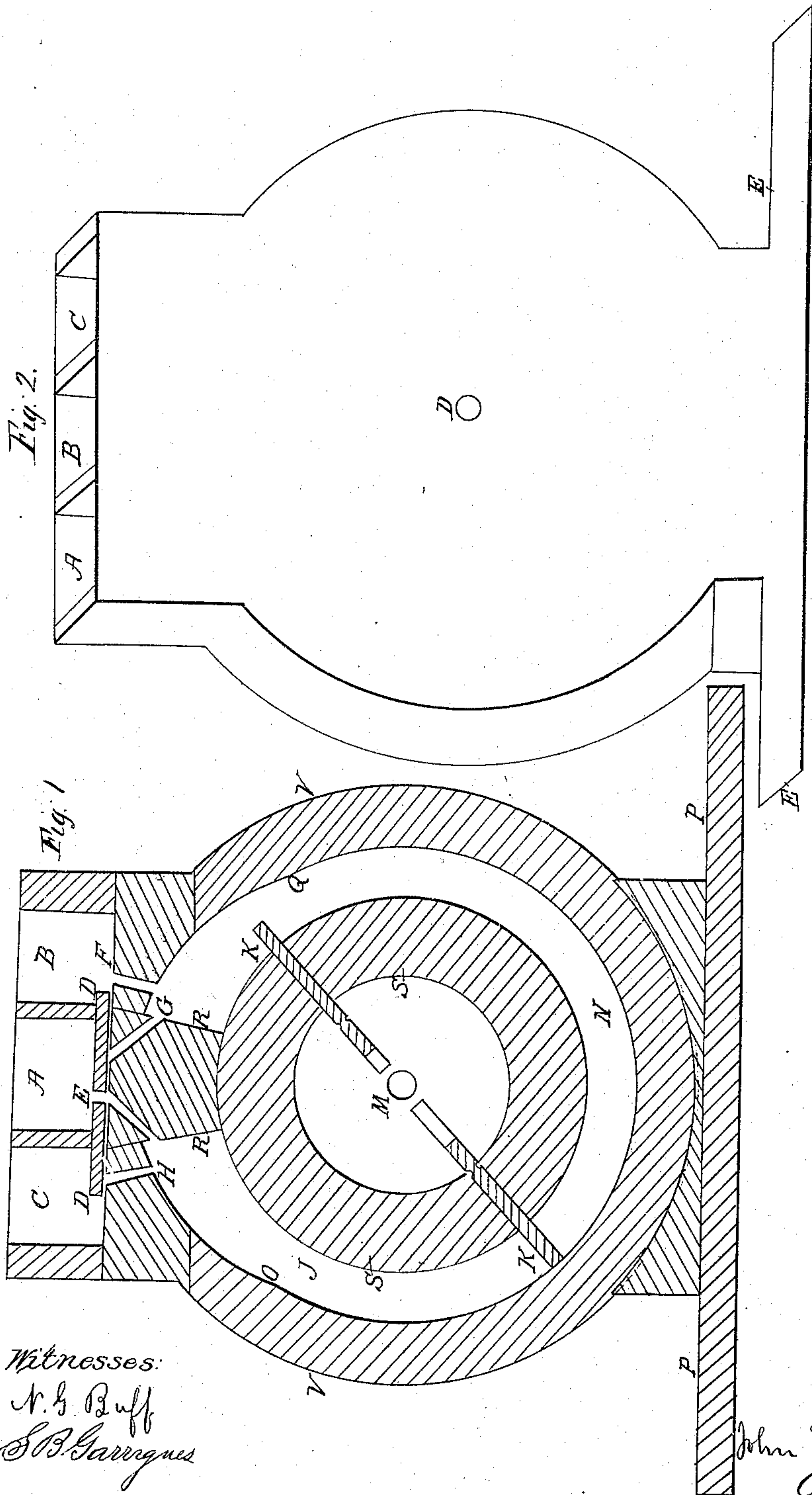


J. W. SIMONTON & O. T. STRUBLE.
ROTARY STEAM ENGINE.

No 47,751.

Patented May 16, 1865.



Witnesses:
A. B. Buff
S. B. Garrigue

Inventor:
John W. Simonton
Oliver T. Struble

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Fig. 3.

