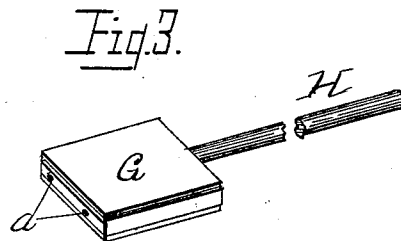
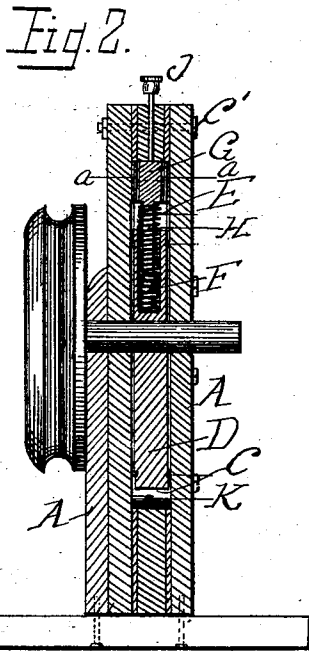
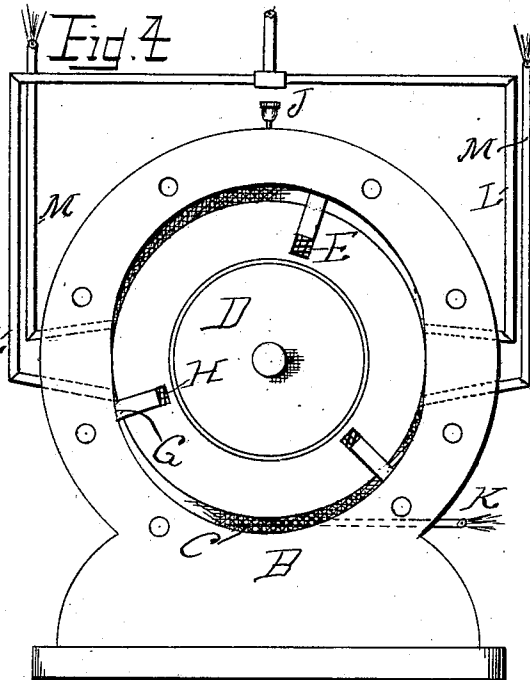
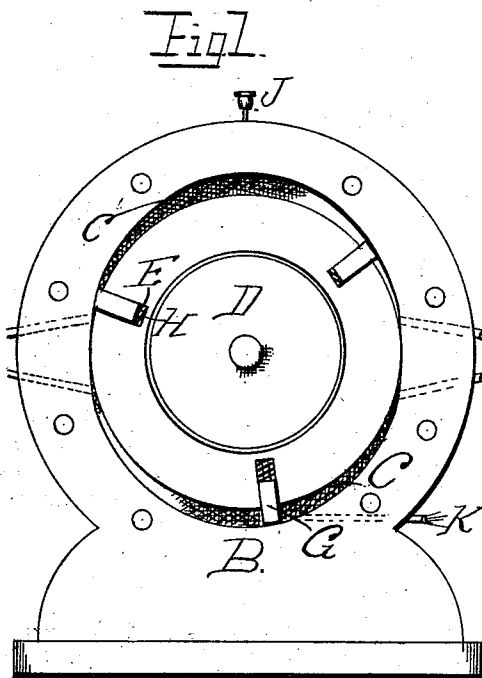


(No Model.)

W. S. PETTY.
ROTARY ENGINE.

No. 508,555.

Patented Nov. 14, 1893.



WITNESSES
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UNITED STATES PATENT OFFICE.

WILLIAM S. PETTY, OF SPARTANBURG, SOUTH CAROLINA.

ROTARY ENGINE.

SPECIFICATION forming part of Letters Patent No. 508,555, dated November 14, 1893.

Application filed February 23, 1893. Serial No. 463,461. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. PETTY, a citizen of the United States, residing at Spartanburg, in the county of Spartanburg and State of South Carolina, have invented certain new and useful Improvements in Rotary Engines, as set forth in the accompanying specification, reference being had to the drawings forming part of the same in which—

Figure 1. is a side view with the front plate removed, of my improved reversible rotary engine. Fig. 2. is a vertical sectional view of the same. Fig. 3. is a view of one of the pistons removed, and Fig. 4. is a view similar to Fig. 1, showing the engine capable of running in one direction only but with increased power.

My invention relates to rotary engines. It has for its object to provide an engine of this sort, which will be simple in construction, durable in use, and comparatively inexpensive of production.

With these objects in view, the invention consists in certain features of construction, and combination of parts of the same, which will be hereinafter described and claimed.

In the construction shown in Fig. 1, A represents the sides of the casing, and B, the intermediate ring. These parts are clamped together by bolts C'. The ring B, has an oval opening C of less diameter, horizontally than vertically. It is also provided with two inlet ports on one side, and two exhaust ports on its opposite side. The inlet ports are arranged slightly at opposite sides of the narrowest portion of the opening, for the purpose hereinafter described.

D, represents a cylinder wheel, located in this opening. The wheel is provided upon its periphery with recesses E, from the base of which extend sockets F. Into these recesses I fit my pistons G, with the extending shanks H, in the sockets. Around these shanks are springs which exert their force outwardly.

J, is an oil cup of any suitable construction, and K, is a pet cock. It will be seen that

when steam enters the port above the smallest diameter of the opening in the ring, it will strike one of the pistons, and force it around in one direction, and escape through the exhaust port. When it is desired to reverse the engine steam is cut off from this port, and allowed to enter through the other port, thus driving the engine in the opposite direction.

In the construction shown in Fig. 4, I have shown an engine capable of running in one direction only, but with increased power.

L denotes the inlet pipes, and M, denotes the outlet pipes. It will be seen that the outlet pipes on one side are above the inlet pipes, and on the opposite side this arrangement is reversed. Steam in one of the inlet pipes will pass upwardly while that entering the opposite pipe will pass downwardly, and thus impart to the cylinder wheel double power. This construction is well adapted for stationary engines. The pistons are recessed upon their sides, and ends, to receive packings of any suitable material, preferably Babbitt metal. They are also provided with longitudinal bores *a* to allow the steam to pass through them, and thus prevent said steam forcing the pistons back in their recesses.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

In a rotary steam engine, the combination with the cylinder provided with an oval steam chamber, a circular cylinder wheel journaled in said chamber and provided with recesses in its periphery, spring actuated pistons located in said recesses and provided with longitudinal bores communicating with said recesses and ports entering said chamber at a point at one side of its smallest diameter, substantially as herein described.

WILLIAM S. PETTY.

Witnesses:

JNO. EARLE BOMAE,
P. M. PETTY.