

G. V. ATWOOD.
 Improvement in Rotary Steam Engines.
 No. 120,411. Patented Oct. 31, 1871.

Fig. 1.

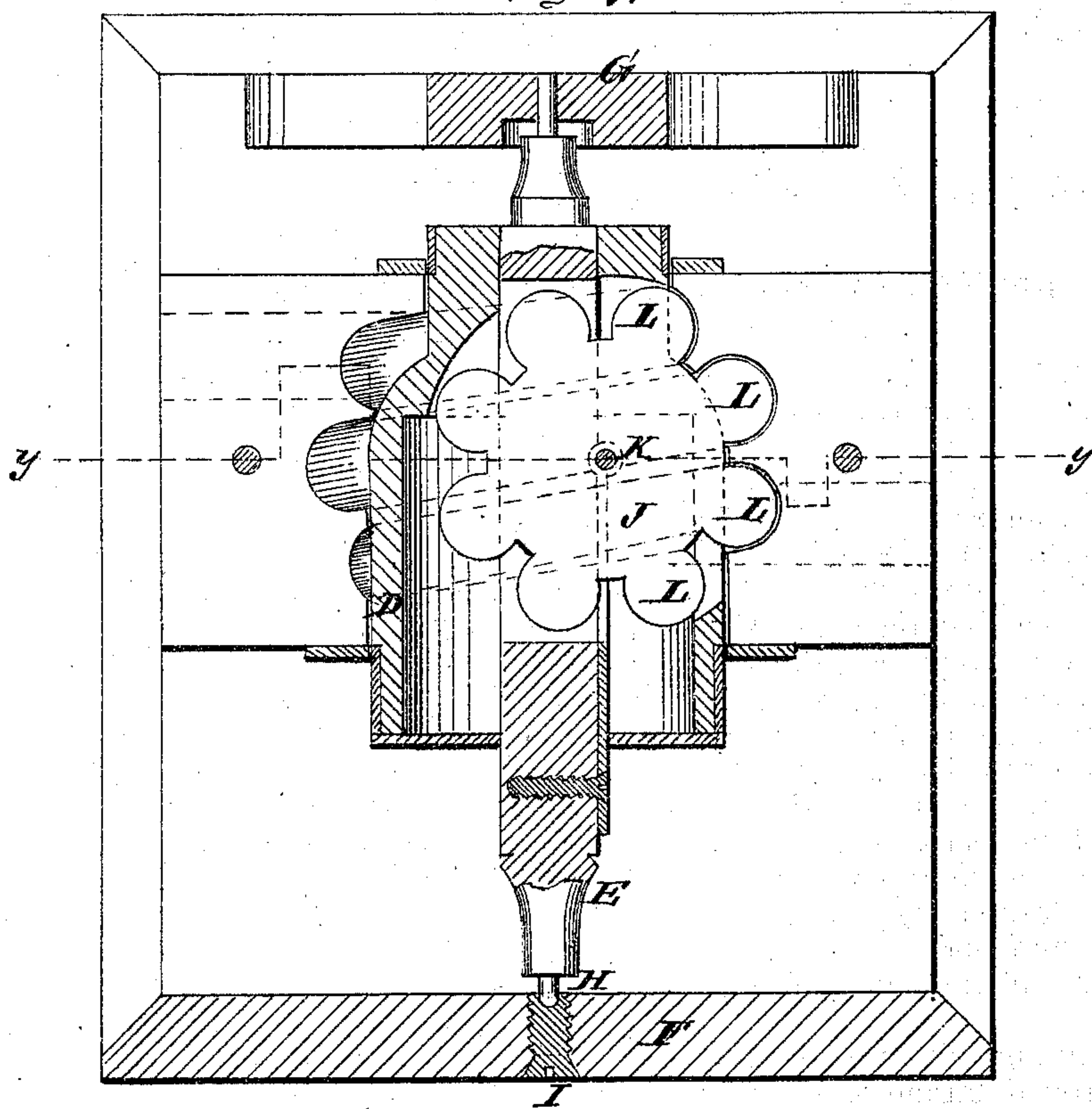
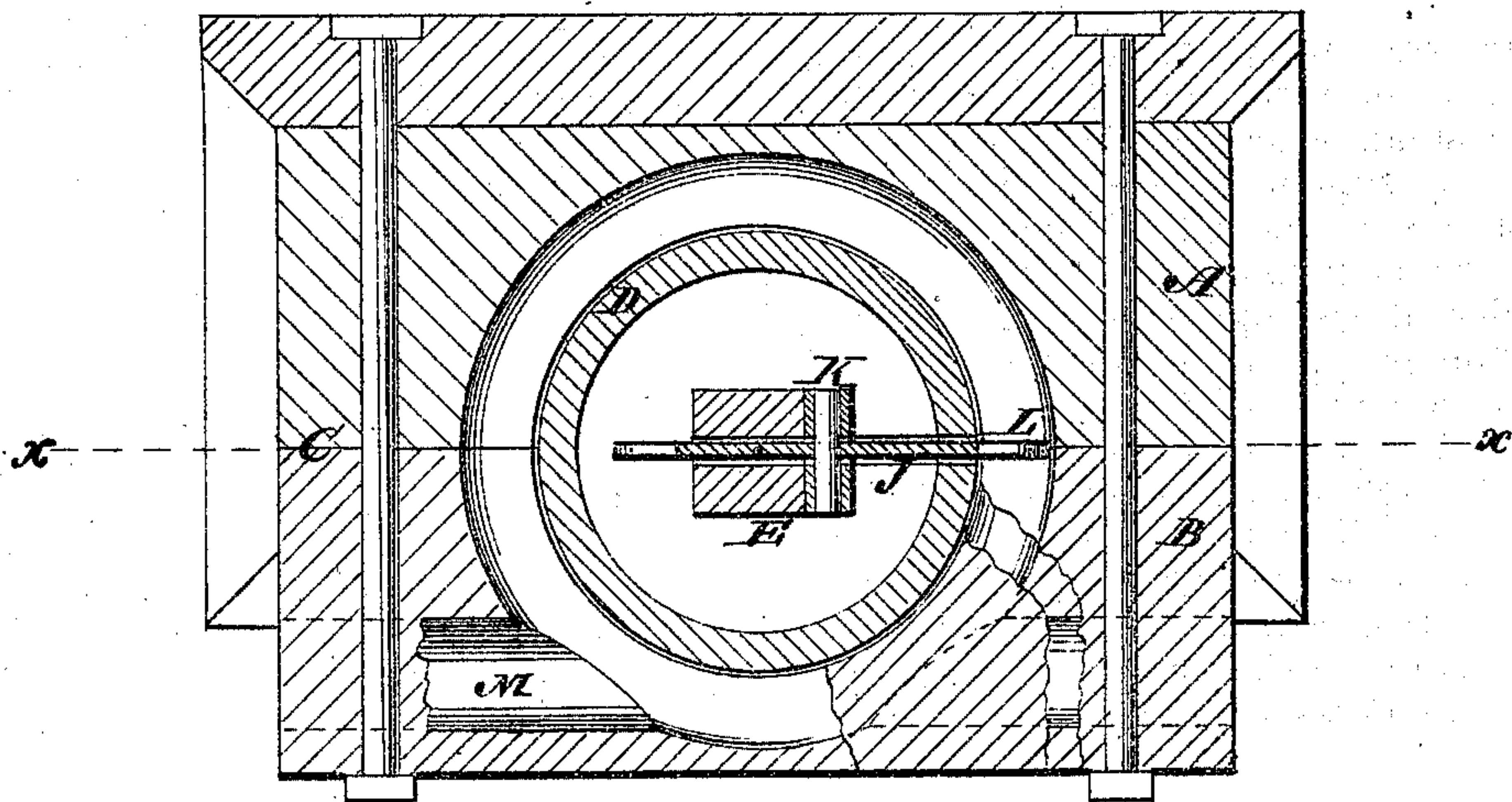


