

No. 677,531.

Patented July 2, 1901.

E. E. ALBERT.
ROTARY ENGINE.
(Application filed July 17, 1899.)

(No Model.)

Fig. 1.

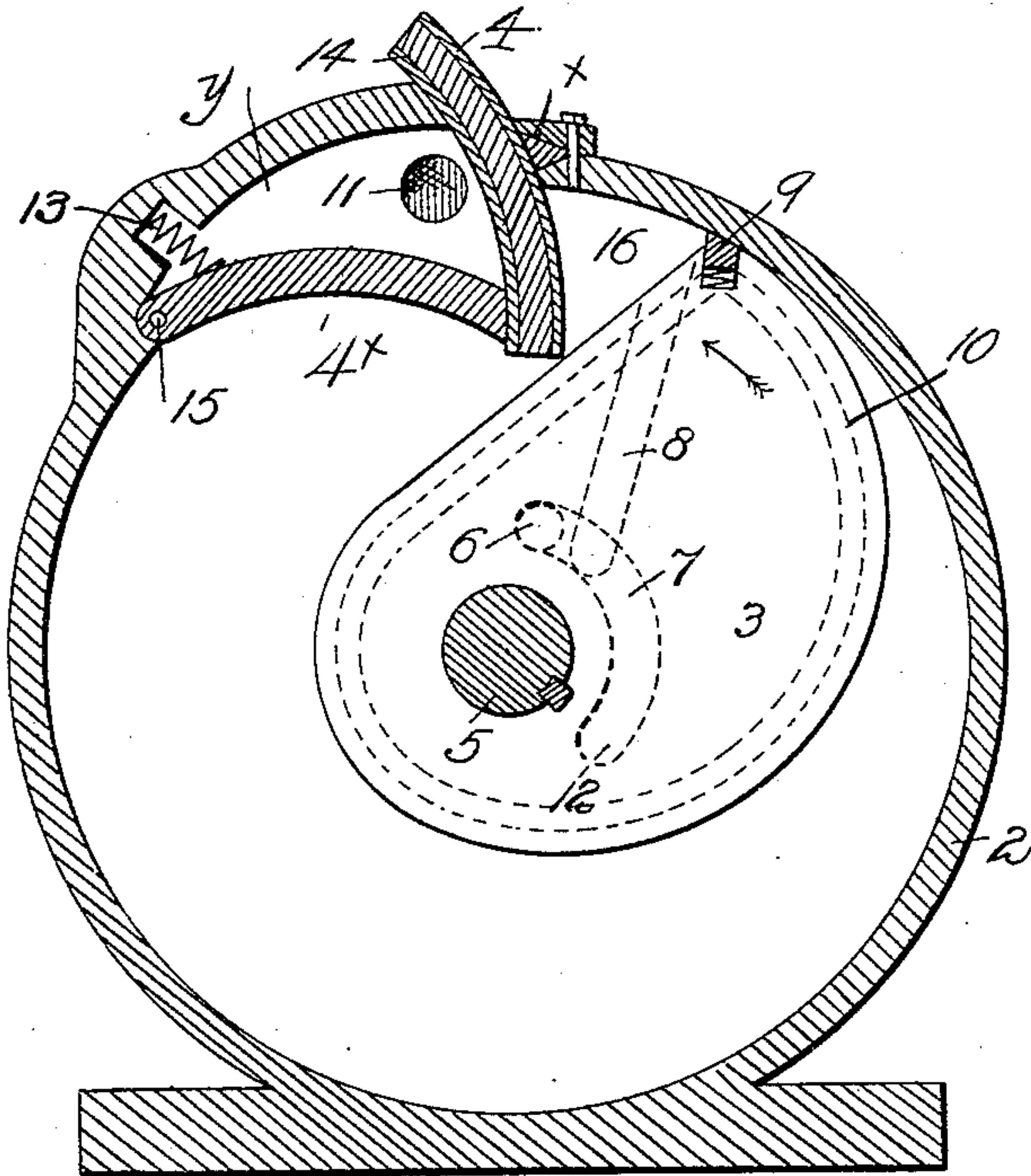
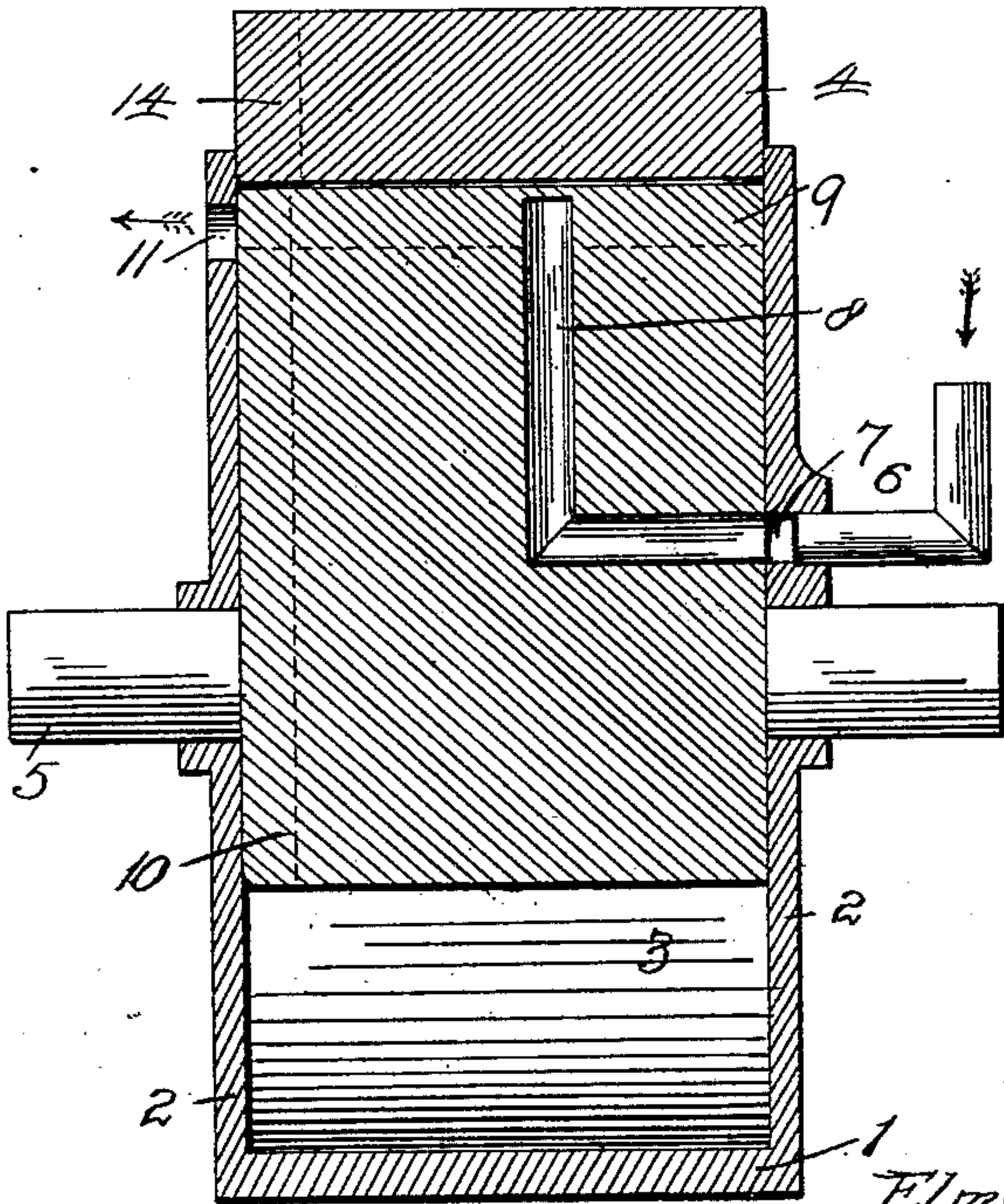


Fig. 2.



