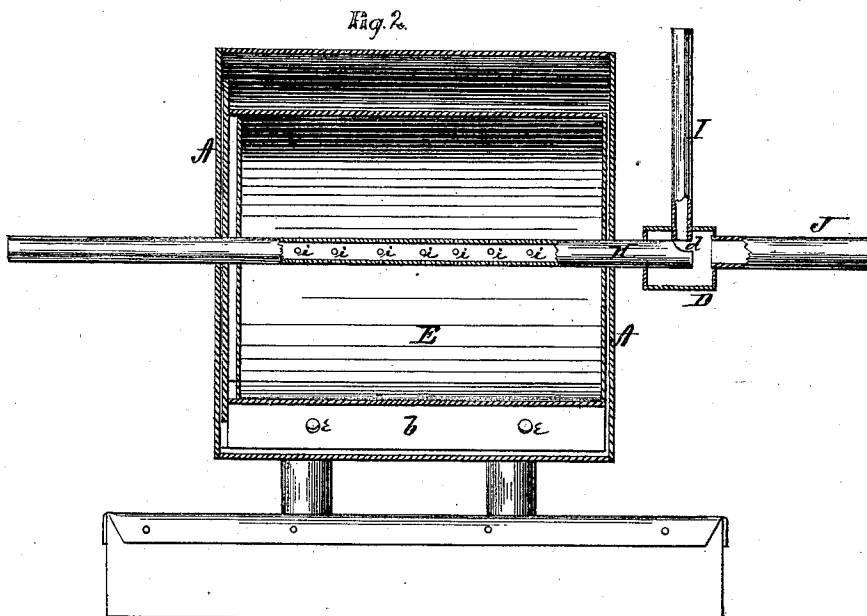
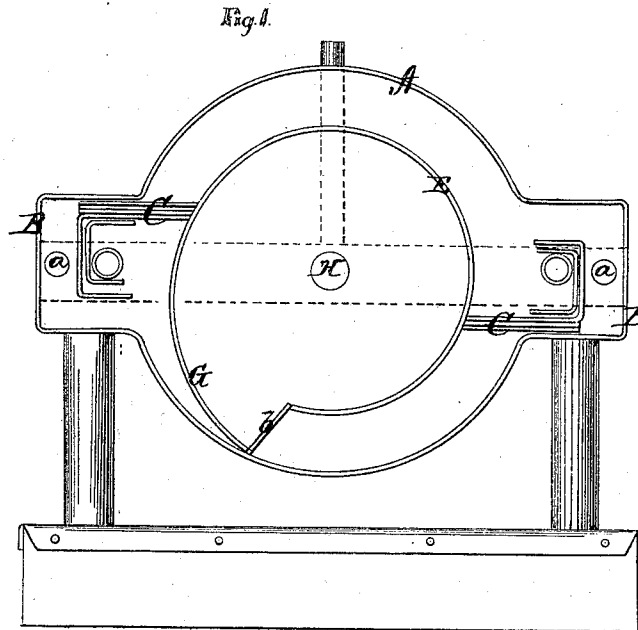


SAMUEL GIBSON.

Improvement in Rotary Steam Engines.

No. 125,373.

Patented April 2, 1872.



Witnesses:

James C. Hutchinson
C. L. Ewert

Inventor

Saml. Gibson
per Alexander Mason

Attorneys.

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Fig. 3.

