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(54) Title: **RECIPROCATING FLUID MACHINES**

(57) Abstract

A scotch yoke type fluid device in which the pistons (32) are decoupled from each other and provides each piston (32) with its own pair of sliding surfaces (30) and its own slider (18). The sliding surface (30) of each piston are disposed on the same side of the big end bearing (16) of the crank (12). The main axis (14) of the crank (12) is movable along a path such that the pistons are neither substantially retarded nor advanced. The effective centre of mass of the crank, piston and slider remains stationary relative to the crank axis. Each piston includes a guide means (2030) for constraining the piston to move along the piston axis, the guide means located transversely of the sliding surfaces (30) and engage guides rigidly mounted on the crankcase. An intermediate member may interconnect the piston and the slides with a means for adjusting the position of the intermediate member in order to change the compression ratio of the device. For a device having opposed pistons, the yoke (6060) attached to the two pistons is split into two parts (6062a, 6062b) releasably held together.

