

D. STANTON.
Engine.

No. 198,427.

Patented Dec. 18, 1877.

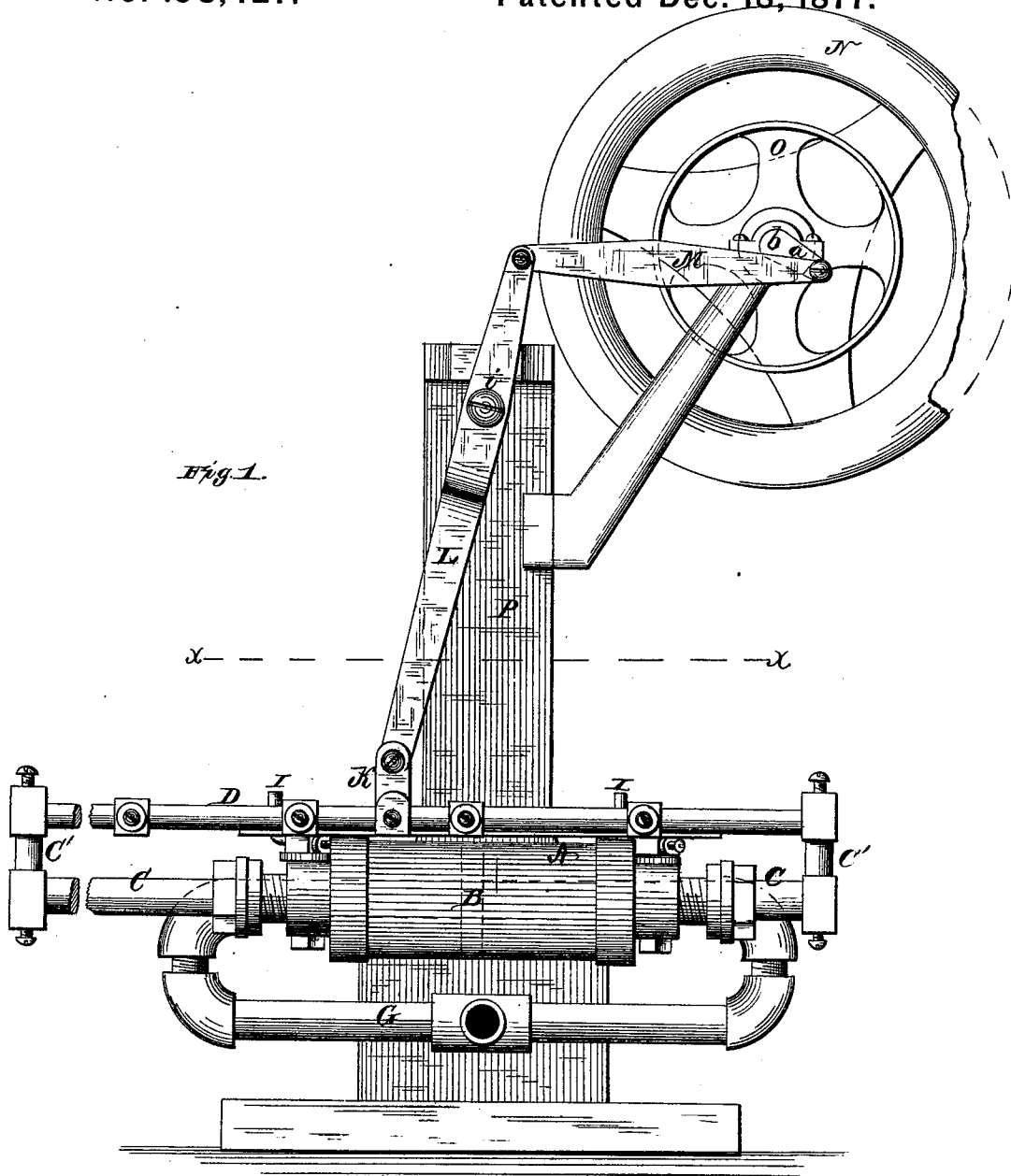


Fig. 1.

WITNESSES
Frauck L. Curraud
Frank Galt

INVENTOR
David Stanton
Haude Mason
ATTORNEYS

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Fig. 2.

