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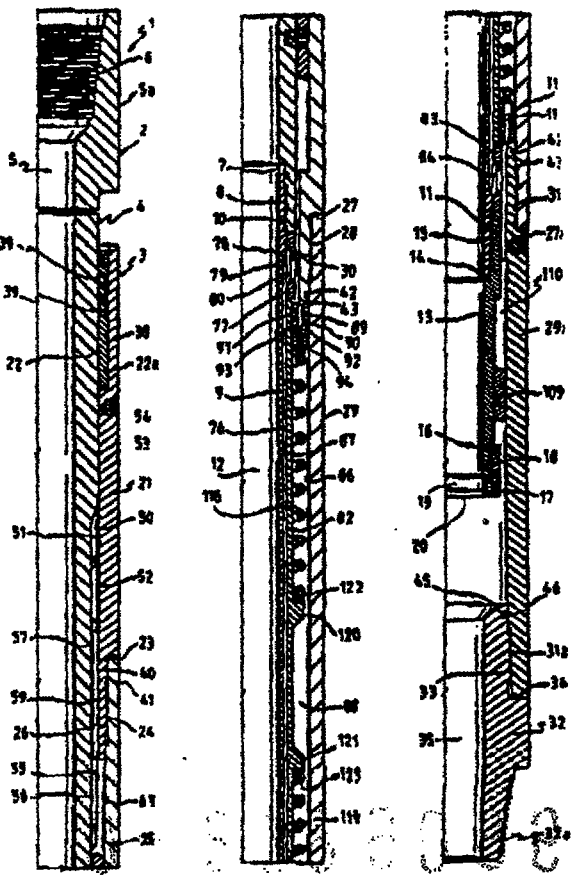
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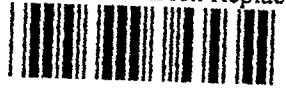
(54) Title: A DOUBLE-ACTING ACCELERATOR FOR USE WITH HYDRAULIC DRILLING JARS

(57) Abstract

A double acting accelerator (1) includes a mandrel (2) arranged in a housing (3) for sliding longitudinal movement. A pair of pistons (89, 111) are positioned radially between the housing (3) and mandrel (2) to form a substantially sealed chamber (88) longitudinally therebetween. Movement of the mandrel (2) in a first direction urges the first piston (89) toward the second piston (111), thereby greatly increasing the pressure of fluid in the chamber (88). Movement of the mandrel (2) in a second opposite direction urges the second piston (111) toward the first piston (89) to, likewise, greatly increase the pressure of fluid in the chamber (88). Thus, a large amount of energy is stored in the accelerator (1) independent of the relative direction of movement of the mandrel (2) and housing (3).



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