

No. 627,782.

Patented June 27, 1899.

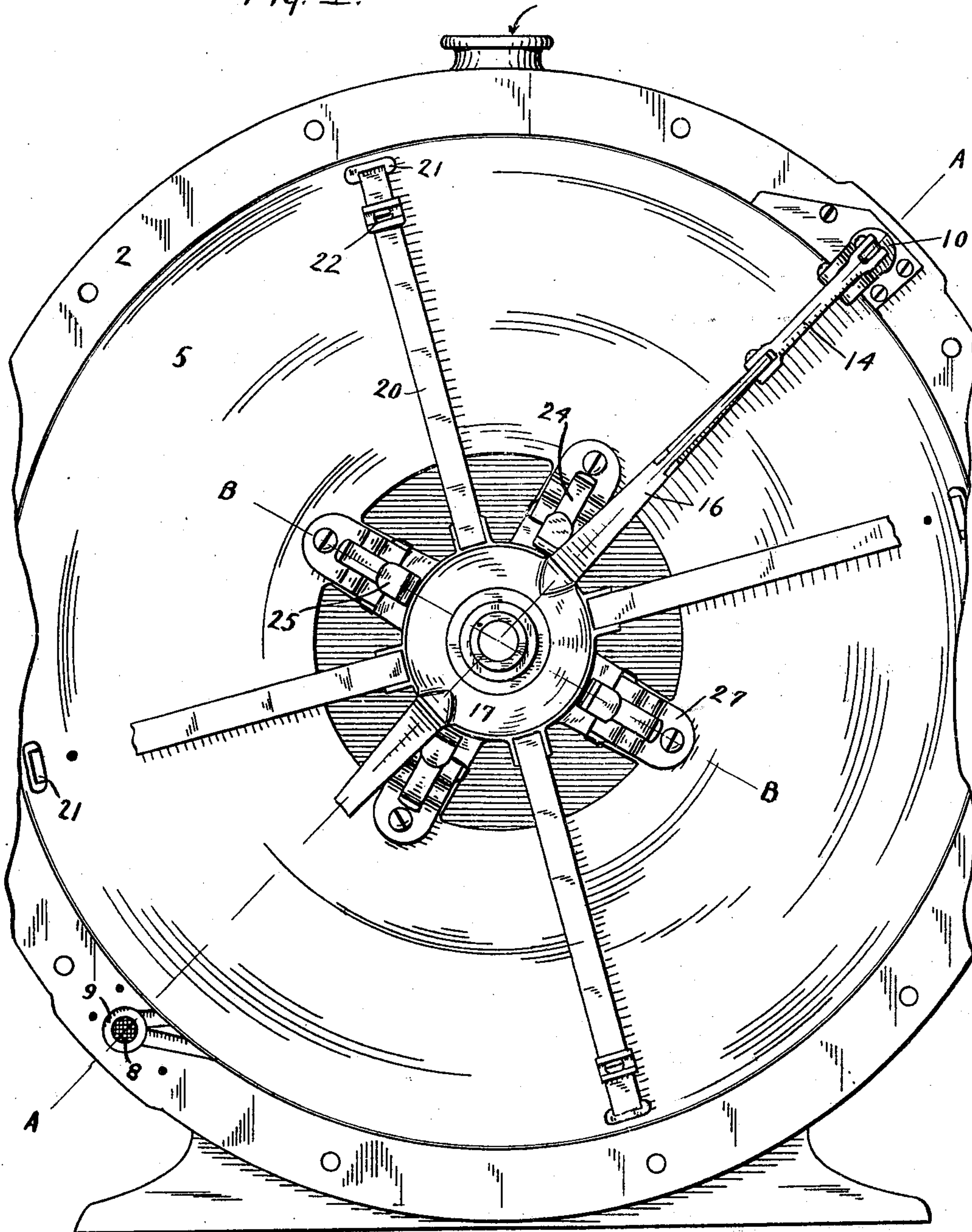
G. C. PYLE.
ROTARY ENGINE GOVERNOR.

