

J. MOORE.
ROTARY-ENGINE.

No. 176,878.

Patented May 2, 1876.

Fig. 1

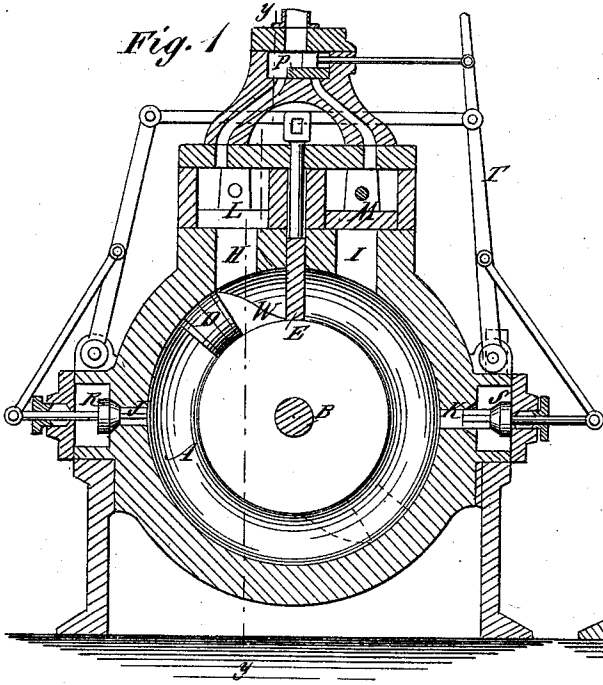


Fig. 2

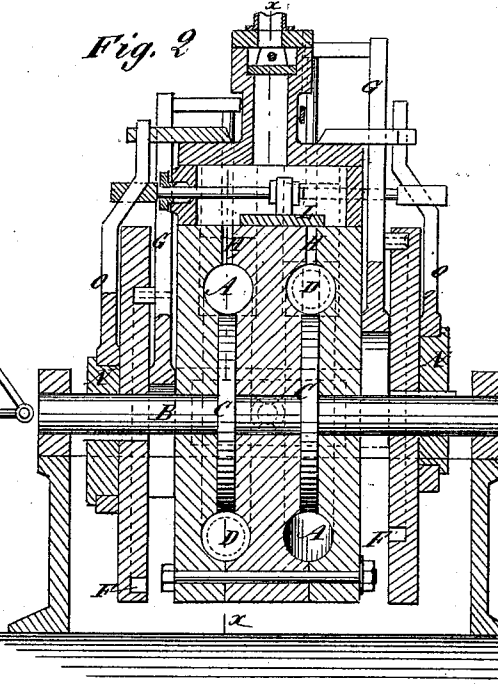


Fig. 3

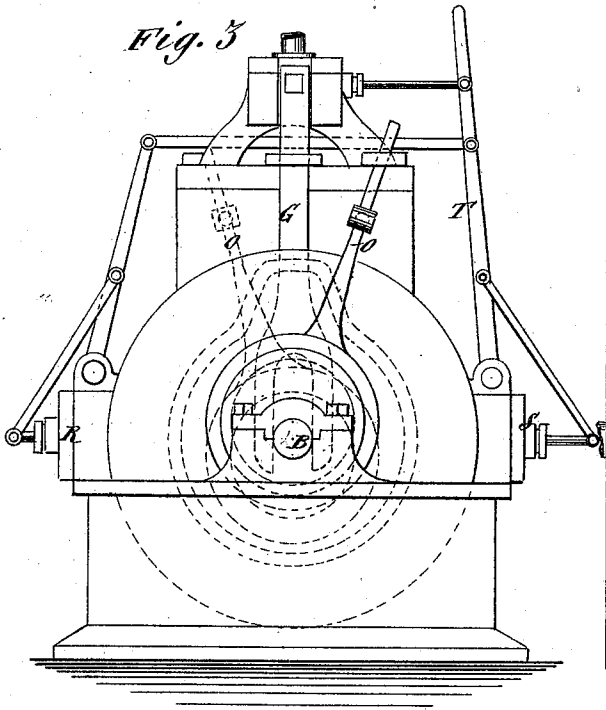


Fig. 4

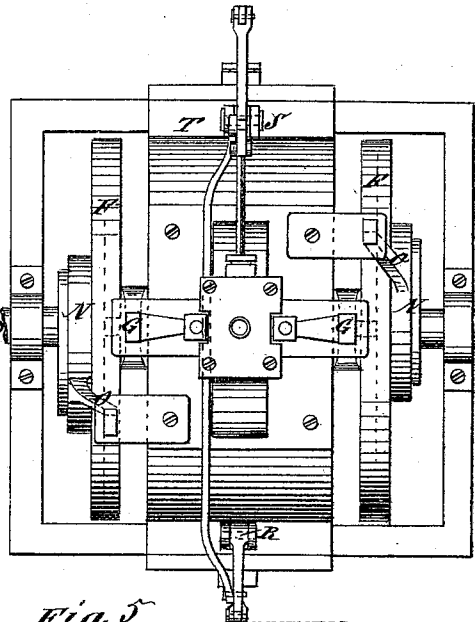
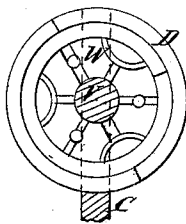


Fig. 5



WITNESSES:

C. Nevada
John Goethals

INVENTOR:

J. Moore
BY *[Signature]*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPHUS MOORE, OF MOUND VALLEY, KANSAS.

IMPROVEMENT IN ROTARY ENGINES.

Specification forming part of Letters Patent No. **176,878**, dated May 2, 1876; application filed February 28, 1876.

To all whom it may concern :

Be it known that I, JOSEPHUS MOORE, of Mound Valley, in the county of Labette and State of Kansas, have invented a new and Improved Rotary Engine, of which the following is a specification :

This invention consists of a pair of cylinders, with pistons set opposite each other for one to take steam when the other is not taking it, with abutments which slide out and in to let the pistons pass, and are worked by cam-disks outside of the cylinders; also with two sets of slide-valves for running the engine either way, the valves being worked by eccentrics on the shaft outside of the case, and also with two sets of exhaust-ports for use according to the way the engine runs, the valves of which are connected to the reversing-valves, so as to shift simultaneously with them.

The steamways are constructed in the form of a round ring, and the pistons are in the form of a segment of a ring, and are attached to the edge of a disk keyed on the shaft, so as to be fitted with ordinary round piston-packing.

Figure 1 is a sectional elevation of my improved engine, taken on the line *xx* of Fig. 2. Fig. 2 is a sectional elevation taken on line *yy* of Fig. 1. Fig. 3 is a side elevation. Fig. 4 is a top view, and Fig. 5 is an elevation of the piston.

