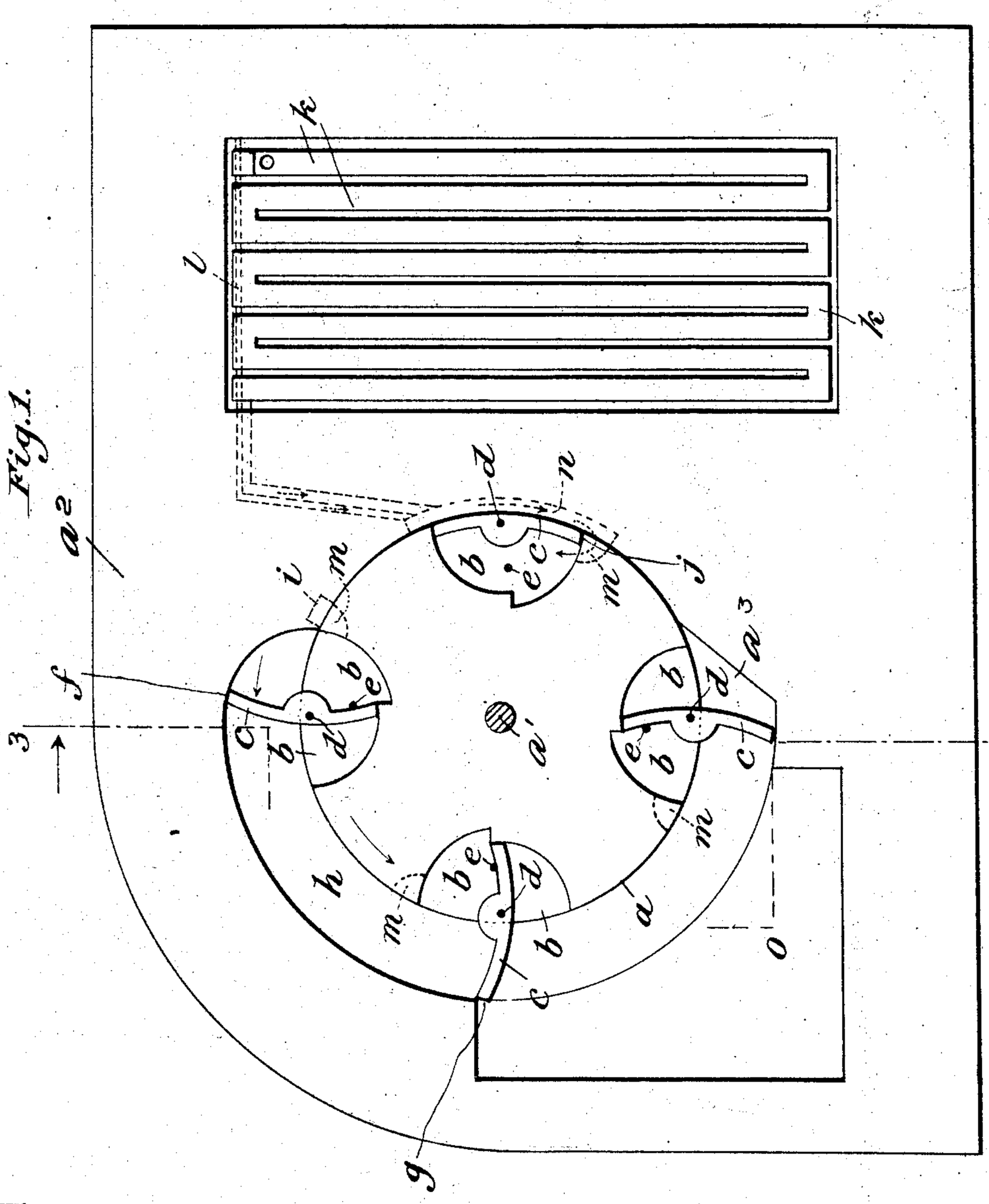
A. J. CHARLTON.

ROTARY ENGINE.

APPLICATION FILED AUG. 5, 1907.

908,955. **Patented Jan. 5, 1909.**

4 SHEETS—SHEET 1.



Witnesses:
C. F. Simmermaker
J. Hasterline

Inventor:
Albert J. Charlton.

