

A. G. DOEDYNS.
 ROTARY ENGINE.
 APPLICATION FILED FEB. 20, 1912.

1,052,045.

Patented Feb. 4, 1913.

2 SHEETS-SHEET 1.

Fig. 1.

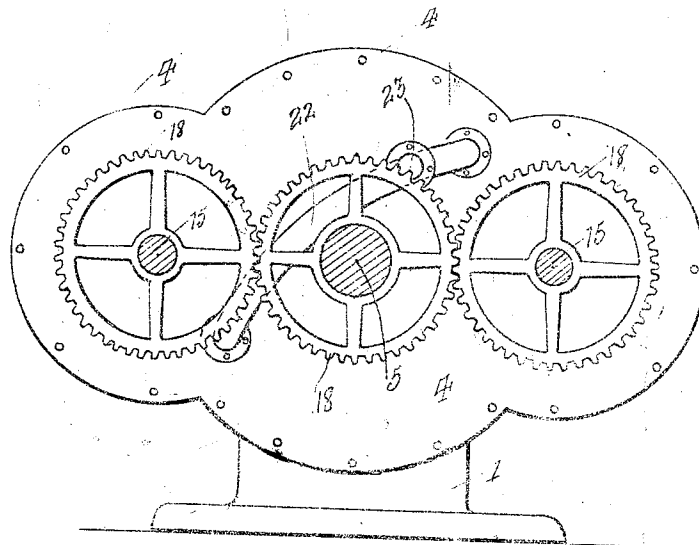
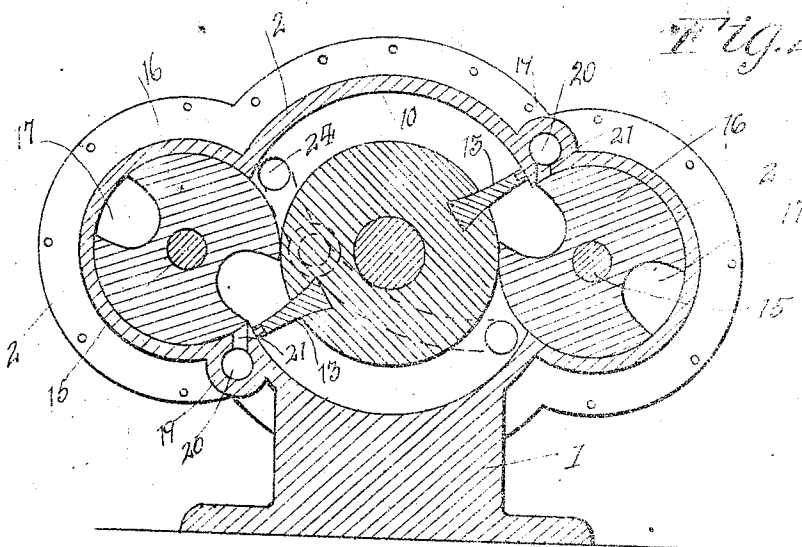


Fig. 2.



Witnesses

B. M. Spring
 J. H. Kelly

Inventor
 Andrew G. Doedyns,
 by Richard B. Owen
 His Attorney

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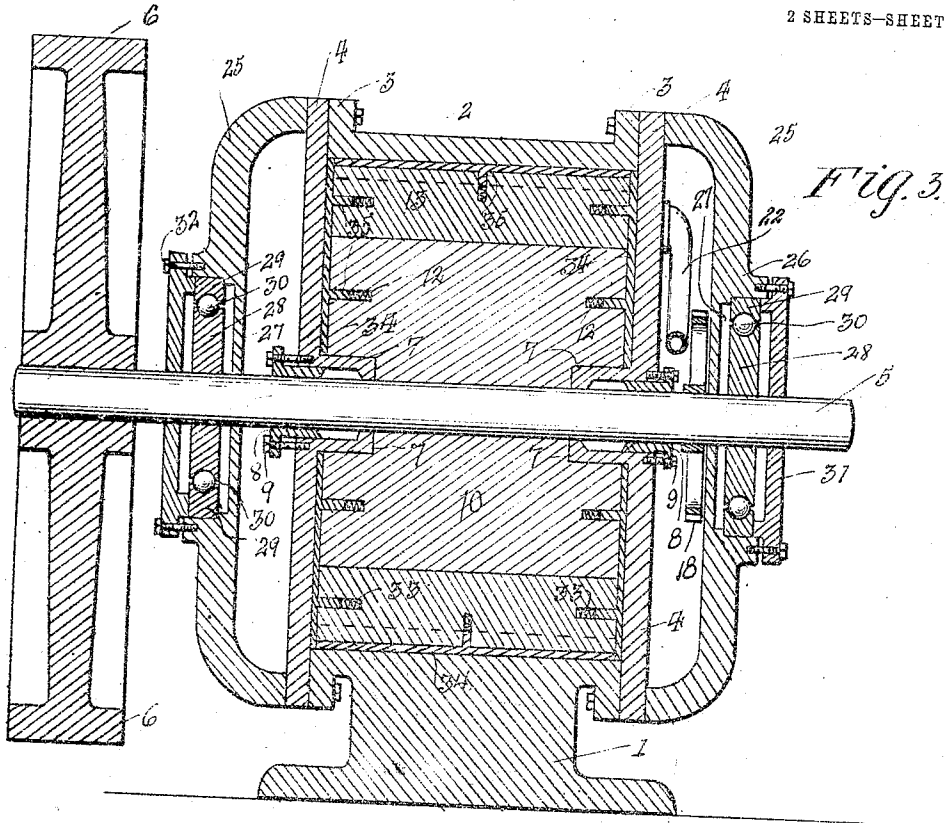


Fig. 4.

