

No. 861,377.

PATENTED JULY 30, 1907.

C. D. MACROPOULOS.

ROTARY ENGINE.

APPLICATION FILED APR. 9, 1906.

Fig. 1.

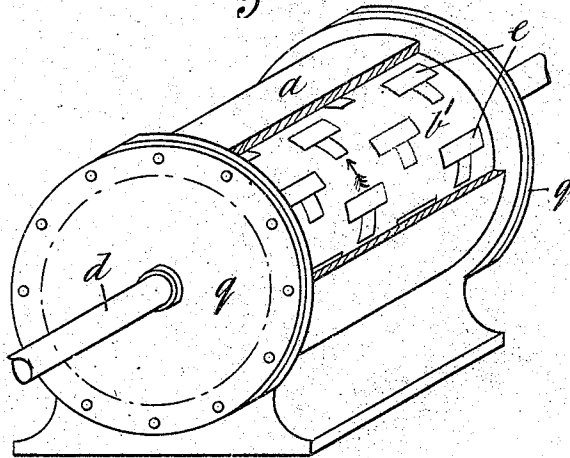
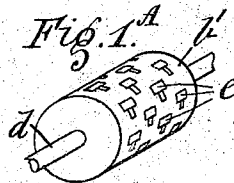
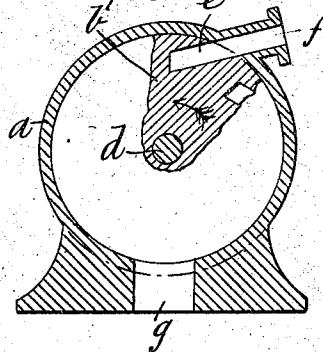


Fig. 2.



Witnesses.

E. W. Bayly.
J. P. Bayly.

Inventor.

Constantine Dimitrios Macropoulos
per *John Pitt Bayly,*
attorney

UNITED STATES PATENT OFFICE.

CONSTANTINE DEMETRIUS MACROPOULOS, OF LONDON, ENGLAND.

ROTARY ENGINE.

No. 861,377.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed April 9, 1906. Serial No. 310,706.

To all whom it may concern:

Be it known that I, CONSTANTINE DEMETRIUS MACROPOULOS, a subject of the King of Greece, residing at 28 Clarendon road, in the county of London, in England, gentleman, have invented a new and useful Rotary Engine of the Impact-Wheel Type, of which the following is a specification.

My invention relates to rotary engines.

Figure 1, is an isometrical view of the rotary engine with a part of the cylinder casing *a* cut away in order to show the interior revolving wheel *b'* which travels with the shaft *d* in the direction indicated by the arrow. Fig. 1^A, shows the wheel *b'* in one piece of metal, with the shaft *d* fixed to the wheel. Fig. 2, is a transverse section of Fig. 1, showing a part of the wheel *b'* with one of the chambers *e* being placed opposite the steam-port *f*; and the exhaust-port *g*.

This invention consists of a solid or massive wheel *b'*, mounted on a shaft in a case or cylinder *a* and covers *q*; in the outer circumference of the wheel *b'* there are opened any number of chambers *e*, of a uniform size, at an equal distance from one another. They are arranged in a row and take an inward oblique direction, *i. e.* deviating from the center. The wheel *b'*, so made is mounted on the shaft *d*, and can be driven either by steam, gas, compressed air, or water under pressure. The wheel may be of any size, large or small. There are rows of chambers *e*, and the size, and number of the chambers *e* may also vary.

The wheel *b'* fits exactly in the cylinder or casing *a*, touching the walls of it to such an extent, so as to be free to rotate. The cylinder *a* is closed at both ends by a cover *q*, leaving only the necessary openings for the shaft of the wheel to go through. In a certain part of the circumference of the cylinder there are two or more steam-ports *f*, through which the steam passes into the chambers, and pushes the wheel *b'* causing it

to rotate. These are the admission steam-ports, and they are placed in such a manner that the steam fills the chambers *e* of the wheel *b'*, one of each row alternately, thus forcing it to continually rotate. The admission of the steam may also be done by any number of steam-ports. Also in the circumference of the cylindrical casing at a regulated distance from the admission ports, there is an exhaust-port *g* by which the steam escapes, when the chambers arrive at this point while rotating.

I am aware that engines of the impact-wheel type have been used before, and I do not claim such as my invention, but I am not aware that engines with a wheel *b'* of any size with more than two rows of chambers *e*, as illustrated and described in my specification have ever been used before, and therefore I claim this as my invention.

The pockets or chambers *e*, are arranged at an angle, are elongated in the direction of the axis of the wheel, and have shallow branches of less width than the pockets. These branches are provided to keep up a supply to the pockets after the main portions of the pockets have passed the steam port *f*. This prolonged supply is maintained on account of the initial condensation taking place on the entrance of steam into the main portions of the pockets.

What I claim, and desire to secure by Letters Patent of the United States, is—

The combination with a cylinder provided with a steam port and an exhaust port, of a wheel tightly fitting within said cylinder and provided with pockets having shallow branches of less width than the pockets.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CONSTANTINE DEMETRIUS MACROPOULOS.

Witnesses:

ALFRED NUTTING,
H. D. JAMESON.