A. J. CHARLTON.

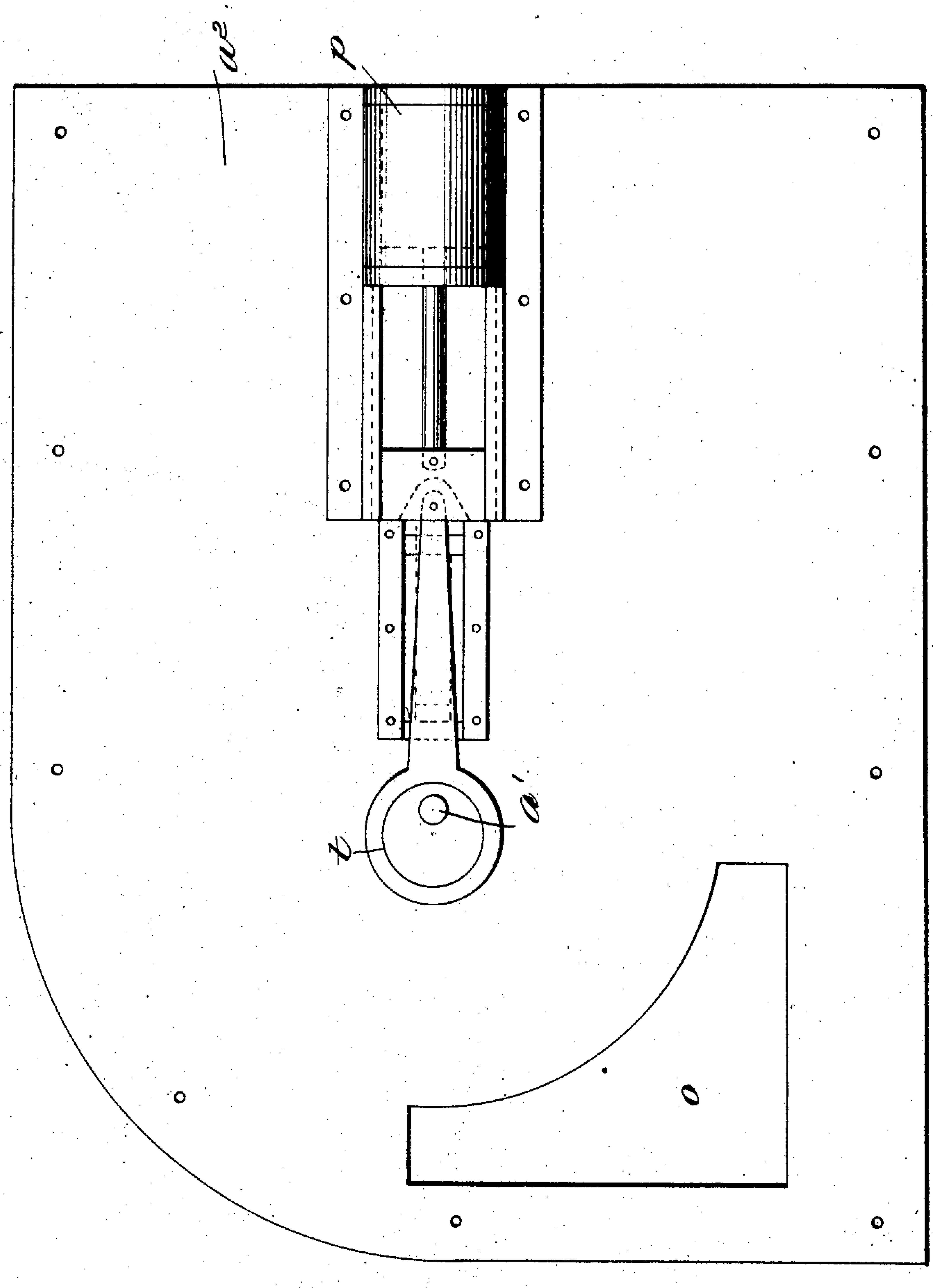
ROTARY ENGINE.

APPLICATION FILED AUG. 5, 1907.

908,955. Patented Jan. 5, 1909.

4 SHEETS—SHEET 2.

Fig.2.



Witnesses:
C. F. Simmermaker
J. Easterline

Inventor:
Albert J. Charlton

A. J. CHARLTON.

ROTARY ENGINE.

APPLICATION FILED AUG. 5, 1907.

908,955.

