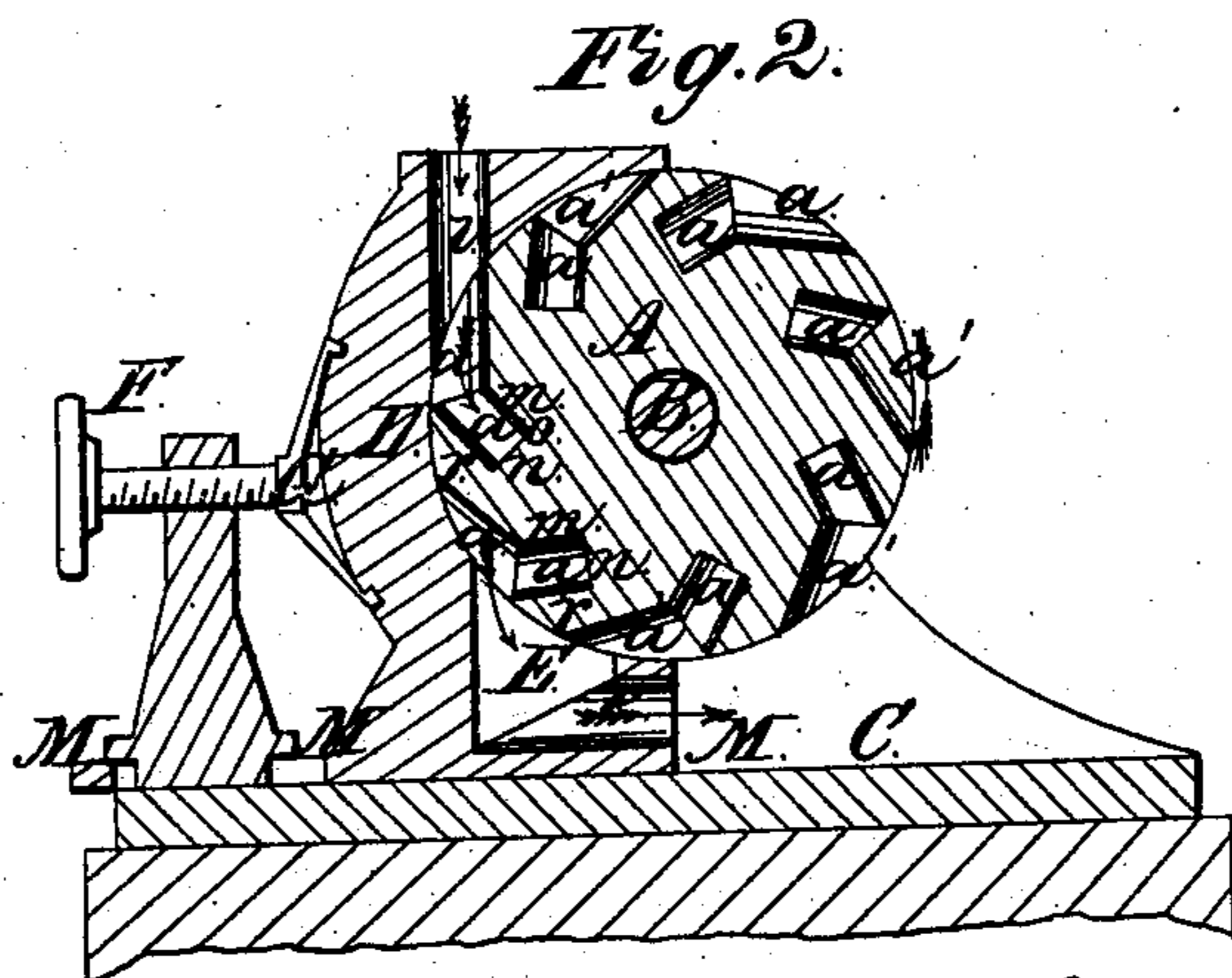
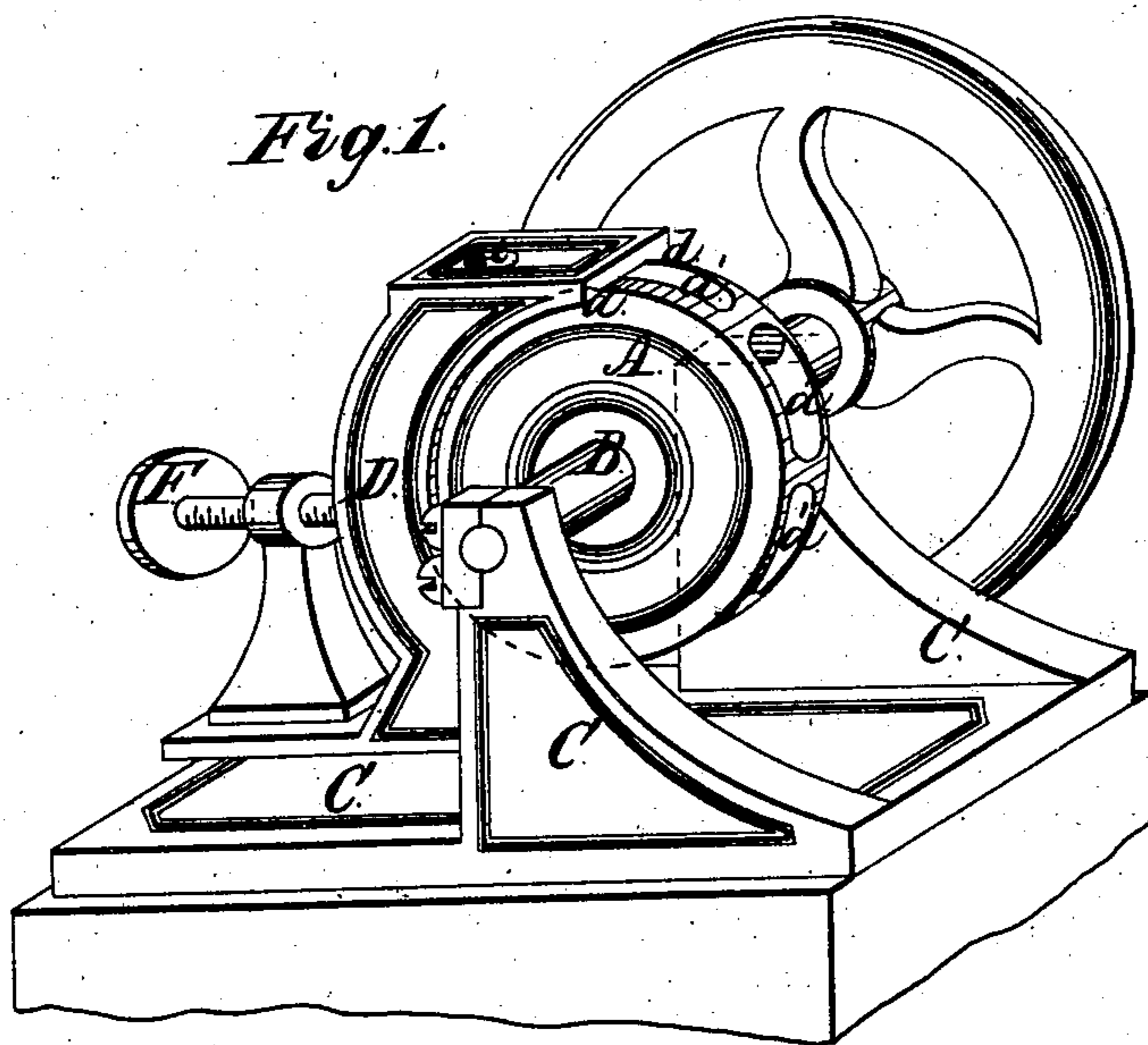