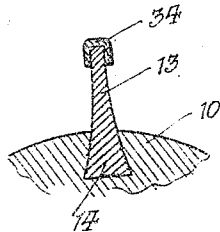


Fig. 5.



WITNESSES

B. M. Spring
 J. R. Smith

INVENTOR

Andrew G. Doedyns,
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UNITED STATES PATENT OFFICE.

ANDREW G. DOEDYNS, OF DUNKIRK, NEW YORK.

ROTARY ENGINE.

1,052,045.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed February 20, 1912. Serial No. 678,770.

To all whom it may concern:

Be it known that I, ANDREW G. DOEDYNS, a citizen of the United States, residing at Dunkirk, in the county of Chautauqua and State of New York, have invented new and useful Improvements in Rotary Engines, of which the following is a specification.

My invention relates to the class of engines, and more specifically to that class of engines which are commonly called rotary engines.

An object of my invention is to provide a rotary engine which will have as few moving parts as possible, thereby reducing to a great extent the loss of energy due to friction.

Another object of my invention is to provide an engine of the rotary type which may be operated by steam, compressed air or internal combustion.

A still further object of my invention is to combine a rotary engine with a rotary valve, said valve being of a peculiar construction.

With the foregoing and other objects in view my invention relates to such details of construction and in the arrangement and combination of parts as will be hereinafter fully described and specifically pointed out in the appended claim.

In describing my invention in detail reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a side elevation of my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a cross sectional view of my invention. Fig. 4 is a detail view. Fig. 5 is a side elevation of the piston blades showing the method of mounting the packing within the same.

In the accompanying drawings which fully illustrate the preferred form of my invention the numeral 1 designates the base thereof, upon which base is formed a circular structure 2 as shown. The structure 2 has an annular flange 3 formed at each side thereof, to which flanges are secured the plates 4. Journaled through the plates 4 and preferably near the centers thereof is a shaft 5 which has a fly wheel 6 mounted at one end thereof. The plates 4 are provided with an inwardly projecting sleeve 7 which engage the shaft 5 and receive therein the packing nut 8 as shown at 9. It is

now readily obvious that the shaft 5 may be operated independently of the plates 4.

Secured to the shaft 5 and preferably between the plates 4 is a drum 10 which drum has a plurality of recesses 11 formed therein for the reception of the coiled springs 12, the said springs serving the purpose that will be hereinafter fully described. I provide the piston blades 13 which blades are flared at their inner ends 14, whereby their displacement is prevented.

Revolubly mounted within the structure 2 by means of the shafts 15 are the valves 16, which valves are provided with the cut-out portions 17 as shown for the reception of the piston blades 13. Carried upon one end of the shafts 15 and on the shaft 5 are gear wheels 18 which are adapted to mesh with one another, whereby when the shaft 5 is rotated through the medium of the rotation of the piston blades the valves 16 will also be rotated and preferably at the same speed. The structure 2 is provided with the offset portions 19 within which are formed the openings 20, which openings communicate with the interior of the structure as shown through the medium of a duct 21. Leading to the openings 20 is a conducting pipe 22 which pipe is provided with means as shown at 23 for receiving one end of a supply pipe not shown. Other openings 24 are formed in the plates 4 which serve as exhaust ports.

For a purpose that will be presently described I secure to the upper and lower edges of the plates 4 the arms 25, which arms extend from a circular plate 26, said plate being provided with the cut-out portions 27, in which operate the wheels 28 which are carried fast upon the shaft 5. Positioned within the cut-out portions 27 are the rings 29 between which rings and said wheels operate the ball bearings 30. For the purpose of holding the rings 29 in place I provide the packing nut 31 as shown at 32. It is now readily obvious that when the piston blades are rotated through the medium of a charge introduced between the plates 4 the shaft 5 will revolve independently of the other structure, whereby motion may be transmitted from said shaft to different parts of machinery.

I find it advantageous to provide the drum 10 and the piston blades 13 with packing around the edges thereof for an obvious purpose. In pursuance of this I provide the

blades 13 with cut-out portions, which cut-out portions are adapted to receive the coiled springs 33. I preferably use the packing strips 34, which strips are provided with the inwardly projecting tongues 35 which tongues enter the cut-out portions which are formed in the drum and piston blades and engage the coiled springs held therein, whereby said strips will normally be held in engagement with the plates 4 and the structure 2.

I desire to lay the greatest of stress upon the simplicity of my invention both in construction and in operation.

It is thought that the operation of my device will be readily apparent from the foregoing description and that a more specific disclosure of the operation will be unnecessary.

I desire it to be understood that I may make slight changes in the construction of my invention without departing from the spirit thereof, provided, however, such changes fall within scope of the subjoined claim.

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

In a device of the character described, a supporting structure having a substantially circular member mounted thereon, said sub-

stantially circular member comprising ends and an intermediate compartment, said intermediate compartment being comparatively larger than said compartments blades covering the sides of said compartment, shafts journaled through said plates and extending through said end compartments, cylinders carried upon said shafts, said cylinders provided with cut out portions upon their periphery, said cut out portions being at diametrically opposite points thereof, the shaft journaled through said plates, a hub carried upon said shaft, piston blades carried upon said hub, said piston blades being at diametrically opposite points, intake ports provided at intersection of said end and intermediate portions, said ports being normally closed by said cylinders, one of said plates provided with spaced apart openings, said openings forming exhaust ports said ports communicating with said intermediate compartment pipes having connection with said exhaust ports and means connecting said pipes together as and for the purpose described.

ANDREW G. DOEDYNS.

Witnesses:

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ROBERT COOPER.