Similar letters of reference indicate corresponding parts.

A represents the steamways arranged side by side around the shaft B, on which are the disks C, each having a piston, D, on its periphery, running in one of the steamways. E represents the sliding abutments, which are worked by the grooved cams F and bars G, one being raised when the other is down. H and I are two inlet-ports to each cylinder,

and J and K exhausts. L is the valve for the two ports H, and M the valve for the ports I, of both engines, said valves being worked by the eccentrics N and rods O. P is a reversing-valve, and R S exhaust-valves, both of the latter being connected to the lever T of the reversing-valve, so that when steam is admitted at H to run the engine to the left the exhaust-port J will be closed by valve R, and port K will be opened, and when admitted at I, to run to the right, port K will be closed and J opened.

The round form of the piston is represented in Fig. 5, showing the connection of it to the disk by the center stud U and bracket W. This form enables it to be packed all round, the same as the piston of reciprocating engines, or better than the angular form commonly used in rotary engines. The steam may be worked expansively in this contrivance by setting the eccentrics to cut off in advance of the exhaust, or, in other words, before the pistons arrive at the exhaust-ports.

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

1. The combination, in a rotary steam-engine, of the two parallel steam-chambers A, disks C, pistons D, sliding abutments E, steam-ports H I, valves L M, and exhaust-valves R S, all constructed and relatively arranged as herein set forth.

2. The combination of steam-ports H I, valves L M, exhausts J K, valves R S, sliding abutments E, grooved cams F, and bars G, with the cylinders and pistons, substantially as specified.

JOSEPHUS MOORE.

Witnesses:

C. H. BENT,
W. D. ENGLISH.