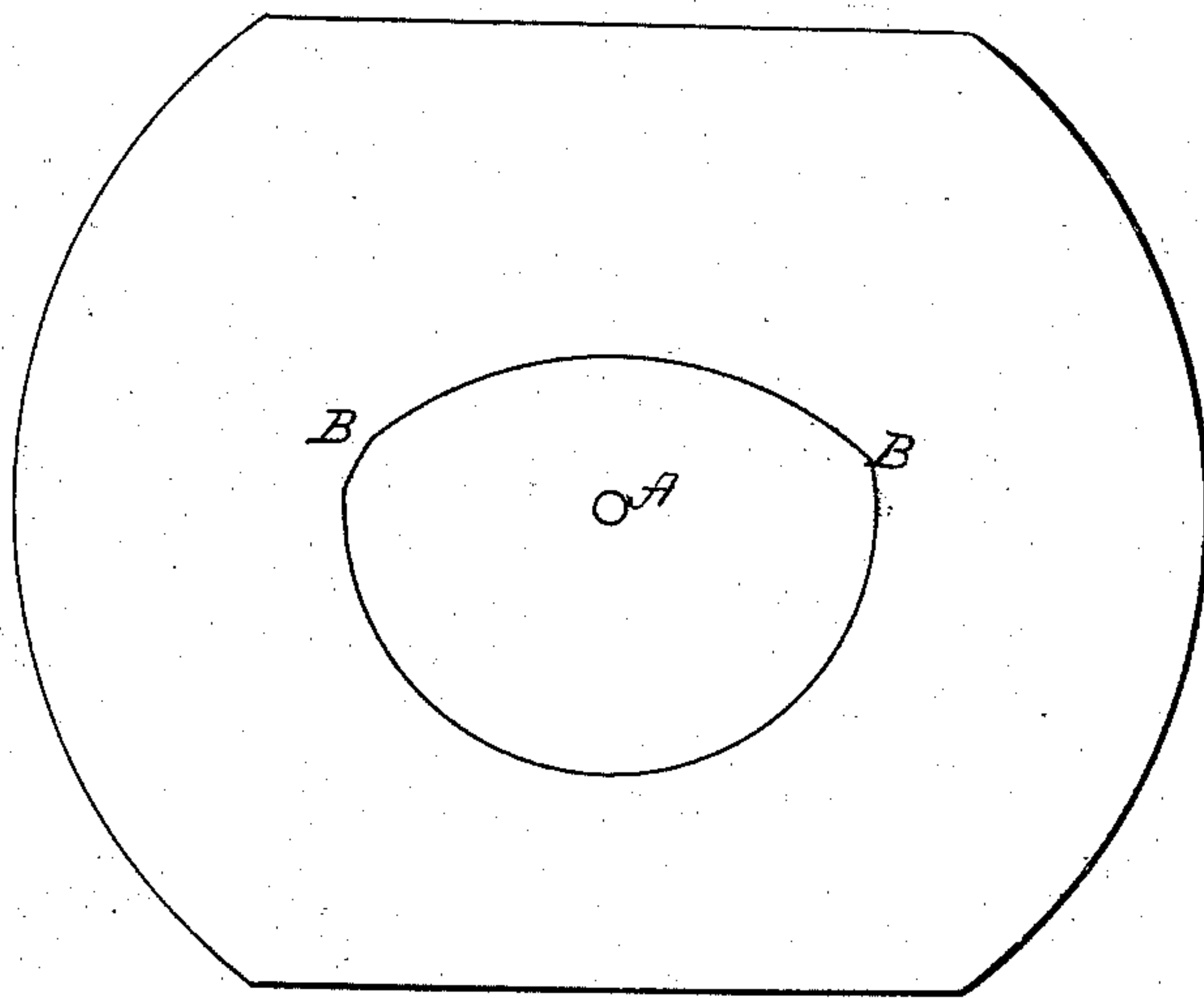


Fig. 4.