Patented Jan. 5, 1909.

4 SHEETS—SHEET 3.

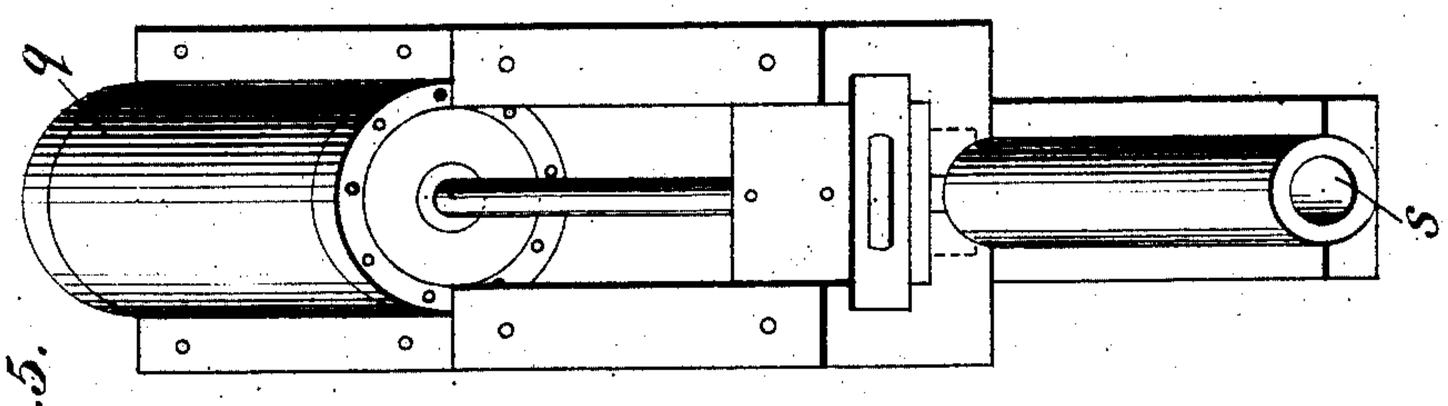


Fig. 5.