S. S. JAMISON, Jr.
ROTARY STEAM ENGINE.

No. 76,770.

Patented Apr. 14, 1868.



Witnesses.

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SAMUEL S. JAMISON, JR., OF SALTSBURG, PENNSYLVANIA.

Letters Patent No. 76,770, dated April 14, 1868.

IMPROVEMENT IN ROTARY STEAM-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL S. JAMISON, Jr., of Saltsburg, in the county of Indiana, and State of Pennsylvania, have invented a new and useful Improvement in Rotary Engines; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable others skilled in the art to which the invention appertains to fully understand and use the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view.

Figure 2 is a vertical section.

This invention relates to that class of rotary engines in which the steam is applied to a revolving cylinder, one side of which works against an abutment, and consists in such a construction of the cylinder and the abutment that the engine is greatly simplified, and the cost of it reduced, while the power of the steam is utilized to great advantage, and the parts of the engine can be readily adjusted and made steam-tight, should they at any time work loose.

In the drawings, A is the revolving cylinder, carrying a shaft, B, supported by a frame or bed, C. D is the abutment, against which the cylinder works, provided with a steam-induction pipe, *i*, eduction-pipe *e*, and exhaust-steam chamber E. The abutment D can be adjusted against the cylinder A, with any requisite degree of force, by means of a set-screw, F, operating against a brace, G, the whole abutment sliding to and from the cylinder upon guides or ways M M, by which it is held firmly down to the bed, and prevented from any lateral action or vibration.

In the perimeter of the cylinder, chambers *a a* are formed, having expanded entrances *a' a'*, and being formed and arranged in the manner clearly shown in fig. 2. The steam from the induction-pipe *i* acts upon the walls of the chambers *a a, a' a'*, forcing the cylinder round on its axis till the mouths of the chambers come over the exhaust-chamber E, when the steam in the chambers *a a'* exhausts into the chamber E, and thence to the open air, through the pipe *e*. As one chamber, *a a'*, passes out from under the influence of the induction-steam, the revolution of the cylinder brings another chamber into the position just vacated by the last one, and subjects it, in its turn, to the action of the live steam, thus keeping up a constant and uniform rotary motion of the cylinder.

By constructing and adjusting the cylinder and abutment in the manner described, with the perimeter of the cylinder perfectly flat, the latter will wear its own bearing true, so as to form and keep the joint between it and the abutment steam-tight.

In order to steady and strengthen the apparatus, and prevent any vibration or lateral action of the cylinder, its perimeter may sink into or run in a groove in the concave wall of the abutment, so that it will be held perfectly steady by a flange, *d*, on each side.

The brace G may have a slight spring, if thought advisable, by which means the abutment will yield slightly, to accommodate itself to the expansion of the metal by heat.

The form of the chambers *a a'* is believed to possess a great advantage, in the fact that the upward pressure of the steam against the wall *m* is nearly or quite counterbalanced by its downward pressure against the wall *n*, leaving the working force of the steam to be applied to the wall *r*, in such a way as to actuate the cylinder to the greatest advantage.

The walls being perfectly straight, all the steam exhausts from the chambers. There is no back pressure of steam, except against the wall *m*. If the wall ran in a straight line from the point *o* to the point *o'*, there would be a back pressure all along the wall, which is now avoided by the form of the chambers.

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

The arrangement of the regulating-screw F, spring-brace G, movable abutment D, and guides M M, operating in connection with a rotary cylinder, A, in the manner described.

S. S. JAMISON, Jr.

Witnesses:

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