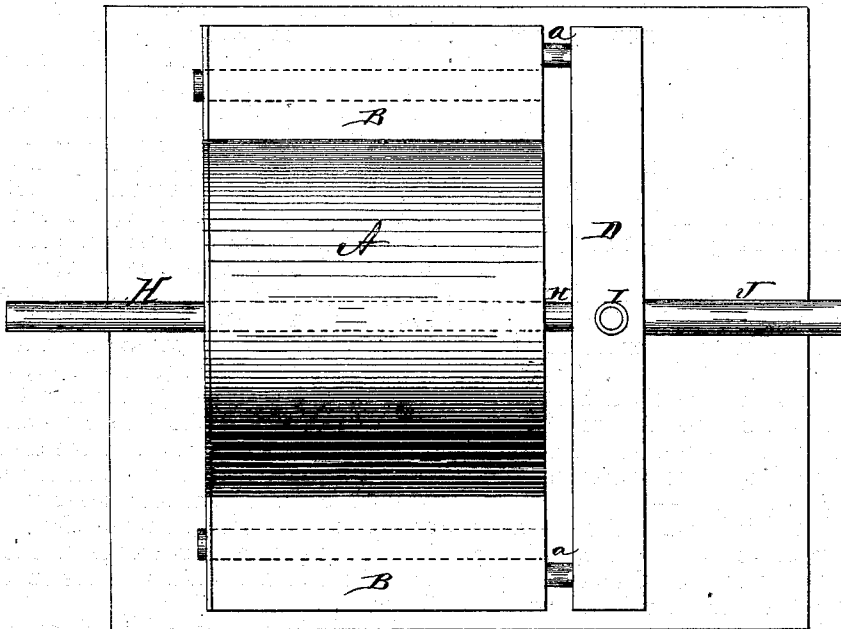
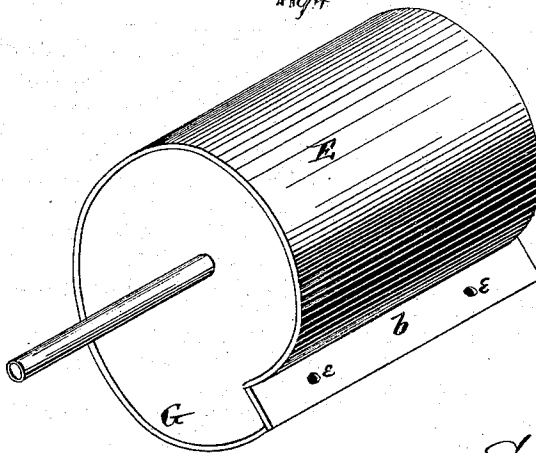


Fig. 4



Witnesses:

James C. Hutchinson
to L. Everett.

Inventor

Inventor
Saml. Gibson
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Attorneys.

UNITED STATES PATENT OFFICE.

SAMUEL GIBSON, OF YORK, PENNSYLVANIA.

IMPROVEMENT IN ROTARY STEAM-ENGINES.

Specification forming part of Letters Patent No. 125,373, dated April 2, 1872.

To all whom it may concern:

Be it known that I, SAMUEL GIBSON, of York, in the county of York and in the State of Pennsylvania, have invented certain new and useful Improvements in the Rotary Steam-Engine; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a rotary engine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section, Fig. 2 a transverse vertical section, and Fig. 3 a plan view of my engine. Fig. 4 is a perspective view of the interior cylinder with its eccentric or cam.

A represents the stationary cylinder or shell of my engine, provided with a valve-chest, B, on each side, as shown. Within each valve-chest B is a valve, C, behind which is a communication, *a*, with the steam-chest D. E represents the interior rotating cylinder provided with an eccentric or cam, G, forming an abutment at *b*, as shown in Figs. 1 and 4. H is the shaft passing through the center of the cylinder E, and one end thereof passes into the steam-chest D. This end of the shaft H is cut off on one side at *d*, as shown in Fig. 2, and is directly beneath the pipe I, through which the steam enters into the steam-chest. When this opening *d* is opposite the pipe I the steam passes through the shaft, and through the holes *i i*, into and fills the interior cylinder or wheel E; from thence the steam goes through the holes *e e* in the abutment *b*, and

pressing against the valve forces the wheel around. The valves close instantly at the very moment the steam issues from the holes *e e*. As the wheel or interior cylinder E rotates, the cam G forces the valves out till the abutment *b* has passed the valve, when it is instantly closed by the exhaust steam. The engine exhausts twice every revolution; or, in other words, it holds the steam until over the valve, and then takes steam over the second valve, and makes a complete revolution. The exhaust steam passes behind the valves, closing the same, and through the passages *a a* into the steam-chest and out through the exhaust-pipe J. Live steam is admitted, as above mentioned, when the opening *d* in the end of the shaft H is opposite the steam-inlet pipe I, and when the wheel revolves the steam is cut off, the expansion of the steam forces the wheel around to complete the revolution, so as to take live steam again. By this means I not only get the advantage of the concussion of the steam, but also of the expansion of the steam.

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

1. The arrangement of the wheel E with cam G, abutment *b*, and openings *e e*, the shaft H with openings *i i* and *d*, and the steam-chest D with inlet-pipe I, all substantially as and for the purposes herein set forth.

2. The within-described rotary engine, consisting of the cylinder A, valve-chests B, valves C, steam-chest D, wheel E, cam G, shaft H, and pipes I J, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of January, 1872.

Witnesses: SAMUEL GIBSON.

D. J. WILLIAMS,
JNO. A. METZELL.