

June 12, 1962

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3,038,457

CYLINDERS FOR TWO STROKE ENGINES

Filed April 14, 1960

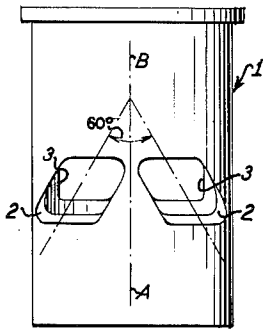


Fig. 1

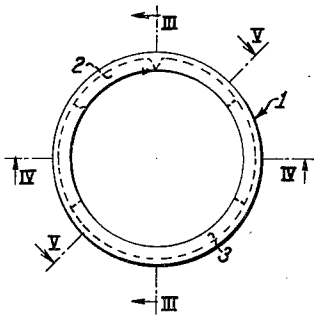


Fig. 2

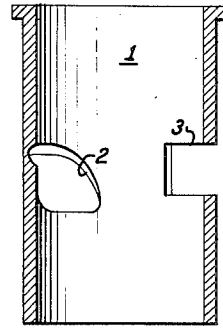


Fig. 3

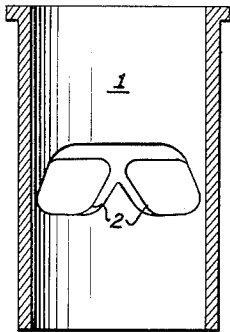


Fig. 4

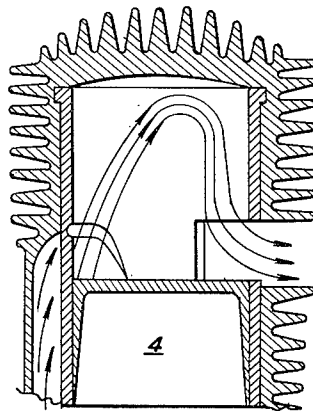


Fig. 5

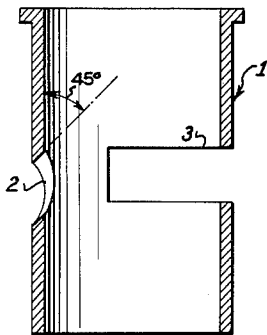


Fig. 6

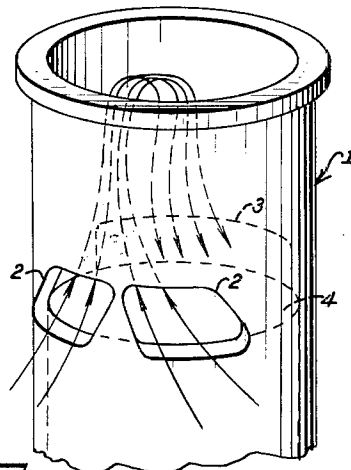


Fig. 7

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**CYLINDERS FOR TWO STROKE ENGINES**  
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 Filed Apr. 14, 1960, Ser. No. 22,342  
 Claims priority, application Italy May 29, 1959  
 1 Claim. (Cl. 123—65)

The present invention relates to cylinders for two-stroke engines with flat pistons reciprocable therein.

It is an object of the present invention to provide an engine adapted for use in model aircraft and wherein inlet or transfer ports are provided in the cylinder of the engine enabling efficient operation of the engine without a conventional deflector baffle on the piston and even though the inlet ports are opposite the exhaust or outlet ports.

In the engine cylinder according to the invention there are two symmetrical inlet ports having substantially the shape of a rhomboid. The inlet ports are positioned whereby the sides thereof converge upwardly and include an angle of sixty degrees. The ports are also upwardly inclined in the cylinder at an angle of forty-five degrees.

In order to explain the characteristics of the cylinder according to the invention, and in order to make more fully clear the advantages thereof, an example without limitation of an embodiment of said cylinder will be described hereinafter.

In the drawings:

FIG. 1 shows an elevational view of the cylinder;

FIG. 2 shows a plan view thereof;

FIG. 3 shows a section taken along the line III—III of FIG. 2;

FIG. 4 shows a section taken along the line IV—IV of FIG. 2;

FIG. 5 shows a section taken along the line V—V of FIG. 2;

FIG. 6 shows an axial section through the cylinder;

FIG. 7 shows a perspective view of the cylinder wherein there is indicated diagrammatically the course or path of the gases therein.

The cylinder, indicated by the reference numeral 1, is provided with two transfer or inlet ports 2, which are opposite the exhaust or outlet ports 3.

The two transfer ports are of substantially rhomboidal shape with two sides converging upwardly (FIG. 1) and symmetrical with respect to the generating lines A and B. The ports present oblique inclined sides that form an acute angle with each other as indicated in FIGURE 1, wherein there is included a 60° angle.

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Moreover each of the two ports forms an upper wall and a lower wall the section of which as shown in FIGURE 5 forms an angle of 45° with the surface of the cylinder.

As seen in the section indicated in FIGURE 4, the juncture of the two ports takes place in the internal portion of the cylinder and this permits the union of the two streams of gases entering said cylinder.

FIGURES 6 and 7 show diagrammatically the path of the gases (indicated by the arrows) due to the above described arrangement of the transfer and exhaust ports as well as to the shaping of said transfer ports which are also represented. In FIG. 6 the piston indicated by 4 is shown.

The above described cylinder affords the following advantages.

(1) Integral utilization of the flat piston with all the advantages resulting therefrom. Namely, a minimal surface exposed to the flame, a cylinder head which can be perfectly hemi-spherical, the elimination of obnoxious hot points and a minimal weight of the parts in alternate movement.

(2) Minimal surface of licking between the column of fresh inlet gases and that of the exhaust gases and consequent lower losses of fresh gases through the exhaust ports due to the single and unidirectional column transfer.

I claim:

A two stroke engine for models comprising a cylinder, a piston reciprocable in said cylinder, said cylinder being provided with two adjacent symmetrical inlet ports, said ports being of rhomboidal shape and positioned whereby said ports have sides which converge upwardly to include an angle of sixty degrees therebetween, said ports being upwardly inclined in said cylinder at an angle of forty-five degrees, the cylinder being further provided with an outlet port diametrically opposed to said inlet ports.

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