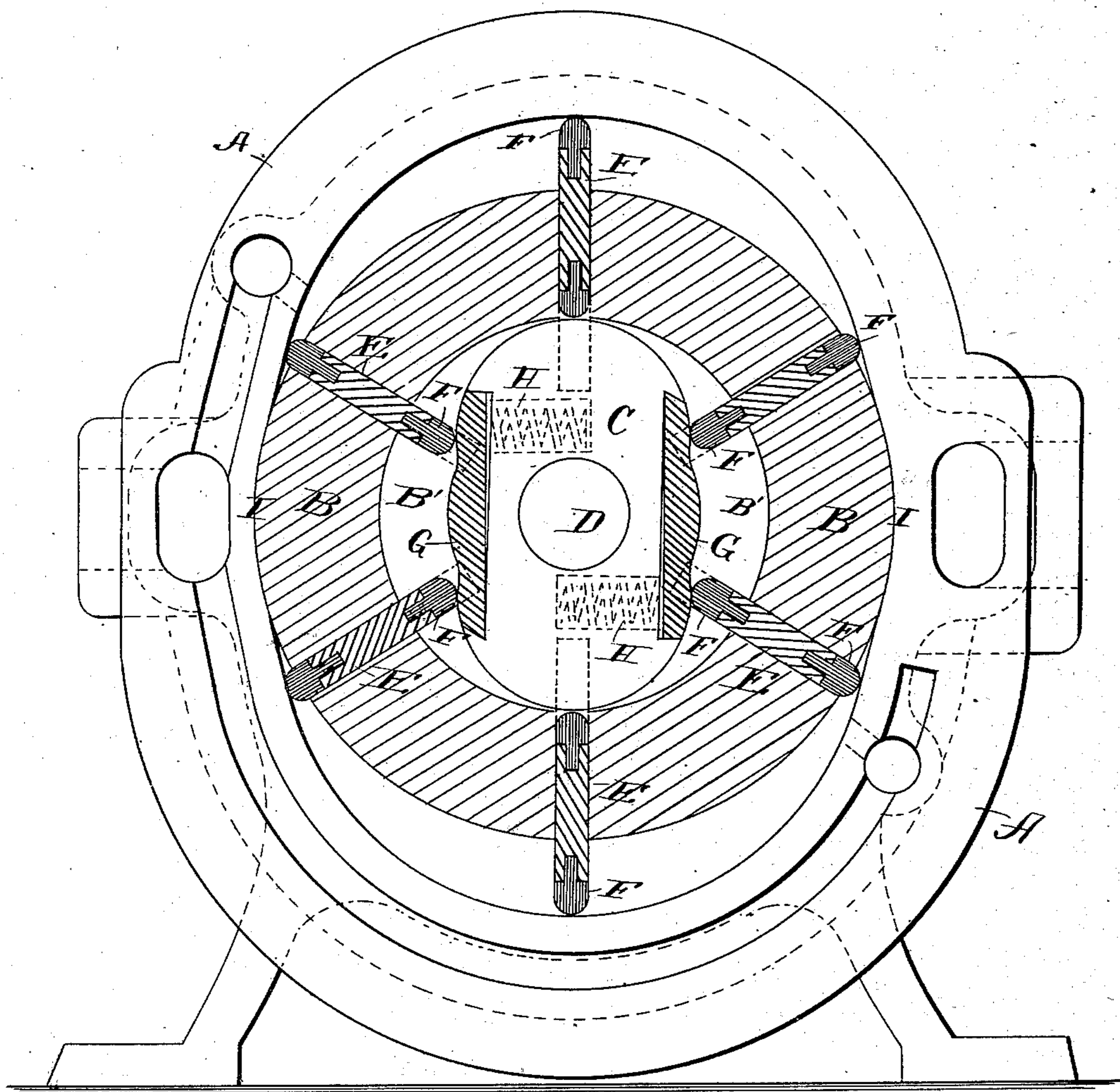


(No Model.)

