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(71) Applicant (for all designated States except US): **BORG-WARNER INC.** [US/US]; Patent Department, 3850 Hamlin Road, Auburn Hills, MI 48326 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MAY, James, Patrick** [US/US]; 6600 Blackman, Jackson, MI 49201 (US).

(74) Agents: **ARTZ, John, A.** et al.; John A. Artz P.C., 2756 Turtle Lake Drive, Bloomfield Hills, MI 48302 (US).

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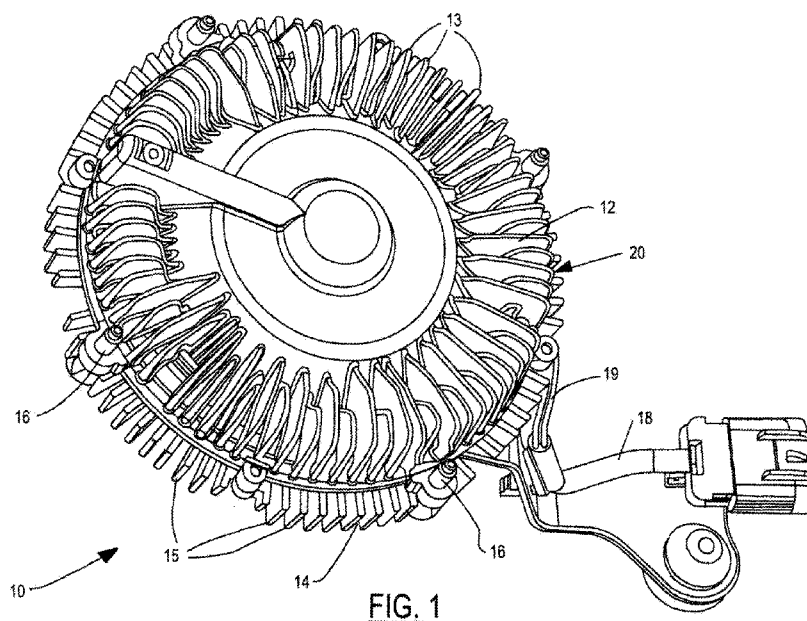


FIG. 1

(57) Abstract: A viscous shear fan drive mechanism for a cooling fan. A moveable valve disk is provided which controls the quantity of fluid in the operating chamber. An electronic actuation system activates piston and shaft members which move the valve disk against the bias of a return spring to open the fill holes, allow fluid communication between the reservoir and working chambers, and allow rotation of the cooling fan. Without activation of the electronic actuation system, the flow of fluid to the working chamber is prevented. A non-magnetic or insulating bushing member adjacent the piston and shaft members prevents the system from sticking in the actuation condition when power is eliminated.

A. CLASSIFICATION OF SUBJECT MATTER***F01P 5/04(2006.01)i, F01P 7/08(2006.01)i, F16D 35/02(2006.01)i, F04D 25/02(2006.01)i***

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F01P 5/04; F16D 3/80; F16D 31/08; F16D 35/02; F16K 31/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models since 1975.

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: "fluid", "coupling", "non-magnetic", "bushing"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7278524 B2 (BOYER, R. L.) 09 October 2007 See claims 1-22 and figures 1-3	1-9
A	US 2004/0242335 A1 (YAMAUCHI, T.) 02 December 2004 See claims 1-4 and figures 1-3	1-9
A	US 6419064 B1 (KRAMMER, R.) 16 July 2002 See claims 1-35 and figures 1-2	1-9
A	US 6085881 A (ROBB, N. E.) 11 July 2000 See claims 1-20 and figures 1-5	1-9



Further documents are listed in the continuation of Box C.



See patent family annex.

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Authorized officer

HWANG, Joon Seok

Telephone No. 82-42-481-8431



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