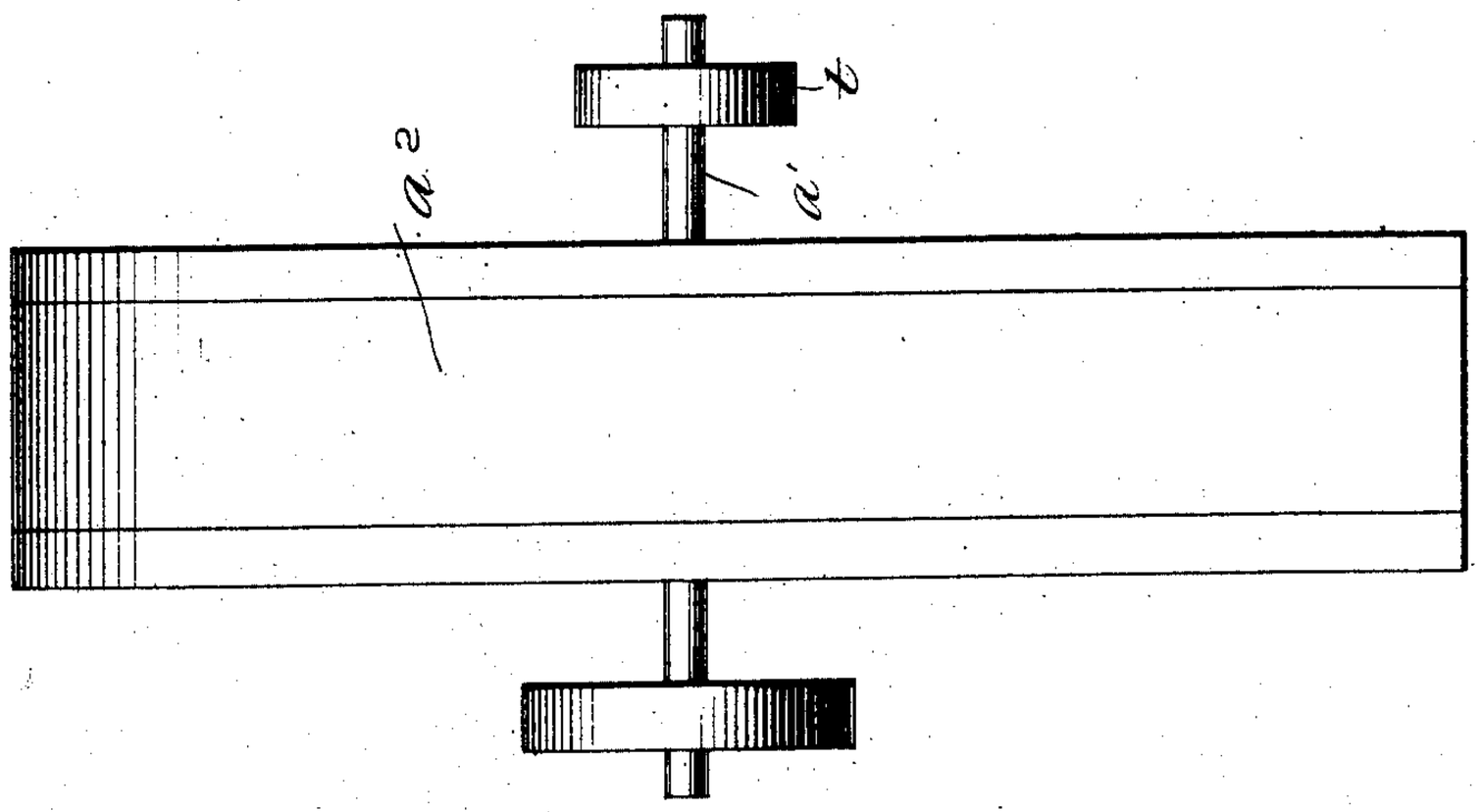


Fig. 4.

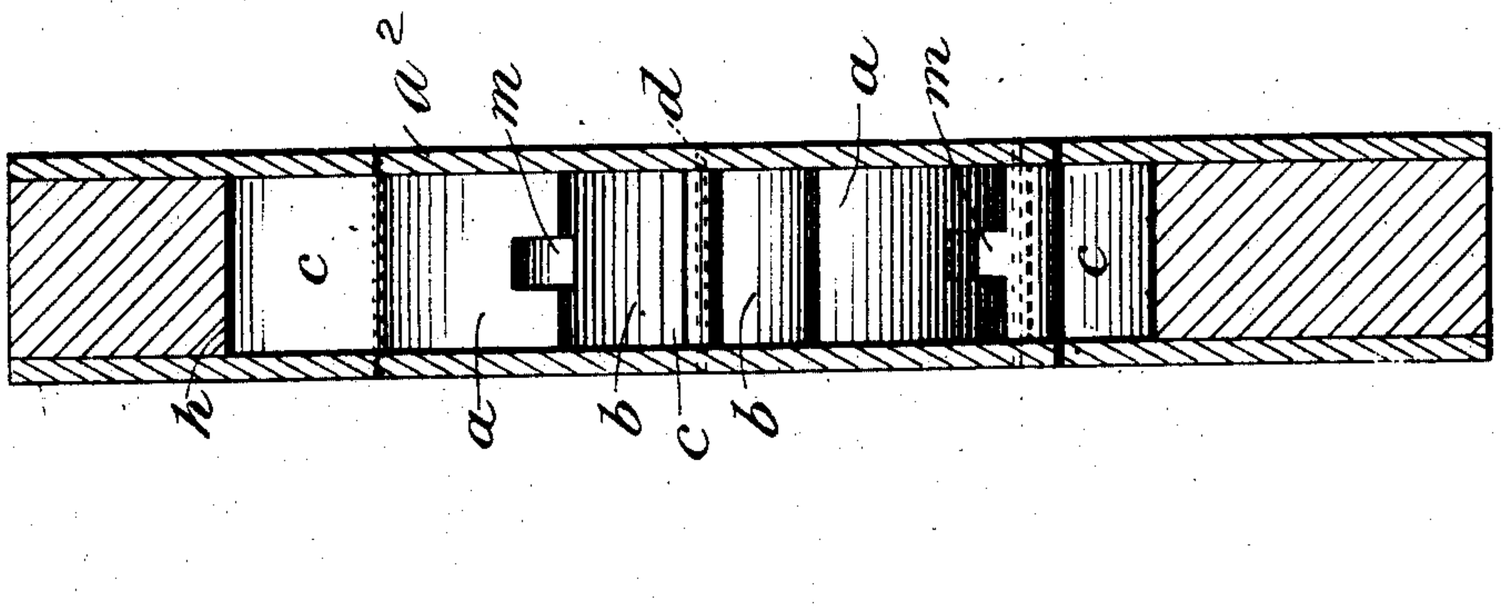


Fig. 3.

