

L. MIGHT.
 ROTARY ENGINE.
 APPLICATION FILED APR. 20, 1915.

1,161,503.

Patented Nov. 23, 1915.

FIG. 1.

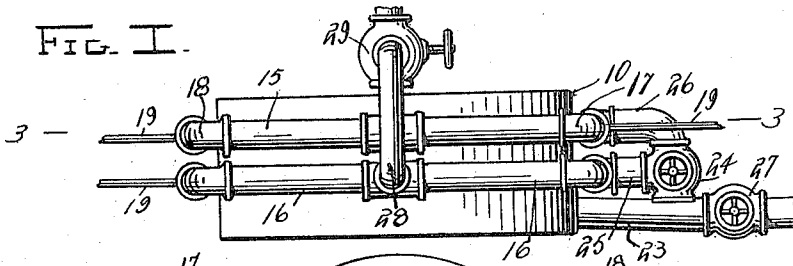


FIG. 2.

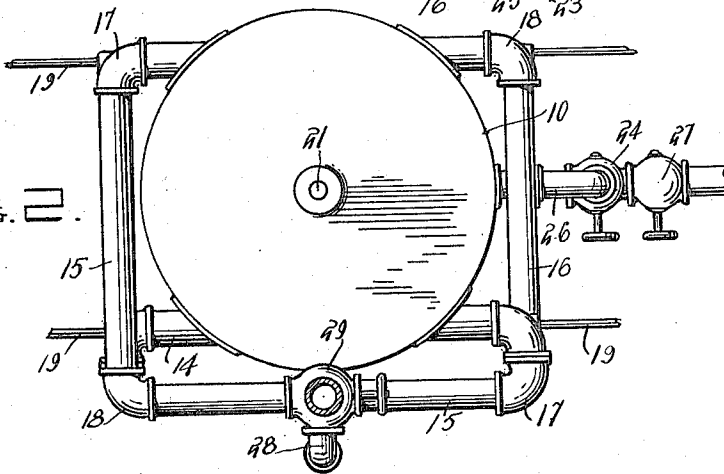


FIG. 3.

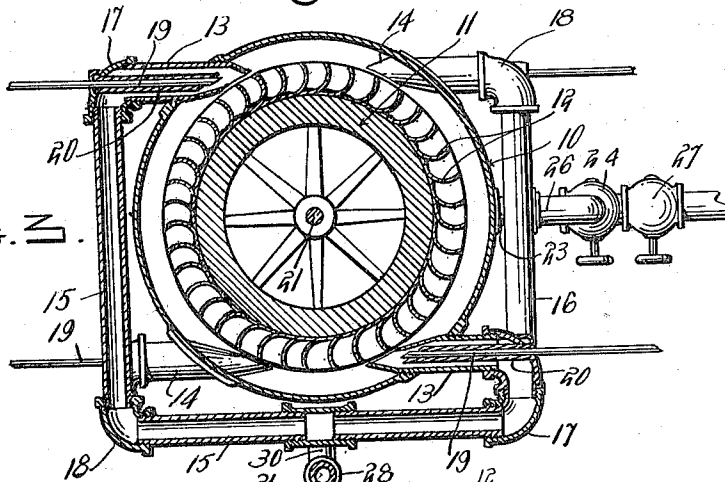
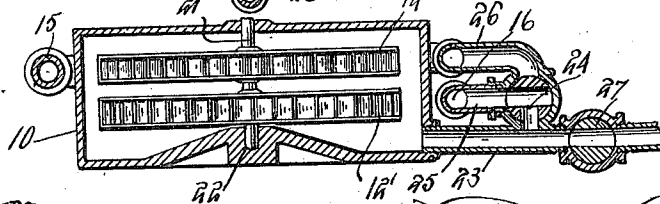


FIG. 4.



Witnesses
J. C. Simpson
Harry M. Teet

Inventor
 L. Might

By *Charles Chandler*
 Attorney

UNITED STATES PATENT OFFICE.

LINCOLN MIGHT, OF GRAVENHURST, ONTARIO, CANADA.

