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*Has received an application for a patent
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Therefore, this

United States Patent

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Ronald J. Zigg
Acting Commissioner of Patents and Trademarks

Melvinia Gary
Attest

- [54] **HYDRAULIC CYLINDER**
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[52] U.S. Cl. 92/2; 92/122;
92/165 PR
[58] Field of Search 92/2, 165 PR, 122;
91/61; 173/108

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[57] **ABSTRACT**
A hydraulic cylinder including a closed cylinder in which are mounted a rotor for rotation about the axis thereof and two pistons for linear movement, the pistons being respectively sleeved onto two ends of the rotor and bounding a first arcuate fluid tight chamber with the inner surface of the cylinder and the peripheral surface of the rotor. At least one vane member is provided on the rotor for operating with the fluid to produce a rotational output. At least one piston rod is connected to one end of the rotor and mounted to the closed end of the cylinder in fluid tight relationship. On both sides of the first fluid tight chamber are two second fluid tight chambers bounded respectively by two pistons associated with the inner surfaces of the cylinder and the closed ends.

5 Claims, 8 Drawing Figures