J. MOFFET.  
ROTARY ENGINE.

No. 315,318.

Patented Apr. 7, 1885.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN MOFFET, OF NEW YORK, N. Y.

## ROTARY ENGINE.

SPECIFICATION forming part of Letters Patent No. 315,318, dated April 7, 1885.

Application filed November 15, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN MOFFET, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Rotary Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to that kind of rotary engine which comprises a vertically-elongated shell or casing inclosing a slotted cylinder provided with sliding pistons, the ends of the rotary cylinder being recessed to enable it to pass around a cam, one of which is secured to each head of the casing for the purpose of successively projecting the piston-blades as the cylinder is rotated.

My invention consists in enlarging the horizontal diameter of the elliptical shell or casing, so as to facilitate the passage of the pistons at the sides of the casing and afford a wide bearing at those points between the shell and rotary cylinder to prevent leakage of steam.

The invention also consists in forming the cams with a recess on each side for the reception of a hardened-steel bearing-plate that is pressed outwardly by a spiral spring, so as to form a cushion for the inner ends of the piston-blades, thereby obviating the noise that accompanies the employment of solid cams.

The invention is illustrated in the annexed drawing, which represents an inner vertical side elevation of my improved rotary engine, partly in section, one of the casing-heads being removed.

A is a vertically-elliptical shell or casing, which is provided with suitable ports and inlet and exit passages for steam.

B is the internal rotary cylinder, the ends of which are recessed at B' for passage around the vertically-elongated cams C, one of which is secured to the inner side of each casing-head.

D is the shaft or journal of the rotary cylinder B, and E E are the sliding piston-blades

that move in radial slots formed in said cylinder. The inner and outer edge of each piston-blade is grooved longitudinally for receiving the shank of a shouldered packing-strip, F, that is composed of hardened steel, the outer or bearing portion of said strip being of equal thickness with the piston and rounded at its extremity, as shown. These strips F are designed to obviate wear of the blades, and, being detachable, may be readily renewed when necessary.

In order to cushion the piston-blades and lessen the wear and noise caused by their being thrust back against the sides of the cams under the rotation of the cylinder, I provide the vertical sides of the cams with hardened-steel bearing-plates G G, that are let into suitable recesses in contact with spiral springs H H. It will be seen that the joint between the cam and that end of the bearing-plate which is nearest its spring is horizontal, so as to allow the plate the necessary range of movement, while the joint at the opposite end of the bearing-plate is inclined in such a manner as to form a hinge for the plate and prevent its falling out of place.

The lateral or horizontal diameter of the shell or casing A is increased, as shown, so as to form elongated abutments I I on each side that afford a more extended bearing than usual for the rotary cylinder. This lateral enlargement of the shell facilitates the passage of the sliding piston-blades past those points on each side, and diminishes the force of their thrust against the cams, while the extended bearing-surface between the cylinder and shell prevents the escape of steam in advance of the cylinder.

It will thus be seen that my improvements tend to greater durability by facilitating the movements of the parts and lessening wear.

The operation of the engine is similar to that of others of like kind and need not be further explained.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rotary engine, the vertically-elliptical shell A, having an enlarged horizontal diameter, forming extended lateral abutments II, in combination with a rotary cylinder, B, pro-

vided with sliding piston-blades E E, having a hardened-steel bearing or packing strip, F, on each edge, substantially as described.

2. In a rotary engine, the combination, with  
5 the fixed cams C C, of the steel bearing-plates G G, and the spiral-springs H H, let into said cams to form cushions for the inner ends of the sliding pistons, substantially as described.

3. In a rotary engine, the combination of the  
10 vertically-elliptical shell A, having an enlarged horizontal diameter, forming lateral abutments

I I, the shaft D, rotary cylinder B, provided with radial slots and recessed ends, the fixed cams C, having yielding bearing-plates G G, and the sliding piston-blades E E, having pack- 15 ing-strips F F, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN MOFFET.

Witnesses:

F. A. LOWE,  
L. B. HOWE.