

May 13, 1930.

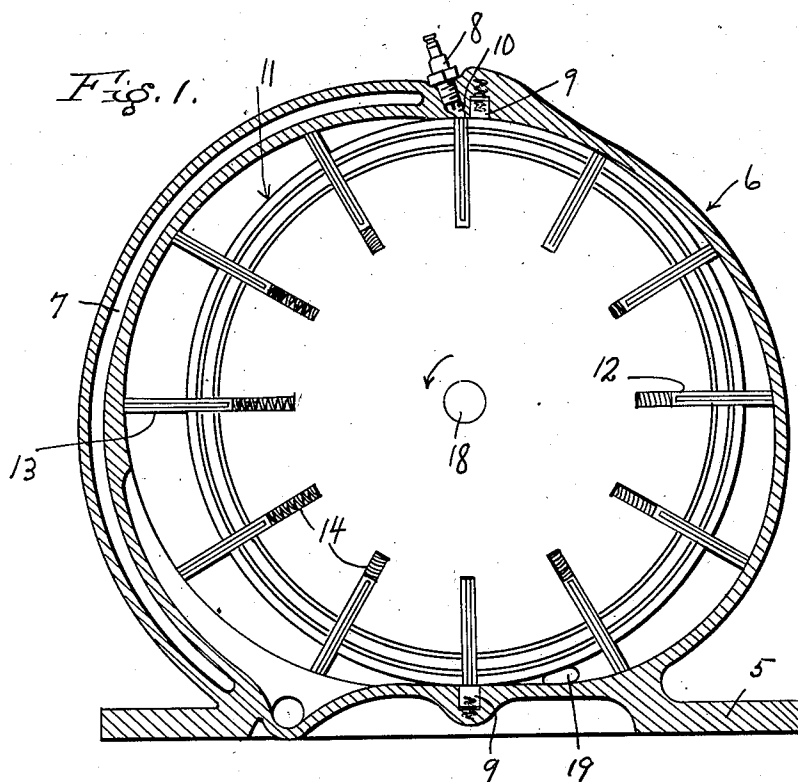
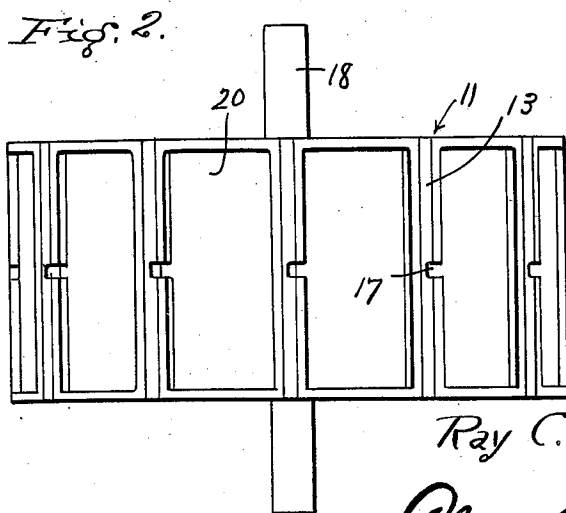
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1,758,320

INTERNAL COMBUSTION ENGINE

Filed May 11, 1929

2 Sheets-Sheet 1



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Fig. 3.

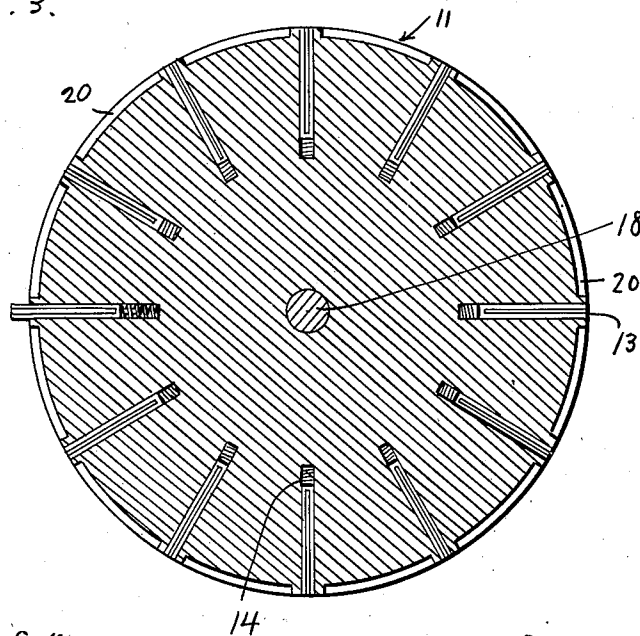
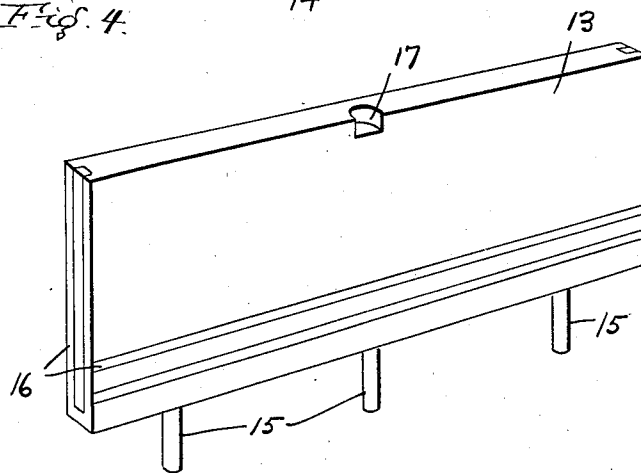


