE**

(57) A safety cap (10) for a motor vehicle fluid reservoir (14), the cap configured to be attached and fixed to a neck (12) of the reservoir. The cap includes a screwing cover (16) with a first screw thread (16ba), and a safety cell (18) configured to allow the passage of gas from the interior to the exterior of the reservoir, and/or vice versa, when the cap is fixed to the neck and when a pressure difference between the interior and the exterior of the reservoir is greater or less than at least one predetermined threshold value. The cap includes a ring (20) with structure (30, 30a, 32) for fixing to the neck and a second screw thread (22) to cooperate with the first screw thread, the cell at least partly housed in the neck and surrounded by the cover and/or the ring when the cap is fixed on the neck.



**Fig. 2**

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EUROPEAN SEARCH REPORT

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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)
A	FR 2 221 962 A5 (JOURNEE PAUL [FR]) 11 October 1974 (1974-10-11) * column 2, line 39 - column 3, line 19; figures 1,3 * * column 3, lines 34-38 *	1-14	INV. F01P11/02
A	US 2008/179325 A1 (CLARKE JOHN [US] ET AL) 31 July 2008 (2008-07-31) * paragraphs [0016], [0017], [0018], [0022], [0024]; figures 2,3,4,5 *	1-14	
A	FR 622 813 A (TRÉMELET) 8 June 1927 (1927-06-08) * page 1, lines 14-30; figures 2,4,8,9 *	1-14	
A	WO 03/056154 A1 (REUTTER HEINRICH [DE]) 10 July 2003 (2003-07-10) * page 3, paragraph 7 - page 4, paragraph 1; figure 1 *	1-14	
A	FR 2 431 975 A2 (NEIMAN DIFFUSION) 22 February 1980 (1980-02-22) * page 1, lines 5-13, 17-20 *	1	TECHNICAL FIELDS SEARCHED (IPC) F01P
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 26 August 2020	Examiner Luta, Dragos
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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ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 20 16 6959

5 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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26-08-2020

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2221962 A5	11-10-1974	DE 2405966 A1	03-10-1974
		DE 7404309 U	22-08-1974
		FR 2221962 A5	11-10-1974
		GB 1433441 A	28-04-1976
-----			
US 2008179325 A1	31-07-2008	NONE	
-----			
FR 622813 A	08-06-1927	NONE	
-----			
WO 03056154 A1	10-07-2003	AT 368176 T	15-08-2007
		DE 10164676 A1	03-07-2003
		EP 1456514 A1	15-09-2004
		US 2005077295 A1	14-04-2005
		WO 03056154 A1	10-07-2003
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FR 2431975 A2	22-02-1980	NONE	
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