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S. M. Snyder,

PATENTED JAN 11 1870

Imp^d Rotary Engine.

fig. 1.

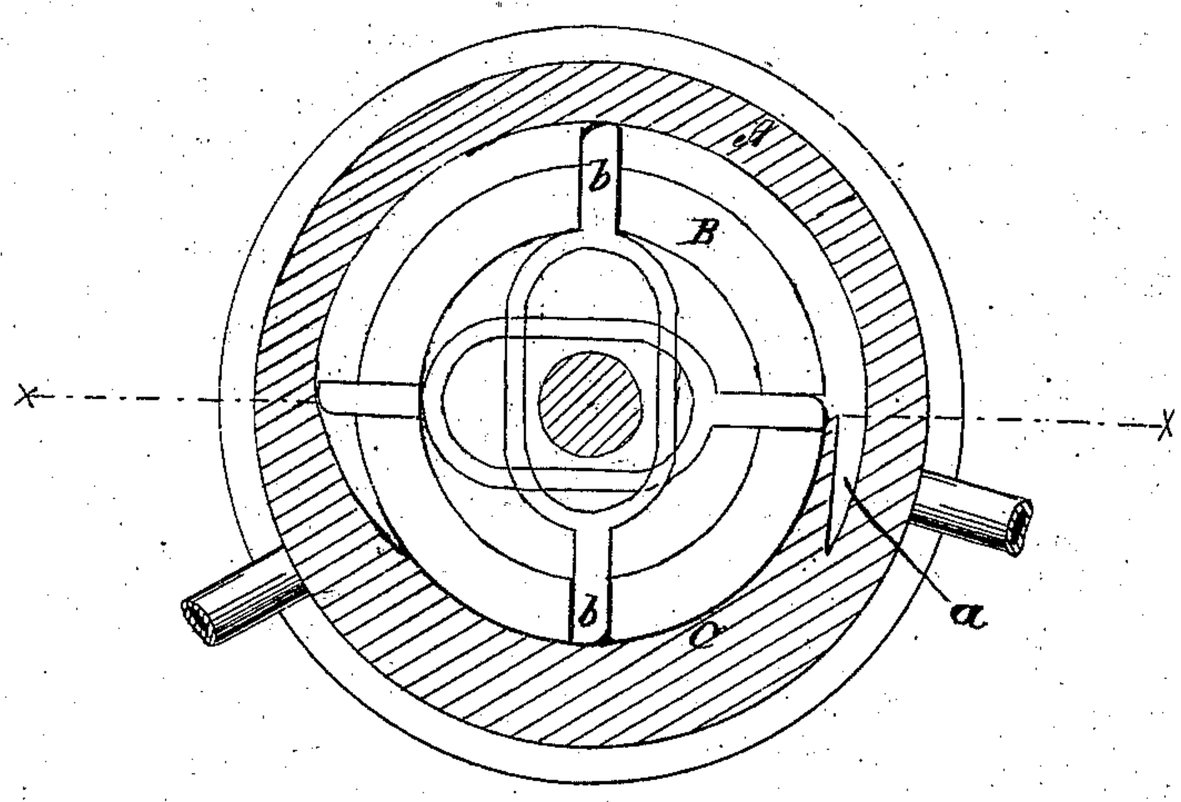
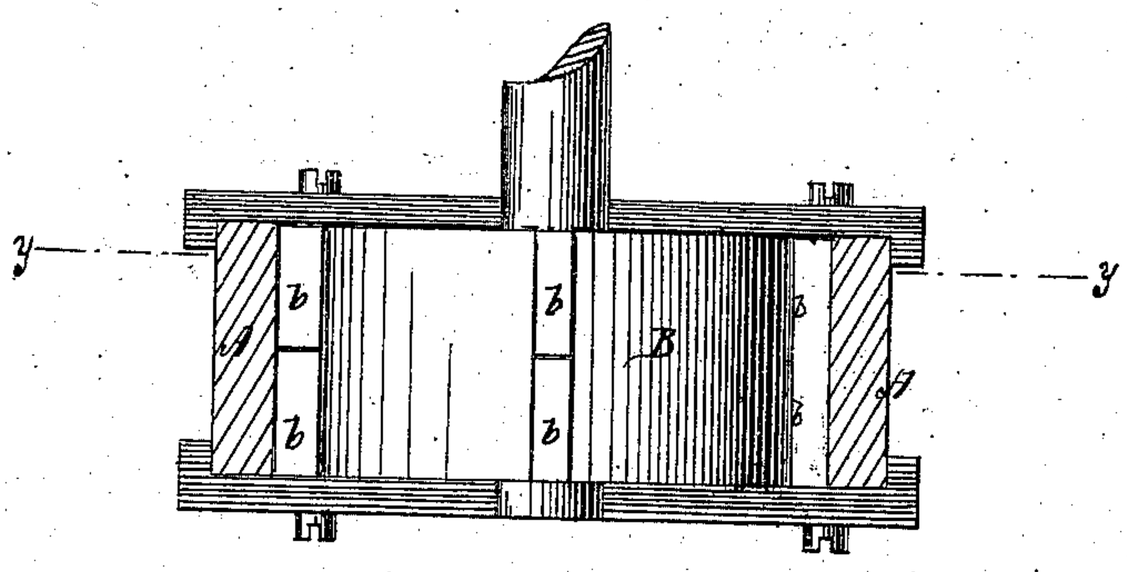


fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL M. SNYDER, OF BRADY, PENNSYLVANIA.

IMPROVEMENT IN ROTARY ENGINES.

Specification forming part of Letters Patent No. **98,811**, dated January 11, 1870.

To all whom it may concern:

Be it known that I, S. M. SNYDER, of Brady, in the county of Indiana and State of Pennsylvania, have invented a new and Improved Rotary Engine; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a horizontal section. Fig. 2 is a vertical section.

This invention consists in combining with the hollow revolving piston of a rotary steam-engine, two or more diametrical sliding valves placed at right angles to each other, said valves being made bulging at their central parts which are within the cylinder, said bulging parts being hollow and surrounding the piston-shaft, with space enough to allow the valves to play back and forth upon and transversely of said shaft, the ends of the valves projecting through vertical orifices in the shell of the hollow piston far enough to come in contact with and receive end-play, in the course of their revolution, from a lining of semi-annular shape, placed between the piston and cylinder, which lining also serves to direct the entering steam in the right direction.

In the drawings, A is the cylinder, and B the hollow piston.

C is a semi-annular lining placed between the piston and cylinder, such lining having both ends tapering inward from the cylinder, and thus leaving a wedge-shaped space, *a*, between one of its tapering ends and the interior of the cylinder, into which space the inlet-valve opens and discharges the entering steam against the inclined face of the lining C, which directs it toward the right, or in the track of the valves *b*. The latter project through vertical orifices in the piston-shell, and as the end of each strikes the annular lining the valve is thrust endwise, so that its opposite extremity strikes the inside of the cylinder and affords surface against which the steam acts. There being four or more valve ends at quadrant intervals, the entering steam always finds a surface against which to act near at hand, and is prevented from flowing in the wrong direction by the inclined face of the annular lining.

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

1. The hollow piston B, sliding valves *b b*, and semi-annular collar C, combined substantially as and for the purpose described.

2. The semi-annular collar C, having both ends tapering inward, and so as to form an inclined face at one end to direct the entering steam in the right direction, substantially as set forth.

SAMUEL M. SNYDER.

Witnesses:

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