E. Matteson.

Steam Engine.

No. 86,311. Patented Jan. 26. 1869.

Fig. 1.

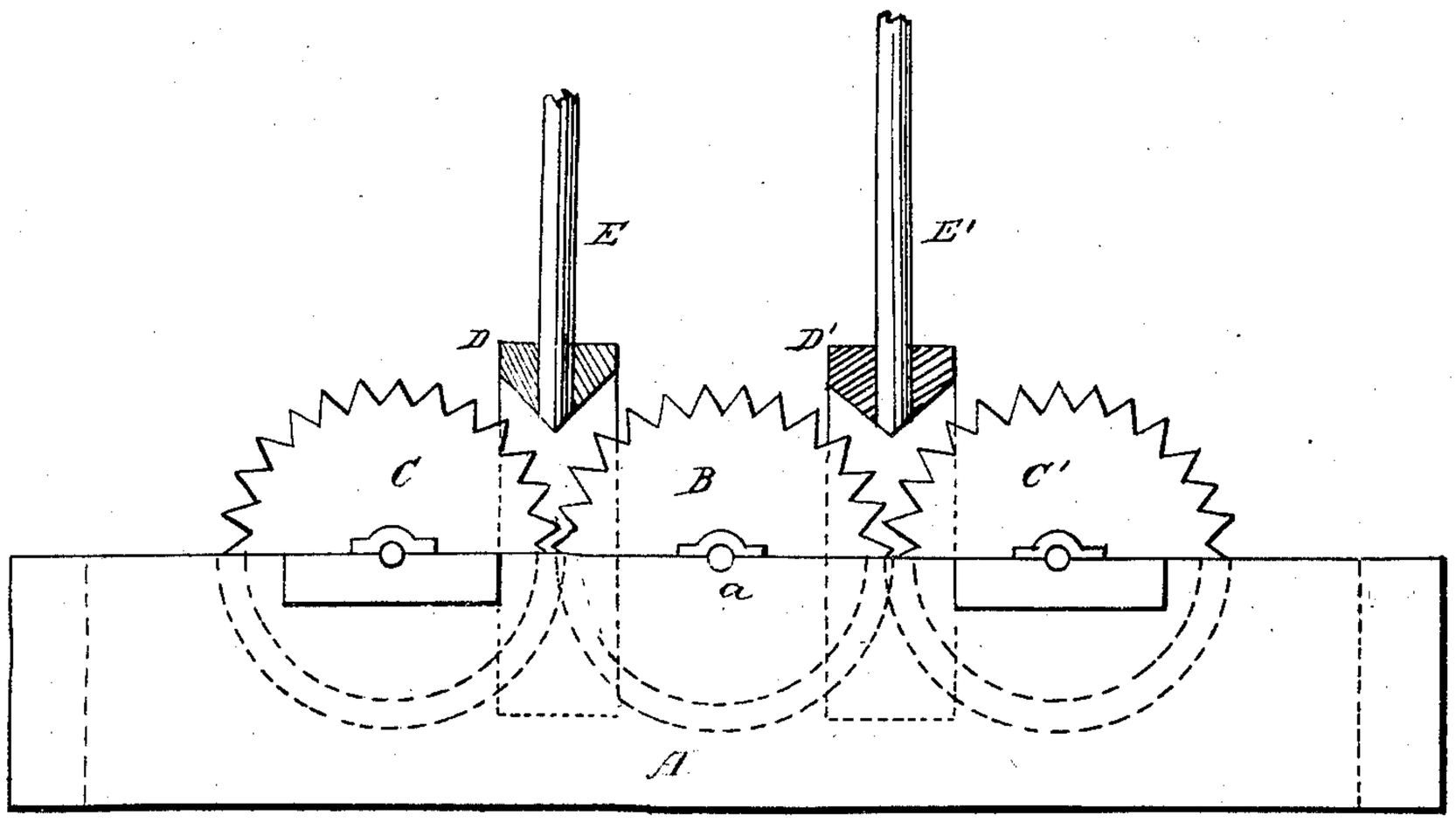
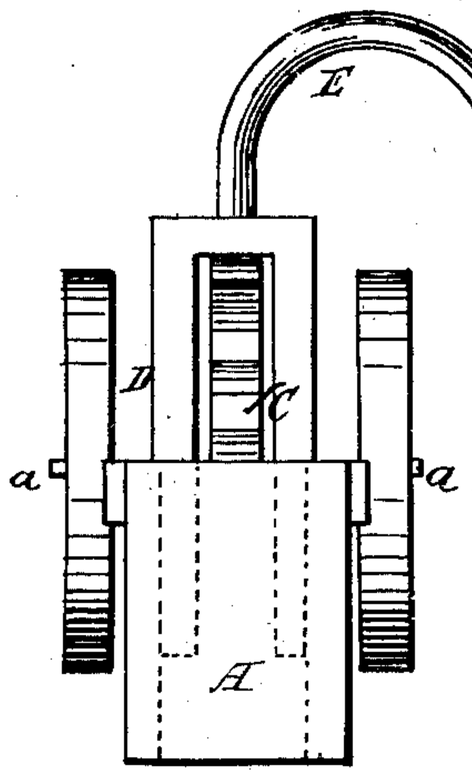


