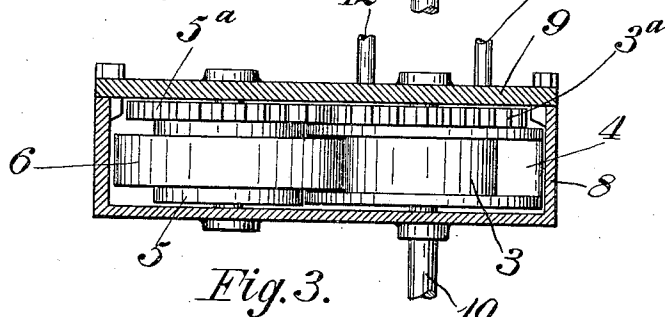
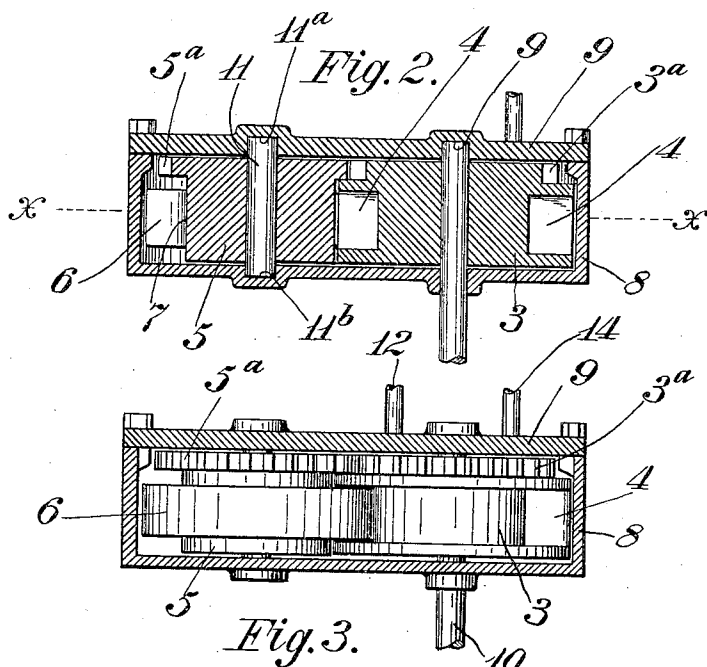
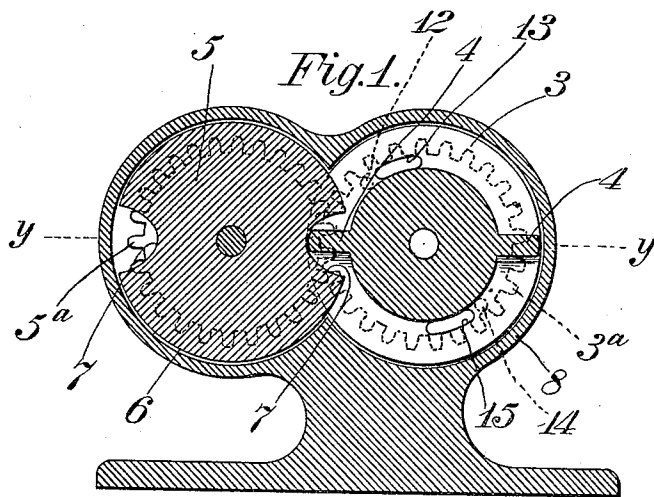


D. BERGER.
 ROTARY ENGINE.
 APPLICATION FILED JUNE 24, 1912.

1,052,124.

Patented Feb. 4, 1913.



Witnesses
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UNITED STATES PATENT OFFICE.

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ROTARY ENGINE.

1,052,124.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed June 24, 1912. Serial No. 705,492.

To all whom it may concern:

Be it known that I, DELLNO BERGER, a citizen of the United States, residing at Madison township, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Rotary Engines, of which the following is a specification.

The object of this invention is to simplify the construction of rotary motors and render their operation more effective.

The invention is embodied in the construction herein shown and described, the features of novelty being pointed out in the appended claim.

In the accompanying drawings—Figure 1 is a vertical section on the line $x-x$ Fig. 2 of an engine according to my invention. Fig. 2 is a horizontal section on the line $y-y$ Fig. 1. Fig. 3 is a plan view of the rotary members, the upper portion of the casing being removed to expose them.

In the views 3 designates a rotary member having an annular cavity intercepted at diametrically opposite points by transversely closing blades or wings 4. The character 5 designates another rotary member that has an annular projection 6 that fits into and fills at a cross section the annular cavity of the rotary member 5. Each of the rotary members 3 and 5 is provided with gear teeth, as shown at 3^a and 5^a, meshing together so that the rotation of one will cause the rotation of the other. The diameters of the toothed portions of the rotary members are the same so that the two members shall rotate at the same speed. The annular projection 6 of the member 5 is recessed at 7, 7 on such curves that the outer edge of the blade or wing as it approaches and passes into said recess keeps close to the wall of the recess so as to prevent as far as practicable the passage of pressure around such blade or wing. These rotary members are inclosed in a suitable case 8, one side of which is provided with a tight but removable cover 9. The rotary member 3 has a shaft 10, one end of which is journaled in a socket 9^a in the cover 9 while the other

end extends through the case. The rotary member 5 has a shaft 11 that is journaled in sockets 11^a and 11^b in the case and cover respectively.

The character 12 designates an inlet port in the cover for the pressure fluid or motive agent. The adjacent wall of the rotary member 3 is provided with an arc slot or port 13 which being in the rotary member travels over the port 12 to admit the motive agent into the annular recess of the rotary member 3. Because the annular projection 6 closes a cross section of the annular cavity of the member 3 when pressure is admitted or created in the chamber formed by said annular projection and the wing, the pressure is exerted to move said wing and the rotary member.

14 designates the exhaust port in the cover 9, and 15 a slot in the adjacent wall of the rotary member 3. The inlet and exhaust ports and the uncovering slots in the rotary member are opposite each other so that while the motive agent is acting at one side the exhaust is taking place at the other. The exhaust can be used as the inlet and inlet as the exhaust to reverse the engine. It will be observed that by proper casting the engine shown employs essentially but six parts.

What I claim is—

In a rotary engine, the combination with a suitable case, of two rotary members geared together within said case to rotate at equal rates, one of said members having an annular recess provided with blades, and the other provided with an annular projection to fit in said annular recess, said annular projection having recesses to receive the blades when said rotary members rotate and a wall of said annular recess provided with ports for the intake and exhaust of the operating agent, and the wall of the case provided with inlets cooperating with said ports.

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