ROTARY ENGINE.

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To all whom it may concern:

Be it known that I, LINCOLN MIGHT, a subject of the King of Great Britain, residing at Gravenhurst, in the Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Rotary Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in rotary engines and particularly to engines in which both steam and water are used as motive power.

One object of the invention is to provide a simple device by which the water is forced against the vanes of a rotor by means of a jet of steam.

Another object is to provide for the water or other fluid being conveyed back to the nozzle for re-delivery against the rotor vanes.

A further object is to provide, when it is not necessary to conserve the water or other fluid, for a free delivery to waste.

A still further object is to provide a device by means of which the rotor may be reversed in action.

Other objects and advantages of my invention will be apparent from the following description and drawings, in which:

Figure 1 is an elevation of an engine made in accordance with my invention, Fig. 2 is a top plan of the same, Fig. 3 is a horizontal section through the line 3—3 in Fig. 1, Fig. 4 is a transverse section through the line 4—4 in Fig. 3.

Referring particularly to the accompanying drawings, 10 represents a cylindrical casing, in which is mounted a rotor 11, around the periphery of which are secured a plurality of vanes or buckets 12 and 12'. At diametrically opposite points of the casing are disposed any suitable number of water nozzles 13 and 14 the inner ends of which are arranged to deliver water into the buckets of the rotor.

The nozzles are connected to the water pipes 15 and 16 by the elbows 17 and 18. Through these elbows are passed steam ejector nozzles 19, which extend into the water nozzles and terminate inwardly of the smaller ends thereof. The steam nozzles are suitably protected by heat insulating covers

20, in the elbows 17 and 18 and in the nozzles 13 and 14.

The shaft 21 of the rotor is suitably mounted in a step bearing 22. At one side of the casing is connected an overflow pipe 23 for conveying the water from the casing after it has passed through the rotor, this pipe may be led to any suitable point of discharge. At a suitable point above the pipe 23, and connected therewith is mounted a three-way valve 24, by which the water may be directed at will through the pipe 25 into the lower set of pipes 16, or through the pipe 26 into the upper set of pipes 16 or through the pipe 26 into the upper set of pipes 15; when the water passes through the lower set of pipes 16 it will impinge on the buckets of the lower half of the rotor 11, and in the upper set the water will impinge on the buckets of the upper half of the rotor 11; and by reason of the fact that these buckets 12 and 12' are set in reverse positions on the rotor 11 the rotor will be capable of rotation in either direction as required.

In the pipe 23 is a one-way valve 27. When using the free discharge 23 the valve 27 is full open and the valve 24 is closed to the pipe 23, the water is then supplied through the pipe 28 passing through the three-way valve 29 which is mounted directly on the upper set of pipes 15 but having one opening or orifice connected by the pipe 30 to the lower set of pipes 16, so that at will the water may be caused to flow into either set of pipes.

What is claimed is:

1. A rotary motor comprising a casing, a rotor mounted in the casing, water nozzles disposed through the casing at diametrically opposite points and disposed to discharge tangentially against the rotor, upper and lower water conduits connected to the nozzles, steam nozzles disposed in the water nozzles, an outflow pipe at one side of the casing, a connection of the outflow pipe with the water conduits, a valve in connection with said outflow pipe for establishing communication with the outflow pipe and the water conduits, a valve in connection with the said outflow pipe for establishing communication with either the upper or lower sets of water conduits, a valve in connection with the water supply pipe for establishing communication with either set of water conduits.

2. A rotary motor comprising a casing, a rotor mounted in the casing, nozzles entering the casing at diametrically opposite points and at different plane levels, water
5 conduits connected to the nozzles, an outlet pipe connected to the casing, connections between the said conduits, and a valve in the said connections adapted to direct water

into one or the other of the conduits, at times, and at times into the outlet pipe. 10

In testimony whereof, I affix my signature, in the presence of two witnesses.

LINCOLN MIGHT.

Witnesses:

THOMAS COOK,
MARGARET M. COOK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."