Fig. 2.



Witnesses:

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GEORGE V. ATWOOD, OF MOUNT HOPE, ALABAMA.

IMPROVEMENT IN ROTARY STEAM-ENGINES.

Specification forming part of Letters Patent No. 120,411, dated October 31, 1871.

To all whom it may concern:

Be it known that I, GEORGE V. ATWOOD, of Mount Hope, in the county of Lawrence and State of Alabama, have invented a new and useful Improvement in Rotary Steam-Engines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and useful improvement in that class of steam-engines which receives steam continuously; and it consists in the construction and arrangement of parts hereinafter described.

In the accompanying drawing, Figure 1 is a section of my improved engine taken on the line *x x* of Fig. 2. Fig. 2 is a cross-section taken on the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A and B are the two parts of a stationary steam-cylinder, C, in which revolves the steam-wheel D. The steam-wheel is fast on the shaft E, which shaft is supported on a journal and pivot in the stands F and G, as seen in Fig. 1. H is the pivot, which runs in a set-screw, I. The wheel is smaller at the opposite end, and any wear of the cylinder may be compensated for by setting up the screw I. J is a piston-wheel, which is pivoted to the steam-wheel D at the point K. L represents a series of piston-disks on the periphery of this wheel. Three (more or less) of these disks project through a longitudinal slot in the steam-wheel, as seen in Fig. 1, and these projecting disks receive the steam-pressure which revolves the wheel. The parts

of the cylinder A B are cut away to receive the steam-wheel, which is packed steam-tight to the cylinder at each end, as seen in Fig. 1. Within the cylinder C is cut a spiral groove of the size and shape of the piston-disk L. The steam is let into the spiral groove of the cylinder through an aperture in the part B of the cylinder, marked M, and is discharged therefrom, from the opposite end of B, through an aperture seen in dotted lines in both figures. The pressure of steam on the disks L in the groove revolves the steam-wheel, which carries the piston-wheel with it. The piston-disks (three, more or less) being in the spiral groove in the cylinder, the consequence is that the piston-wheel is constantly revolved, but with a speed of one-eighth or one-twelfth that of the steam-wheel. The steam acts upon the disks one at a time, and continues the pressure until the disk passes the exhaust-aperture. The action of the steam is continuous, and the force is in proportion to the pressure, the area of the piston, and the leverage on the shaft.

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

1. The piston-wheel J provided with the disks L and pivoted within a revolving cylindrical wheel, in combination with the spiral groove in the cylinder, as and for the purpose specified.

2. The steam-wheel D, cylinder C, and piston-wheel J, combined and arranged substantially as and for the purposes described.

GEORGE V. ATWOOD.

Witnesses:

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(150)