Witnesses:
C. F. Sommermaker
J. Kasterlee

Inventor:
Albert J. Charlton.

A. J. CHARLTON.

ROTARY ENGINE.

APPLICATION FILED AUG. 5, 1907.

908,955.

Patented Jan. 5, 1909.

4 SHEETS—SHEET 4.

Fig. 7.

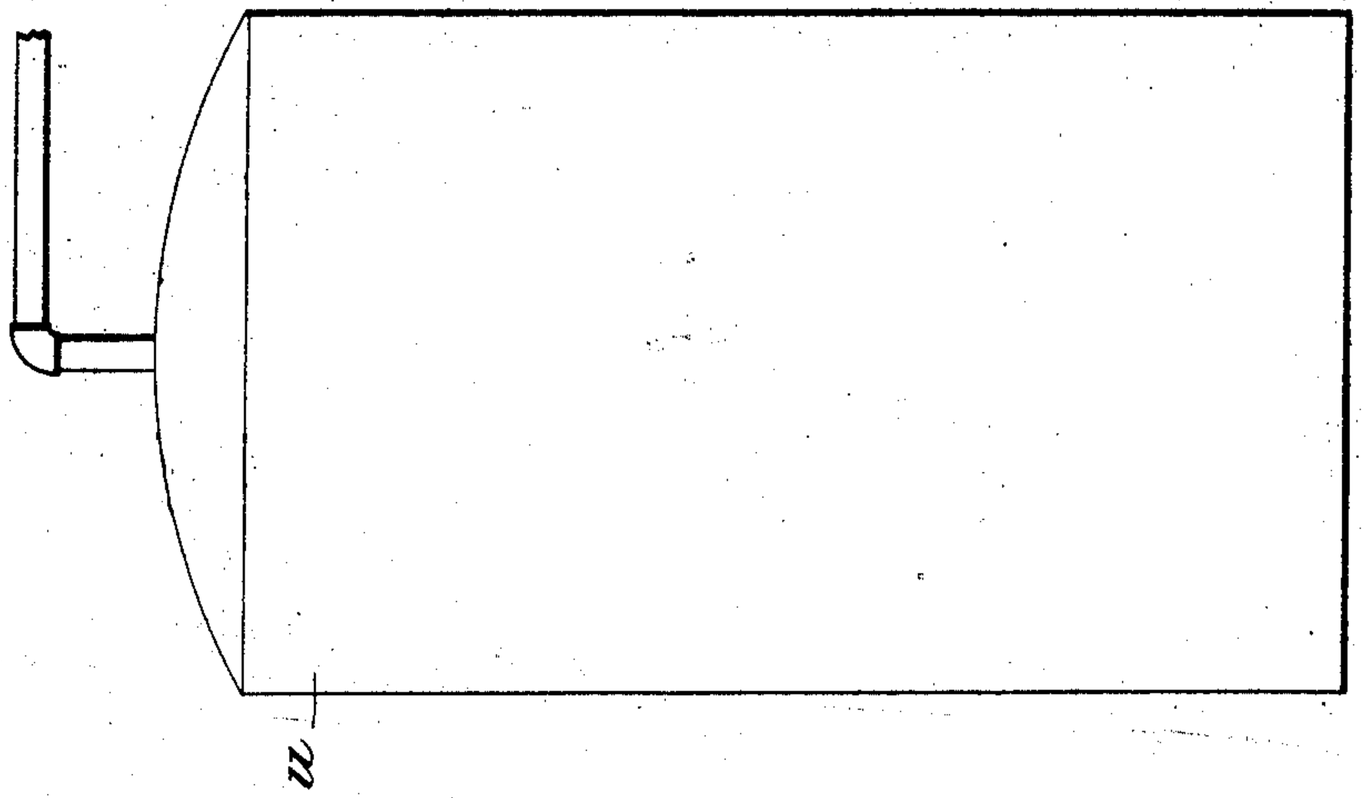
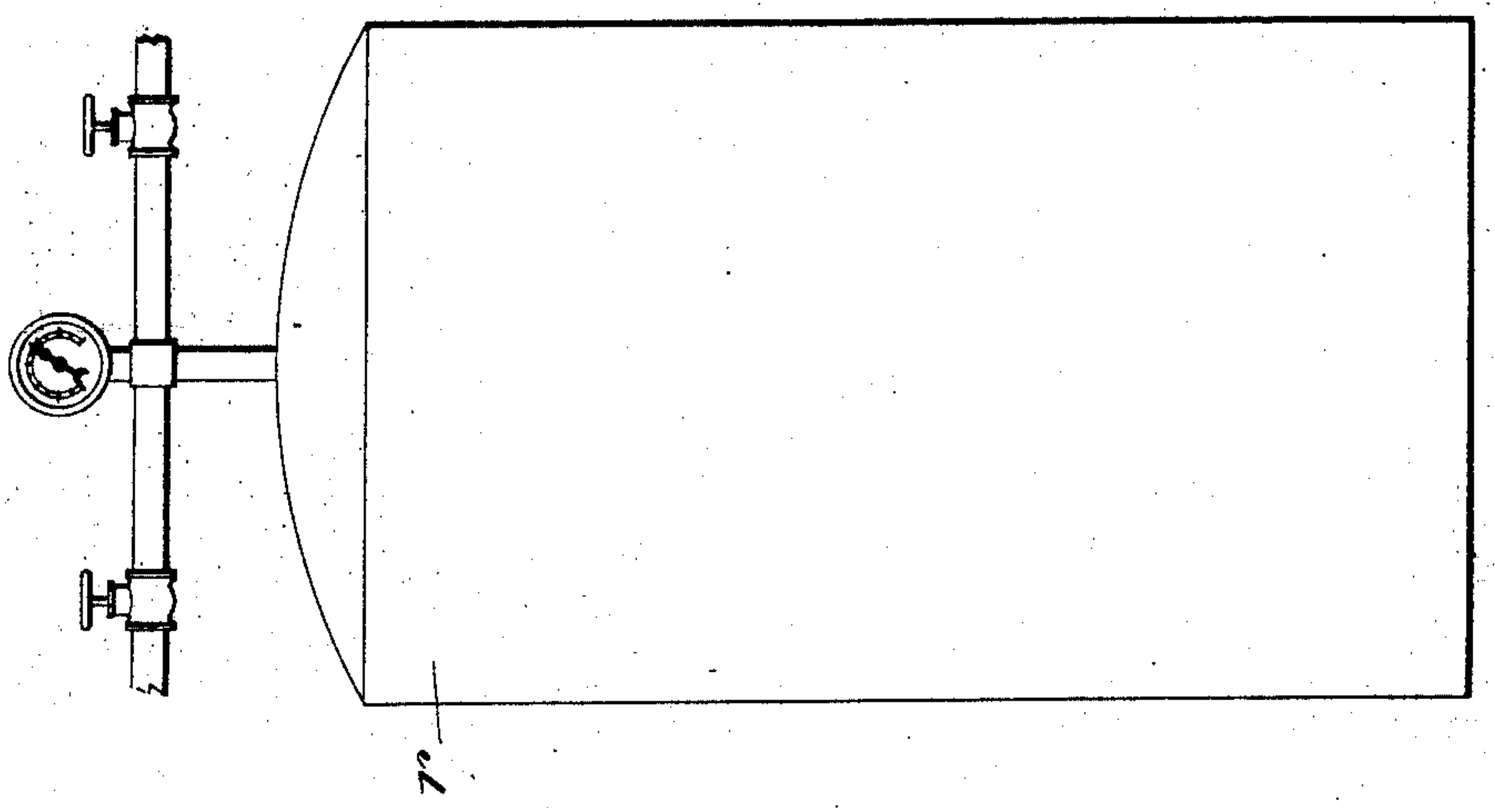


Fig. 6.



Witnesses:

C F Simmermaker

J Kasterlee

Inventor:

Albert J. Charlton

UNITED STATES PATENT OFFICE.

ALBERT JOHN CHARLTON, OF BENNETT, IOWA.

ROTARY ENGINE.

No. 908,955. Specification of Letters Patent. Patented Jan. 5, 1909.

Application filed August 5, 1907. Serial No. 387,250.