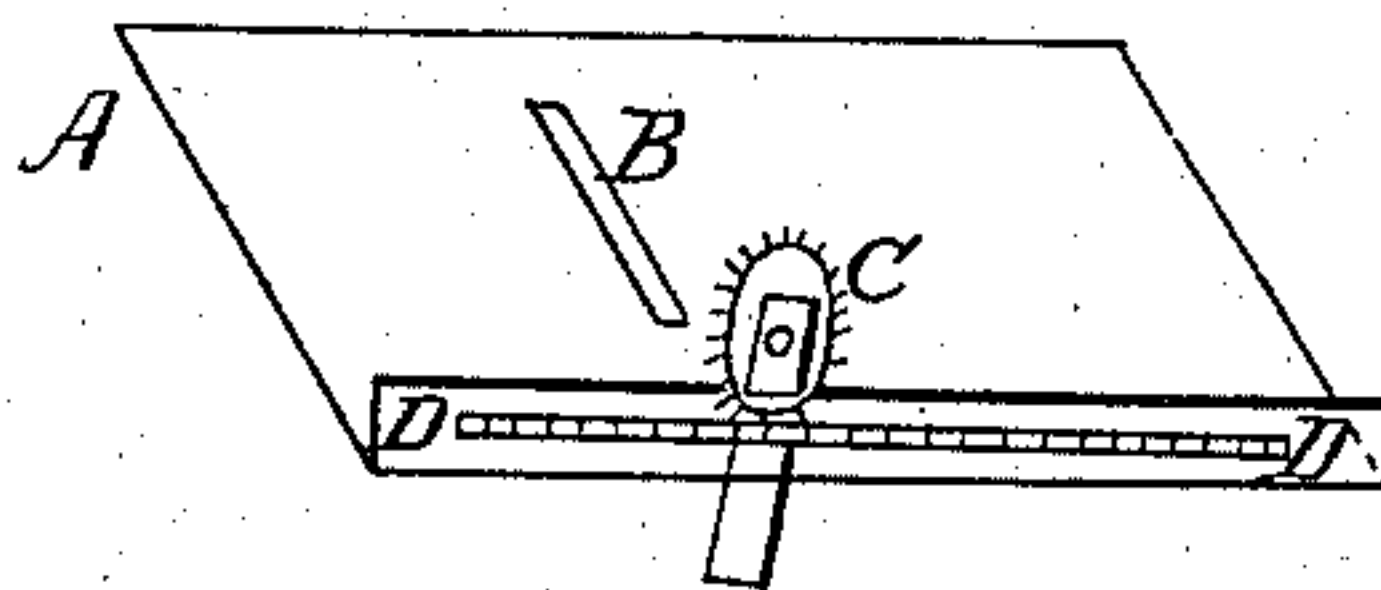
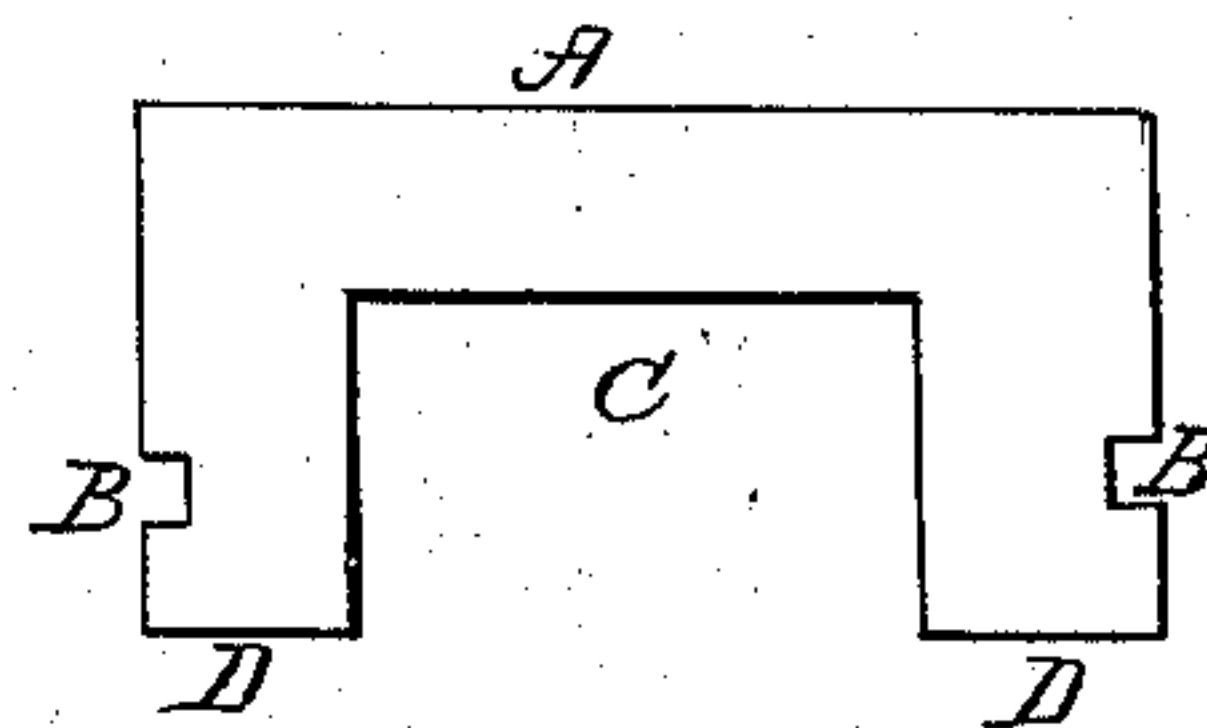


