

No. 850,555.

PATENTED APR. 16, 1907.

G. A. WHITMAN.
ROTARY ENGINE.

APPLICATION FILED MAR. 20, 1906.

Fig. 2.

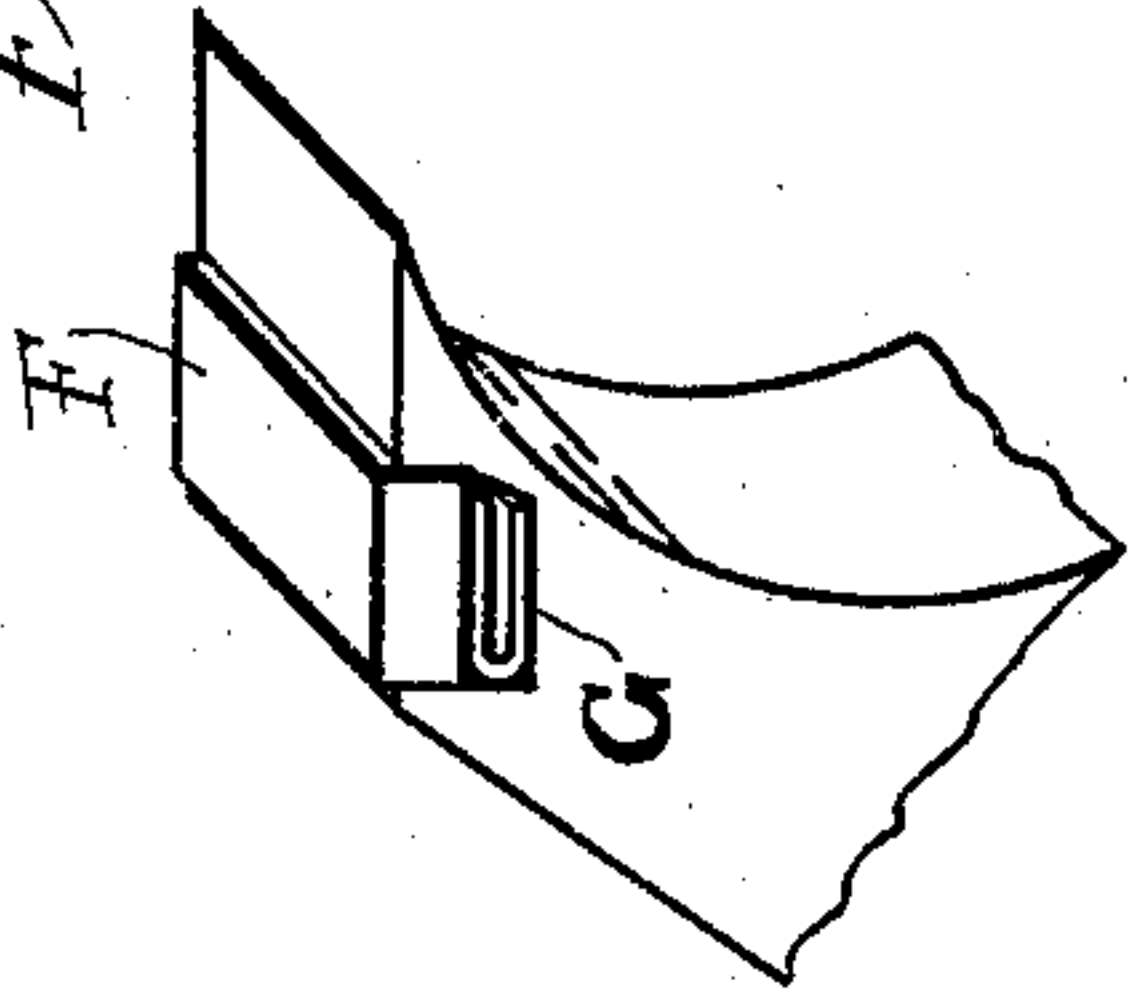
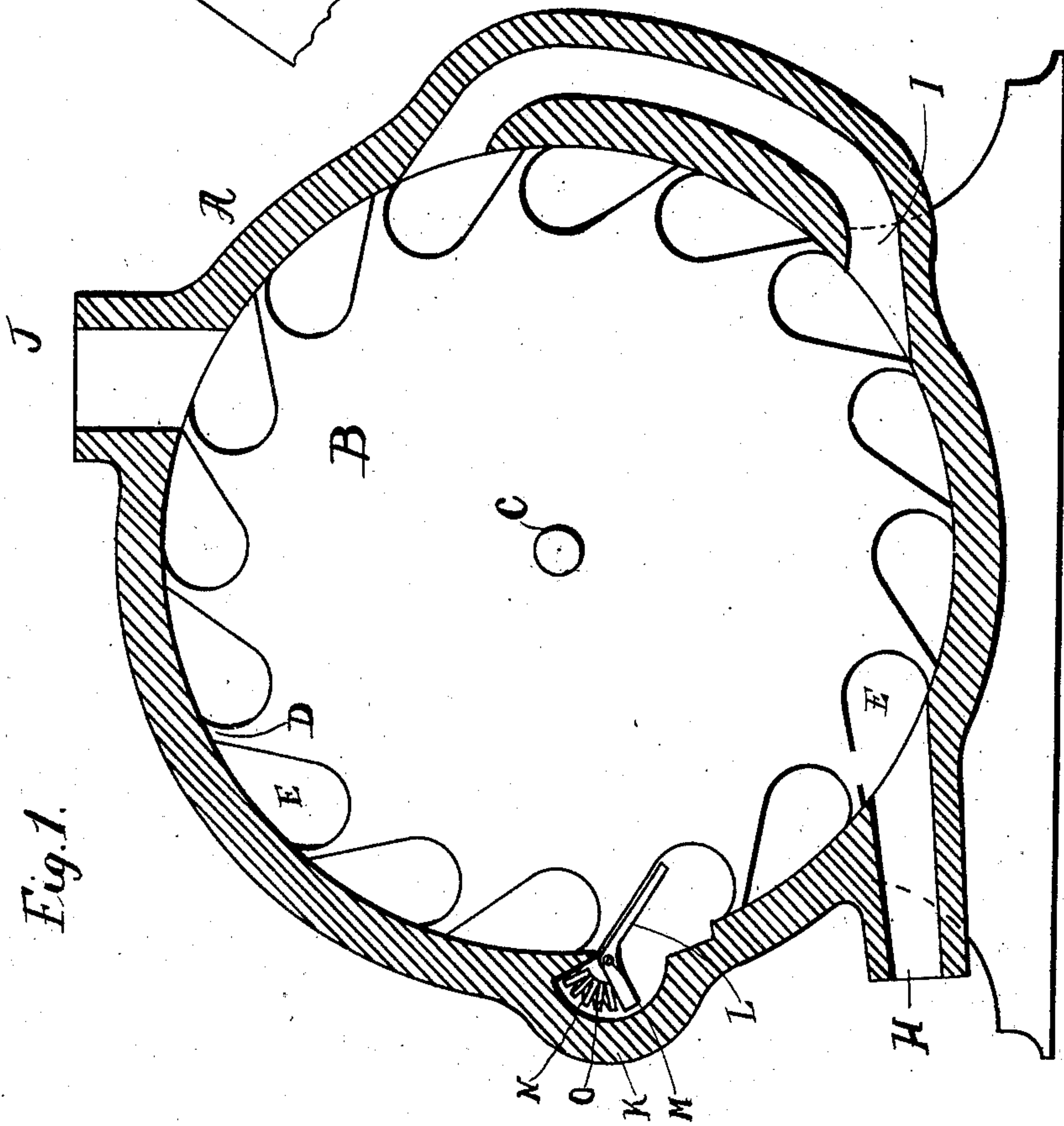