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ROTARY ENGINE.

SPECIFICATION forming part of Letters Patent No. 677,531, dated July 2, 1901.

Application filed July 17, 1899. Serial No. 724,149. (No model.)

To all whom it may concern:

Be it known that I, ELMER E. ALBERT, a citizen of the United States, residing at Malta, in the county of Cassia, State of Idaho, have
5 invented certain new and useful Improvements in Rotary Steam-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 ap-
10 pertains to make and use the same.

My invention resides in the combination and arrangement of parts hereinafter described, and particularly pointed out in the claims.

15 In the accompanying drawings, Figure 1 is a sectional view of my invention, taken transversely of the shaft, parts being shown in side elevation. Fig. 2 is a sectional view of my invention, taken longitudinally of the shaft.

20 In the drawings, 1 is the base of the engine; 2, the cylinder; 3, the piston fixed by a key onto the shaft 5.

4 is an abutment-plate, which is carried at its inner end upon the free end of an arm 4^x,
25 which is pivoted to the cylinder-casing at 15.

The piston, it will be seen, is of cam shape, and the inner end of the abutment-plate is intended to ride on the surface of the piston, said plate being free to move for this purpose
30 in and out through the cylinder-shell, a packed joint being provided at *x*. The cylinder-casing is formed with a recess at *y* to receive the arm 4^x when this swings outwardly. This arm is formed on a curve corresponding to
35 that of the inner wall of the cylinder, and when in its outward position the arm, with its inner curved edge, forms a continuation of the curved surface of the cylinder. The curve of the abutment 4 is struck from the center

40 15. A spring 13, seated in a recess in the cylinder-casing, presses the arm 4^x inwardly to make the abutment-plate contact with the cylinder. The high point of the cam-shaped piston is provided with a packing-strip 9,
45 which is spring-pressed to provide a good yielding contact with the cylinder, and a similar packing-strip 10 is inserted in a recess in the side face of the piston. (Shown in dotted lines in the drawings.) The abutment-plate

4 is provided with a spring-actuated strip in 50 one of its edges.

6 indicates the inlet-port. This is arranged to communicate with a groove 7 in the cylinder-casing, and this is of concentric form and adapted to connect or register with the inner 55 end of a duct or port 8 during part of the rotary movement of the piston. The outer end of the duct discharges the steam into the cylinder behind the piston near the high part thereof. Fig. 1 shows the parts in position 60 to receive steam behind the piston and in front of the abutment—*i. e.*, in the space 16—and the steam in this space acting on the pistons sets the same in rotation. The exhaust-
65 port is shown at 11, and the steam escapes through this when the arm 4^x is forced outwardly by the high part of the cam-shaped piston.

Having thus described my invention, what is claimed, and desired to be secured by Let- 70 ters Patent, is—

1. In combination with the cylinder and piston, an abutment-plate freely movable toward and from the center of the cylinder to rest on the piston at all times and a pivoted 75 arm carrying the said abutment-plate, said arm being formed on a curve corresponding substantially to that of the inner periphery of the cylinder, said abutment-plate being pivoted adjacent to the inner periphery of the 80 cylinder with its inner surface arranged to form a continuation of the inner surface of the cylinder, substantially as described.

2. In combination, the cylinder, the piston and the abutment comprising a pivoted arm 85 with a spring for forcing the arm constantly toward the piston and the abutment-plate connected with the end of the same and extending outwardly from the said arm, said arm being curved and forming a continuation 90 of the inner periphery of the cylinder when said arm is in its outermost position, substantially as described.

E. E. ALBERT.

Witnesses:

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