Fig. 4.



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INTERNAL-COMBUSTION ENGINE

Application filed May 11, 1929. Serial No. 362,213.

The present invention appertains to new and useful improvements in internal combustion engines and more particularly to a novel rotary engine.

5 The principal object of this invention is to provide a rotary internal combustion engine in which the action thereof is similar to a turbine in that the exhaust gases are utilized to assist in the propulsion of the rotor.

10 Another important object of the invention is to provide an engine of the internal combustion type wherein after the engine is once started, the need for the sparking mechanism is discontinued.

15 These and other very important objects of the invention will become more apparent to the reader after considering the invention as described and claimed hereinafter.

In the drawings:

20 Figure 1 represents a vertical sectional view through the improved engine.

Figure 2 represents a top plan view of the rotor detached from the stator.

25 Figure 3 represents a vertical sectional view through the rotor.

Figure 4 represents a perspective view of one of the vanes of the rotor.

Referring to the drawings wherein like numerals designate like parts, it will be seen that the present invention includes a base 5 for supporting the stator generally referred to by numeral 6. The stator is substantially circular and is provided with a water cooling jacket 7. Packing members 9 are located adjacent to the spark plug 8 and as is clearly shown in Figure 1, the points of the spark plug depend into a pocket 10 opening into the stator.

30 The rotor is generally referred to by numeral 11 and consists of a circular block of suitable material provided with a plurality of radially disposed pockets 12 in which vanes 13 are slidably disposed and normally urged outwardly by a coiled spring 14 engaged over the shank members 15 protruding inwardly

from the vane. Each vane is provided with suitable packing means 16 while a notch 17 is provided in its upper edge and communicating the outer edge surface with one side surface of the vane in the manner clearly shown in Figure 4. The rotor 11 is mounted on the shaft 18, as shown in Figure 2. The vanes engage the inner side of the peripheral wall of the stator in the manner shown and as the rotor rotates in the direction of the air, gas will be drawn inwardly through the intake port 19.

This gas will be gradually compressed into the pocket 20 of the rotor as the same approaches the spark plug 8. As the same reaches the spark plug, the gas will be completely compressed into the shallow pocket 20 and at this point will become ignited. The gas will then act against the vane in the manner of a turbine and drive the rotor in the direction of the arrow. The spark may then be eliminated, as the successive pockets will be exploded by the preceding pockets as the burning gases of the preceding pockets escape into the pocket 10 of the stator and around the vane 13 to the notch 17 to the gases in the succeeding pocket. This will, in turn, occur in successive order, and as gas is applied to the engine there will be no necessity for sparks on the timing mechanism whatsoever.

While the foregoing description has been in specific terms, it is to be understood that numerous changes in the specific shape, size, and materials may be resorted to, without departing from the spirit and scope of the invention as claimed hereinafter.

What is claimed is:

1. A rotary engine comprising a stator, a rotor, spring projected vanes on the rotor, pockets in the periphery of the rotor between said vanes, a pocket at the inner side of the stator, each of said vanes being provided with a notch to permit the escape of burning gases from the preceding pocket to the succeeding pocket to ignite the latter.

2. A rotary engine comprising a stator, a rotor, spring projected vanes on the rotor, pockets in the periphery of the rotor between said vanes, a pocket at the inner side of the stator, each of said vanes being provided with a notch to permit the escape of burning gases from the preceding pocket to the succeeding pocket to ignite the latter, each of said vanes being provided with a shank projecting inwardly from the rotor, and a coiled spring convoluted on the shank and being adapted to urge the vane outwardly to wipe the inner surface of the stator periphery.

In testimony whereof I affix my signature.

RAY C. HOSS.