

Abstract

**SELF-PRESSURE-REGULATING COMPRESSED AIR ENGINE
COMPRISING AN INTEGRATED ACTIVE CHAMBER**

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The invention relates to a multimode engine comprising an included active chamber, having a cylinder (1) and a piston (2) that divides the cylinder into an active chamber (CA) and an expansion chamber (CD), and in which: compressed air contained in a tank (12) directly feeds the intake
10 of the engine cylinder (1); the included active chamber (CA) is filled at a constant admission pressure at each engine revolution, said admission pressure decreasing as the pressure in the tank decreases; the volume of the included active chamber (CA) increases progressively as the pressure in the tank (12) decreases; means enable not only the admission opening
15 and conduit (7) to be opened essentially at the top dead centre of the stroke of the piston, but also the modification of the duration and/or the angular sector of the admission, in addition to the opening passage section; and the volume of the included active chamber (CA) is dimensioned for maximum storage pressure, and is then progressively
20 increased, resulting in a self-pressure regulating engine.

Fig. 1