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN W. SIMONTON AND OLWIN T. STRUBLE, OF TAYLORSVILLE, IND.

IMPROVEMENT IN ROTARY STEAM-ENGINES.

Specification forming part of Letters Patent No. 47,751, dated May 16, 1865.

To all whom it may concern:

Be it known that we, JOHN W. SIMONTON and OLWIN T. STRUBLE, of Taylorsville, in the county of Bartholomew and State of Indiana, have invented a new Rotary Steam-Engine; and we 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 annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal sectional view; Fig. 2, a perspective view; Fig. 3, a plan elevation of cylinder-head; Fig. 4, a perspective view of steam-chest valve, and Fig. 5 a sectional view of cylinder-valve.

First. Fig. 1 represents a longitudinal sectional view of the engine complete, in which A, B, and C represent the three chambers of the steam-chest, the central one, A, being constructed to receive the steam from the boiler, (not represented,) and the extreme ones, B and C, for the escapement of the steam after passing the revolution of the cylinder. E and G are orifices for conducting the steam from the steam-chest A into the circular cavity between the rim and cylinder I N. F and H are orifices for the escapement of the steam. D D is a sliding valve on the bottom of the steam-chest, with an orifice, E. R R is a projecting steam-head secured to the rim V V. S S is a solid cylinder (or piston) revolving on a central shaft, M, slotted on opposite sides, so as to receive the valves K K, and P P the base of the engine.

Second. Fig. 2 represents a perspective view of the engine closed, except at the top, in which A B C represent the three chambers of the steam-chest, and D the shaft on which the cylinder revolves, and E E the base of the engine.

Third. Fig. 3 represents a plan elevation of cylinder-head, in which A represents the orifice in which the cylinder-shaft moves; B B, the eccentric permanently attached to and projecting from the cylinder-head.

Fourth. Fig. 4 represents the sliding valve at the bottom of steam-chest, with a rack, D D,

and cog-wheel C, attached to the edge or rim for its movement; B, the orifice in the valve.

Fifth. Fig. 5 represents the cylinder-valve, of which A is the face; D D, arms fitting the slot in the cylinder; B B, slots in the arms of the valve to receive the eccentrics on the cylinder-head.

The operation of the engine is described as follows, reference being had to Fig. 1 for illustration: The steam being admitted into the central chamber of the steam-chest, it passes through the orifice E on to the cylinder S S, striking the valve K, which being thrown out to the rim by means of the eccentrics, immediately but gradually after passing the steam-head R R, the cylinder is driven around under a full head of steam until the second or upper valve reaches the steam-head, where, by a gradual withdrawal, by means of the eccentrics, it passes under the steam-head, and is in turn projected, by means of the eccentrics, to strike the rim at the point O, where it receives a full head of steam, and is alike driven around until the first valve reaches the point Q, where it begins to recede, permitting the steam to escape through the orifice F into the chamber B.

To reverse the motion of the engine, the valve D D, by means of the rack and cog, Fig. 4, is thrown from left to right until the orifice E communicates with the orifice G, closing the orifice F and opening the orifice H, thus securing a direct reverse motion without any change of principle or machinery.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of the reversing-valve D D with the abutment R R, having induction-ports through it, substantially as described.

2. The arrangement of the chamber C, A, and B and the induction-passages H and F, substantially as shown and described.

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Witnesses:

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