ASA JOHNSON.

Improvement in Steam-Engines.

No. 114,300. Patented May 2, 1871.

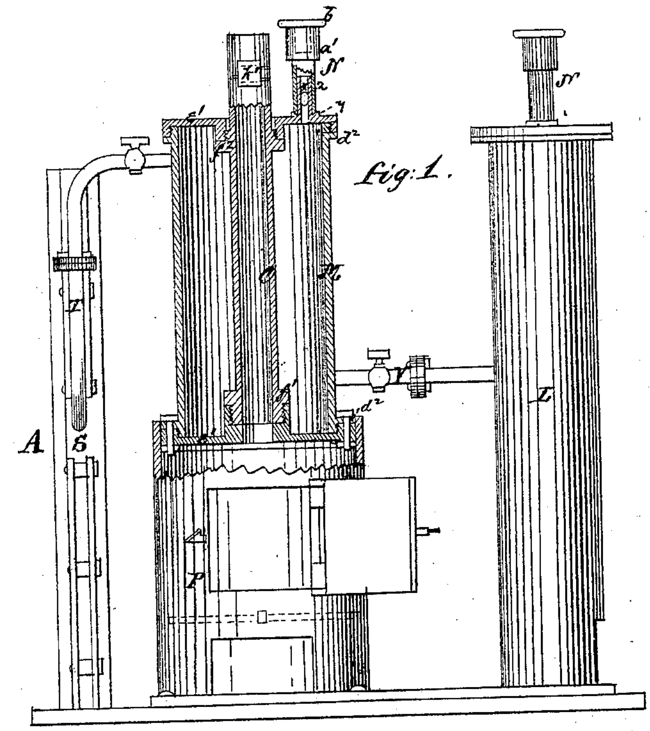

Fig: 1.

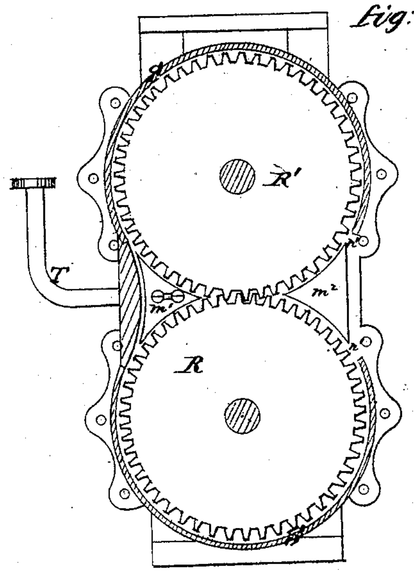

Fig: 2.

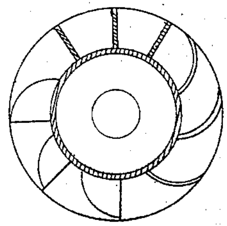

Fig: 3.

Witnesses.

C. L. Evert

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UNITED STATES PATENT OFFICE.

ASA JOHNSON, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND WILLIAM H. JOHNSON, OF SAME PLACE.

IMPROVEMENT IN STEAM-ENGINES.

Specification forming part of Letters Patent No. 114,300, dated May 2, 1871.

To all whom it may concern:

Be it known that I, ASA JOHNSON, of Brooklyn, in the county of Kings and in the State of New York, have invented certain new and useful Improvements in Steam-Engine and Boiler; 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 of a steam-engine, as will be hereafter 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 side elevation of my engine A, and showing a boiler in vertical section. Fig. 2 is an inside view of the engine, and Fig. 3 shows a modification of the wheels used in my engine.

R and R′ represent wheels provided with teeth or projections of any desired and suitable size and shape, which teeth or projections gear or mesh into each other, as shown in Fig. 2. These wheels are placed within a casing, S, in the manner shown, and their journals may connect in any desired and suitable manner with the machinery desired to be driven.

Steam is conducted from the main boiler M through a pipe, T, into one side of the casing S between the two wheels. Directly opposite the entrance of the pipe T, in the casing S, is a triangular block, m^1, which is provided with one or more slots and held by screws passing through slots, or by any other means that will allow said block to slide back and forth.

When the steam enters through the pipe T the block m is forced inward against the teeth or projections of the two wheels R R′, and the steam is turned or divided so as to operate upon the outside of said wheels. These wheels, with the casing inclosing them, being so arranged as to either form a box at any desired point or be tolerably close together, the steam will, of course, revolve the wheels in opposite directions, the steam passing around the wheels and out at the exhaust-openings n'. Said openings may be situated at any desired point in the casing. On the opposite side from the adjustable block m^1 is placed a stationary block, m^2, of somewhat similar construction, and the steam may be admitted from this side of the casing by or through a pipe passing through said block m^2, and the steam operating directly at the point of contact of the two wheels. This naturally causes them to revolve, and the steam passing between them forces the block m^1 outward, closing the tube T, and the steam will then pass around the wheels as before.

When it is not necessary that the two wheels R R′ should gear into or mesh with each other they may be separated any desired distance, and V or any other shaped buckets, teeth, or projections (as shown in Fig. 3) may be used, and be of any size or shape, the sole requisites being that the steam should be applied from and to the outside of the wheel, and either into V or any other shaped buckets, or against teeth or projections of any desired size or shape; and by letting the case rest against the points of the teeth at any desirable point form a box with the casing, or may be placed at any desirable distance from it, so as to allow the steam to pass around the wheel as far as desired.

In the drawing I have represented a main boiler, M, and an auxiliary boiler, L, with safety-valves N N; but I make no claim in this application to any of these devices.

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

The combination of the toothed wheels R R′ and the casing S with the adjustable triangular block m^1, placed between the wheels, all constructed, arranged, and operating substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of March, 1871.

ASA JOHNSON.

Witnesses:
C. L. EVERT,
A. N. MARR.