Fig. 2.



Witnesses:
Leonard Evers.
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Attys.

United States Patent Office.

ELISHA MATTESON, OF BROOKLYN, ASSIGNOR TO HIMSELF, DANIEL SLOAN, AND G. A. MENDEN, OF NEW YORK, N. Y.

Letters Patent No. 86,311, *dated January* 26, 1869.

IMPROVEMENT IN ROTARY STEAM-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ELISHA MATTESON, of Brooklyn, in the county of Kings, and in the State of New York, have invented certain new and useful Improvements in Rotary 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.

The nature of my invention consists in the construction and arrangement of a "rotary engine," which will be hereinafter 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, which form a part of this specification, and in which—

Figure 1 is a side view, part in section, and

Figure 2, an end view.

A represents a frame, of suitable dimensions, in the sides of which the main shaft *a* has its bearings.

This shaft is, inside of the frame A, provided with a cog-wheel, B, and the shaft is, outside of the frame, connected in any suitable manner with the machinery desired to be driven.

The main cog-wheel B gears on one side with another cog-wheel C, the journals of which also have their bearings in the sides of the frame.

Over the joint between the two wheels B and C, is placed a steam-tight packing-box, D, which is connected, by means of a pipe, E, with a steam-boiler.

The steam now passing from the boiler through the pipe E into the stuffing-box, will strike the cogs of the two wheels B and C, turning them, and at the same time turning the machinery connected with the main shaft *a*.

The steam then passes out below the wheels into a condenser, which I contemplate placing under the frame A, and is there used to the best advantage.

On the opposite side of the main wheel B, I place a similar cog-wheel, C′, stuffing-box, D′, and pipe, E′, also connecting with the steam-boiler.

By turning off the steam from the pipe E, and allowing it to pass through E′, it will be seen that the motion of the main wheel B and shaft *a* is reversed, consequently also the machinery connected therewith.

This device may be used in connection with any kind of machinery, but is especially valuable for steamboats, as it takes up very little room, is easily managed, and being very simple, and not as complicated as those now in use.

In case of long voyages, the wheel C′ may be placed in sliding journal-boxes, so as to be removed from the main wheel B, thereby of course lessening the friction.

Instead of using steam as the motive-power, compressed air or water may be used with equal advantage.

In the latter case, the reversing-wheel C′ may be entirely dispensed with, if so desired.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The combination and arrangement of the wheels B, C, and C′, boxes D D′, and pipes E E′, all constructed substantially as specified.

In testimony that I claim the foregoing, I have hereunto set my hand, this 28th day of November, 1868.

ELISHA MATTESON.

Witnesses:

A. A. YEATMAN,

LEOPOLD EVERT.