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

GUY A. WHITMAN, OF GREENLAND, MICHIGAN.

ROTARY ENGINE.

No. 850,555.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GUY A. WHITMAN, a citizen of the United States, residing at Greenland, county of Ontonagon and State of Michigan, have invented a certain new and useful Improvement in Rotary Engines, of which the following is a specification.

My invention relates to a new and useful improvement in rotary engines, and has for its object to provide a simple and effective construction that will permit the steam entering the cylinder to act directly upon the blades of the piston by impact and then follow said blades and be exhausted into a passage from which it will again emerge and enter upon the blades before being finally exhausted.

A further object of my invention is to provide a diaphragm which will prevent the flow of the steam in the wrong direction.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical section of an engine made in accordance with my improvement; Fig. 2, a detail perspective of one of the blades, illustrating the arrangement of a spring-actuated packing-block adapted to fit against and travel upon the inner surface of the cylinder when the piston is revolving.

In carrying out my invention as here embodied, A represents a cylinder which is circular in shape and in which is fitted the piston B, the latter being secured upon a suitable shaft C, having its bearings in the heads of the piston, said bearings here not shown. This piston has a series of blades D formed upon its periphery, so as to produce the pockets E for the reception of the steam, and each of these blades may have a recess formed therein for the reception of the packing-block F, which latter is normally forced outward by means of the spring G, so as to cause the outer surface of the block to bear against the inner surface of the cylinder and travel thereon as the piston revolves. This arrangement will prevent the undue escape of steam past the blades, thus not only permit-

ting the engine to act from the impact of the steam, but also to utilize the expansion of the steam.

H represents the steam-inlet, which is set at an angle so as to project the steam against the blades in the most effective manner, and this impact will cause the piston to revolve, constantly bringing new blades into action, and the steam carried in the pockets E when reaching the primary exhaust I will flow therethrough and again escape into the pockets E and assist in revolving the piston until reaching the final exhaust J, through which it will escape.

In order to avoid the rotation of piston in the wrong direction, a partition L is pivoted at M, the heel end thereof extending into the pocket N, formed by the offset K. A suitable spring O is located in this pocket and bears against the heel end of the partition, so as to cause the latter to normally spring outward and come in contact with the straight line upon the rear side of the blades, thus effectually packing the piston at this point and serving as a wall against which the steam may react. As the piston revolves the partition may be swung downward to permit each blade to pass and again spring inward, as before described.

By this construction an exceedingly simple and effective engine is produced, which will utilize the impact of the steam entering the cylinder and also utilize the expansion thereof for driving the piston and when the steam escapes to the primary exhaust again utilize this steam after the manner of a combined engine.

Having thus fully described my invention, what I claim as new and useful is—

In a rotary engine, a cylinder, a piston fitted to revolve therein, blades formed upon the periphery of the piston, spring-actuated packing-blocks fitted in each wing, a primary exhaust for conveying the steam from the pockets of the blades at a certain point to the pockets of the blades at another point, and a spring-actuated partition contacting with the blades and extending therebetween, as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GUY A. WHITMAN.

Witnesses:

R. J. TOWNSEND,
JOSEPH R. MCCLOUCH.