

(11) **EP 2 617 469 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: **07.08.2013 Bulletin 2013/32**

(51) Int Cl.: A62C 27/00 (2006.01) F04C 15/00 (2006.01)

F04C 2/16 (2006.01)

(43) Date of publication A2: **24.07.2013 Bulletin 2013/30**

(21) Application number: 12003574.6

(22) Date of filing: 08.05.2012

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR Designated Extension States:

BA ME

(30) Priority: 19.01.2012 KR 20120006244

(71) Applicant: JM motors Co., Ltd. Samdong-myeon

Ulju-gun

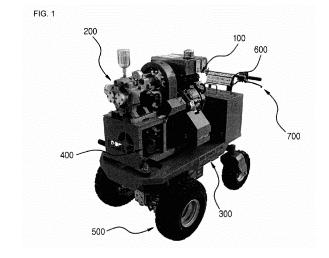
Ulsan gwangyoksi 689-932 (KR)

(72) Inventor: Kno, Sung-Wang Ulju-gun, Ulsan 689-932 (KR)

(74) Representative: Roos, Peter et al Roospatent Bavariaring 20 80336 München (DE)

(54) Simple fire truck with easy movement

(57)Provided is a simple fire truck that easily moves to a narrow fire occurred spot difficult for a car to enter by using a transfer wheel driven by a motor separately from a pump driven by an engine, the simple fire truck including: a depressurization groove that is formed between a chamber where a sealing unit receiving pressure of the pump is provided, and a suction hole, so as to depressurize a pressure of the chamber; a lubricating water supply unit for improving durability through lubrication and cooling by supplying lubricating water to an inlet of the chamber according to a vacuum pressure generated during an initial activation of the pump; and a rotor unit having a first protrusion at an end of a side of a rotor provided inside the chamber, and a second protrusion at a periphery of a shaft hole through which a rotation shaft penetrates. Accordingly, the simple fire truck easily moves to the narrow fire occurred spot difficult for a car to enter by using the transfer wheel driven by the motor separately from the pump driven by the engine, prevents a damage of the sealing unit by depressurizing a pressure transferred to the sealing unit by forming a groove between the chamber and a suction unit formed inside the pump, and improves durability of a positive-displacement pump through lubrication and cooling by using a lubricating water suction unit provided at a pump suction unit during an initial activation.



EP 2 617 469 A3



EUROPEAN SEARCH REPORT

Application Number EP 12 00 3574

Category	Citation of document with in of relevant passa	ndication, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Υ	·	JINMYUNG21 CO LTD [KR]; 7-02)		INV. A62C27/00 F04C2/16 F04C15/00
Υ	Anonymous: "South miniature fire truc pump",	east asia launch of the k / self propelled	1,2	
	XP054975177, Retrieved from the URL:http://youtu.be [retrieved on 2013- * the whole documen	/9xuTDFvFB3A 06-25]		
	XP054975172, Retrieved from the	ube.com/watch?v=UehQu-t 06-14]		TECHNICAL FIELDS SEARCHED (IPC) A62C F04C
Α	WO 2007/007975 A1 (YOUN CHANG SIK [KR] 18 January 2007 (20 * paragraphs [0038] [0054] * * paragraphs [0064] * figures 4,5 * * figures 14-17 *	07-01-18) , [0039], [0053],	1,2	
	The present search report has b	·		
	Place of search	Date of completion of the search		Examiner
	The Hague	2 July 2013	Zup	oancic, Gregor
X : part Y : part docu A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anothe iment of the same category inclogical background written disclosure rmediate document	L : document cited for	the application other reasons	shed on, or



EUROPEAN SEARCH REPORT

Application Number

EP 12 00 3574

Category	Citation of document with indica of relevant passages		Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 0 974 754 A2 (ISHI IND [JP]) 26 January 2 * paragraph [0010] * * figures 1,3,4,5 *	KAWAJIMA HARIMA HEAVY 2000 (2000-01-26)	1,2	
A	Anonymous: "Operation truck / self propelled	of a miniature fire d pump",	1,2	
	,13 February 2011 (2011) XP054975176, Retrieved from the In- URL:http://youtu.be/p: [retrieved on 2013-06] * the whole document	ternet: sA-vTvsYU8 -25]		
А	EP 1 988 290 A1 (SHIM) 5 November 2008 (2008 * paragraphs [0013], * figures 1-3 *	-11-05)	1,2	
				TECHNICAL FIELDS SEARCHED (IPC)
				OLANGINES (ii c)
	The present search report has been	·		
	Place of search The Hague	Date of completion of the search 2 July 2013	7un	eancic, Gregor
C	ATEGORY OF CITED DOCUMENTS	T: theory or principle	<u> </u>	
X : part Y : part docu	icularly relevant if taken alone icularly relevant if combined with another iment of the same category	E : earlier patent door after the filing date D : document cited in L : document cited for	ument, but publis the application rother reasons	shed on, or
	nological background -written disclosure	& : member of the sar		. corresponding

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

EP 12 00 3574

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

02-07-2013

WO 2009082165 WO 2007007975 EP 0974754	A2 A1	02-07-2009	NON			
	A1			_		
EP 0974754		18-01-2007	NON	 -		
	A2	26-01-2000	DE DE EP US	69911695 D 69911695 T 0974754 A 6174148 B	Г2 \ 2	06-11-20 22-04-20 26-01-20 16-01-20
EP 1988290	A1	05-11-2008	CN EP JP KR US WO	101379295 A 1988290 A 4829957 B 20080087896 A 2009311120 A 2007096943 A	A1 32 A A1	04-03-20 05-11-20 07-12-20 01-10-20 17-12-20 30-08-20

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