To all whom it may concern:

Be it known that I, ALBERT J. CHARLTON, a citizen of the United States, residing at Bennett, in the county of Cedar and State of Iowa, have invented a new and useful Rotary Engine, of which the following is a specification.

My invention is an improvement in rotary engines, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof—Figure 1 is a side view of my improvement with part of the casing broken away. Fig. 2 is a side view. Fig. 3 is a vertical section. Fig. 4 is an end view. Fig. 5 is a plan view of the air pump. Fig. 6 is a side view of the air tank, and Fig. 7 is a side view of the gasolene tank.

In the present embodiment of my invention, the rotor comprises a disk or wheel a, secured to a shaft a', which is journaled in the casing a^2. The disk or wheel is provided on its periphery with a plurality of recesses b, of the shape shown in Fig. 1, and in each of said recesses is hinged a vane c, the pivots d of the vane being journaled in the sides of the disk. The vane is curved on an arc of the periphery of the wheel, and is pivoted eccentrically. A rod e is arranged transversely of the recess as shown in Fig. 1 to limit the swinging movement of the door for a purpose to be presently described. The casing a^2, has formed therein a chamber h, the said chamber being shaped on the arc of a circle having the same center as the shaft to which the disk is secured.

The explosive compound is admitted to the recesses b, through a port m in the disk, which is adapted to register with a longitudinal slot n in the casing, the said slot being the opening of a pipe l leading from a series of gasolene coils k.

It will be noticed that the slot n extends over a considerable arc, so that the port m is in communication therewith through a considerable period of the travel of the disk. At i, a sparker is arranged for igniting the charge in the recess b. As soon as the charge is ignited, the force of the explosion swings the vane c into the position shown at the top of the disk in Fig. 1, and the further expansion of the gases will rotate the wheel, until the vane reaches the point g in Fig. 1, when the gases exhaust into the air.

At the lower part of the wheel or disk, is arranged an incline a^3 for closing the vanes before they reach the charging point.

In the present embodiment of the invention, the wheel or disk is shown as provided with four vanes, and with this construction, the explosive compound is always acting on one vane. Air is compressed in the tank r by means of the pump p arranged on the side of the casing and operated by an eccentric t on the shaft a. This air is mixed with the gasolene or other fuel from the tank u, and is fed through the coils k to the recesses b.

I claim—

1. In a rotary engine, a rotor comprising a disk having spaced recesses in the periphery thereof, swinging vanes for normally closing the recesses, the outer surfaces of said vanes corresponding to the periphery of the disk, said vanes being eccentrically pivoted, means for introducing a charge into the recess, means for exploding said charge, whereby to swing said vanes outwardly, and a casing inclosing the rotor whose walls conform to the figure described by the vane in its movement with the disk, said casing having an exhaust opening approximately opposite the point where the charge is admitted.

2. In a rotary engine, a rotor comprising a disk having spaced recesses in the periphery thereof, swinging vanes for normally closing the recesses, the outer surfaces of said vanes registering with the periphery of the disk, said vanes being eccentrically pivoted, means for introducing a charge into the recess, means for exploding said charge whereby to swing said vanes outwardly, a casing inclosing the rotor whose walls conform to the figure described by the vane in its movement with the disk, said casing having an exhaust opening approximately opposite the point where the charge is admitted, and a stop for limiting the outward swinging of the vane.

3. In a rotary engine, a rotor comprising a disk having spaced recesses in the periphery thereof, swinging vanes normally closing the recesses, a casing inclosing the rotor whose walls conform to the figure described by the vane in its movement with the disk, means on one side of the casing for introducing a charge to the recesses during their passage thereby, and means for exploding the charge whereby to swing the vanes out-

wardly, said casing having an exhaust opening on the opposite side thereof from the point where the charge is admitted.

4. In a rotary engine, a rotor comprising a disk having a recess in the periphery thereof, a swinging vane normally closing the recess, a casing inclosing the rotor whose walls conform to the figure described by the vane in its movement with the disk, means for introducing a charge into the recess during the movement of the rotor, and means for exploding the charge whereby to swing the vane outwardly, said casing having an exhaust opening spaced apart circumferentially from the point where the charge is admitted.

ALBERT JOHN CHARLTON.

Witnesses:

C. F. SIMMERMAKER,

F. J. CASTERLINE.