

ABSTRACT

Title: APPARATUS ADAPTED TO PERFORM AS COMPRESSOR, MOTOR, PUMP AND
INTERNAL COMBUSTION ENGINE

A rotary apparatus adapted to perform as, compressor, pump, motor or an internal combustion engine; said apparatus comprising of two vanes, two hollow cylindrical sleeves, hollow cylindrical liner, cams and associated linkages, couplings, shaft, clutch and braking/locking arrangement; said vanes are fitted on to the curved surface of the sleeves, one vane on each sleeve, such that the vanes are radial to sleeve's curved surface and at one of the ends of each sleeve so that the vane's surface protrudes out of the sleeve's end; said sleeves placed such that their ends, fitted with vanes are placed adjacent, with the vanes angularly displaced; said vanes are placed inside a liner; said liner's inner surface is contoured along the path traced by vane edge while rotating about the said axis; said inner surface allows rotation of the vanes about the said axis; said vanes divide the said enclosure formed inside the liner into two sealed chambers; enclosure; said two sleeves, are coupled and uncoupled with a shaft by means of coupling arrangement actuated by cams or other timing devices; said cams or timing devices are dependent on sleeve position; said cams or timing devices actuate said braking/locking arrangements such that each vane is held at a predetermined position alternately, and the vanes are free to rotate through an defined angle alternately; said cams or timing devices allow both vanes to rotate simultaneously through an predefined angle; said cams or timing devices defines the angle by which the vanes are separated, rotated simultaneously or independently, as shown in Figure 48.