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(54) Improvement in a copying distributor spool in hydraulic circuits for controlling hammer motion in punching machines

(57) Improvement in a spool of a copying distributor in a hydraulic circuit (3) for controlling the motion of a cylinder for a hammer (4) in a punching machine, including a pressurized fluid source (24a) in communication with said hydraulic circuit (3), a distributor body (5) which is connected to said hydraulic circuit through pipe fittings and is formed with pressurised-fluid supply lights (6, 33) and discharge light (7) communicating with said pipe fittings, at least one valve means (9) arranged in said hydraulic circuit to control the said distributor body (5), a spool (1) slidably mounted in said body (5) and arranged cyclically to open and close the said lights (6, 33, 7), one operating end (11) of said spool (1) extending outside said distributor body (5) through a calibrated aperture (12) and being arranged to abut against a reference member (13) designed to move rigid with said hammer (4). The improvement provides for a recess (14) formed in said operating end (11) and having one end (15) thereof blind and its other end (16) open, a pin (17) slidably mounted in said open end (16) and arranged to be displaced therein by pressurised fluid flows controlled by said valve means (9), and at least one duct (18) formed in said distributor body (5) and arranged to feed pressurised fluid from said fluid source (24a) to said recess (14).

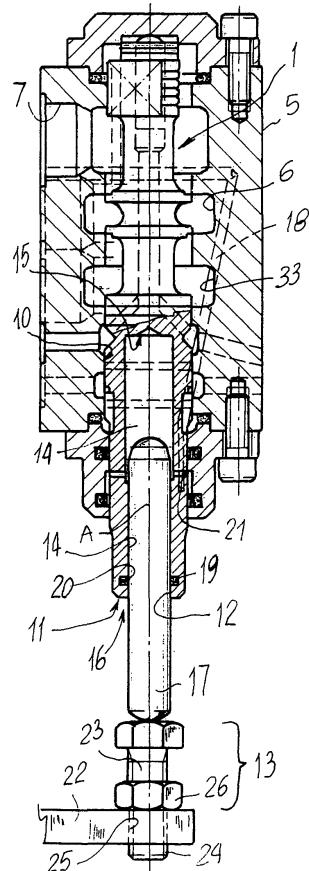


FIG. 5



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
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A	FR 2 425 565 A (RENAULT) 7 December 1979 (1979-12-07) * page 1, line 1 - page 4, line 19; figure 1 *	1-7	
			TECHNICAL FIELDS SEARCHED (IPC)
			F15B B21D B30B
<p>The present search report has been drawn up for all claims</p> <p>1</p>			
Place of search	Date of completion of the search	Examiner	
Munich	23 February 2006	Busto, M	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 02 4492

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.

23-02-2006

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