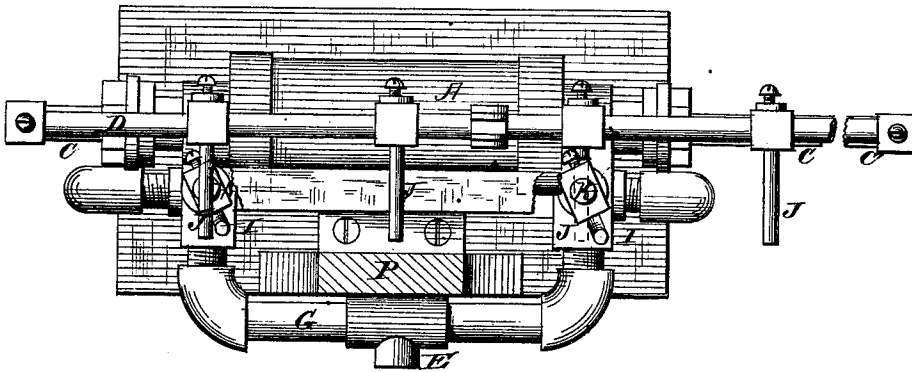
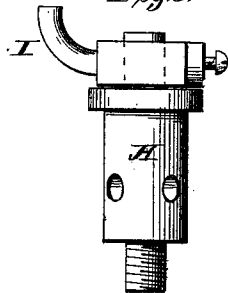


Fig. 3.



WITNESSES

Frank L. Curand
Wm. Galt

INVENTOR

David Stanton
Alfred H. Mason
ATTORNEYS

UNITED STATES PATENT OFFICE.

DAVID STANTON, OF WAYMART, PENNSYLVANIA.

IMPROVEMENT IN ENGINES.

Specification forming part of Letters Patent No. **198,427**, dated December 18, 1877; application filed October 16, 1877.

To all whom it may concern:

Be it known that I, DAVID STANTON, of Waymart, in the county of Wayne, and in the State of Pennsylvania, have invented certain new and useful Improvements in Steam-Engines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to engines; and it consists in the interposition, between the pitman and piston-rod, of a lever pivoted near the end to which the pitman is connected, 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 drawings, in which—

Figure 1 is a front elevation of a steam-engine embodying my invention; Fig. 2, a horizontal section through the line *x x*, Fig. 1; and Fig. 3, a detailed view of one of the valves used in my engine.

A represents the steam-cylinder, with piston B. This piston is provided with a piston-rod, C, extending in both directions, and passing through both heads of the cylinder. The ends of the piston-rod C are provided with posts C', which are connected by a rod, D, passing over the cylinder A, as shown. E is the steam-inlet pipe, leading into both ends of the cylinder; and G is the outlet or exhaust pipe, communicating therewith at the entrances into the cylinder. At these points are inserted suitable two-way cocks H H, provided with curved arms I I, which are operated by means of arms J J, adjustably attached to the rod D. These different parts are so arranged that when steam is admitted at one end of the cylinder it is exhausted at the other end, and vice versa.

In the center of the rod D is secured a clip, K, in which is pivoted one end of a lever, L. The other end of this lever is, by a pitman, M, connected with a crank, *a*, on the end of a shaft, *b*, on which the fly-wheel N is secured. On the shaft *b* is also secured a pulley, O, to connect with the machinery to be driven. The lever L is pivoted to a standard or other suitable frame-work, P, at a point, *i*, near the end to which the pitman M is attached, so that the action of the piston is communicated through said lever to the pitman and crank-shaft, whereby a considerable amount of power is gained, and a comparatively small cylinder and piston will be enabled to run heavy machinery.

The arrangement of the inlet and outlet pipes and the valves is immaterial, as I may use an ordinary slide-valve with the proper ports; and the lever L may be connected to the end of the piston-rod equally as well as in the manner shown and described.

This device may also be used as a water-motor by using different set of valves with larger openings.

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

In an engine, a lever, L, pivoted to a stationary object nearer one end than the other, the long end of the lever being connected to the piston-rod of the engine, and the short end, by a pitman, to the crank-shaft, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of October, 1877.

DAVID STANTON.

Witnesses:

FRANK GALT,
C. L. EVERT.