(Application filed July 9, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. I.



Witnesses

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Fig. II.

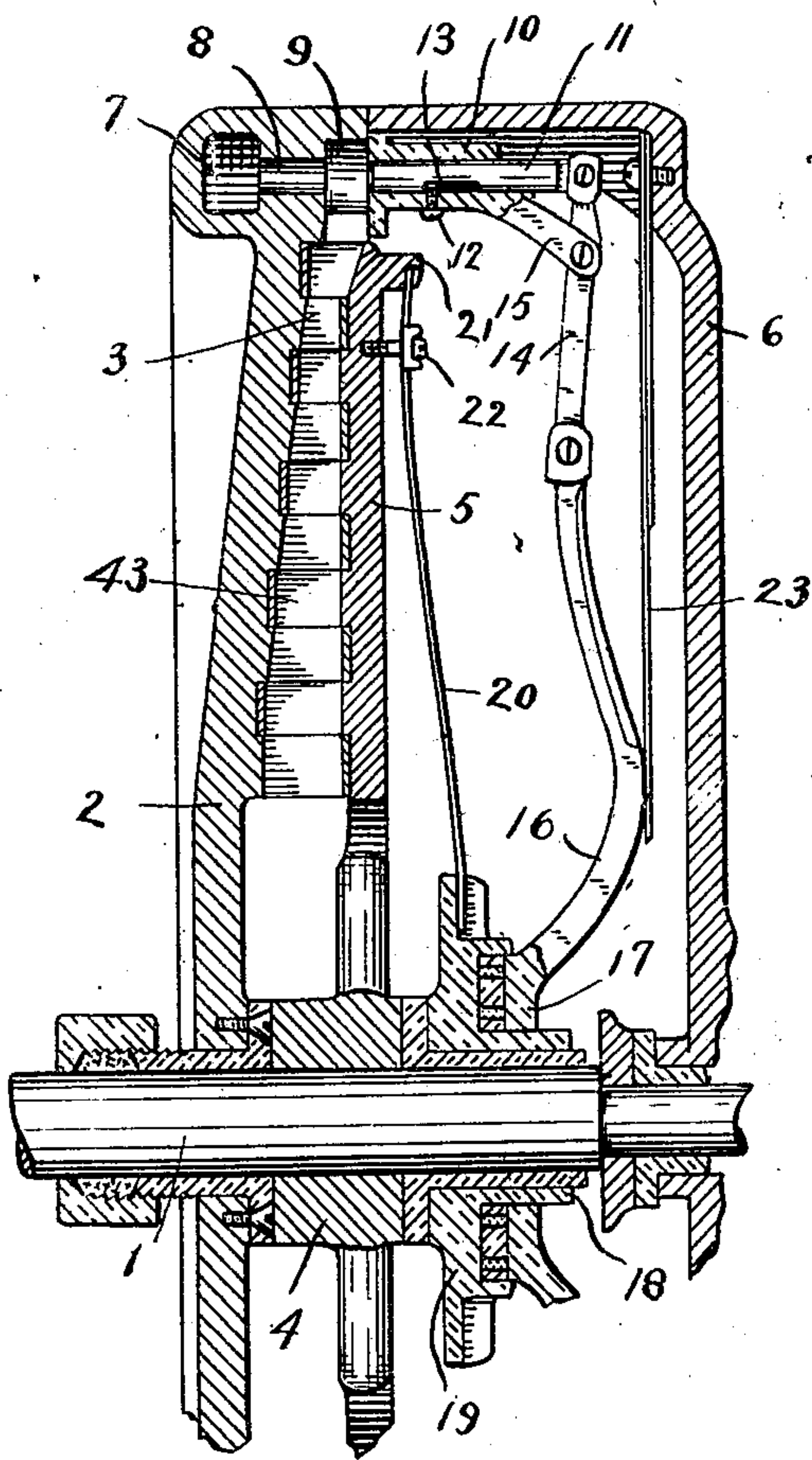
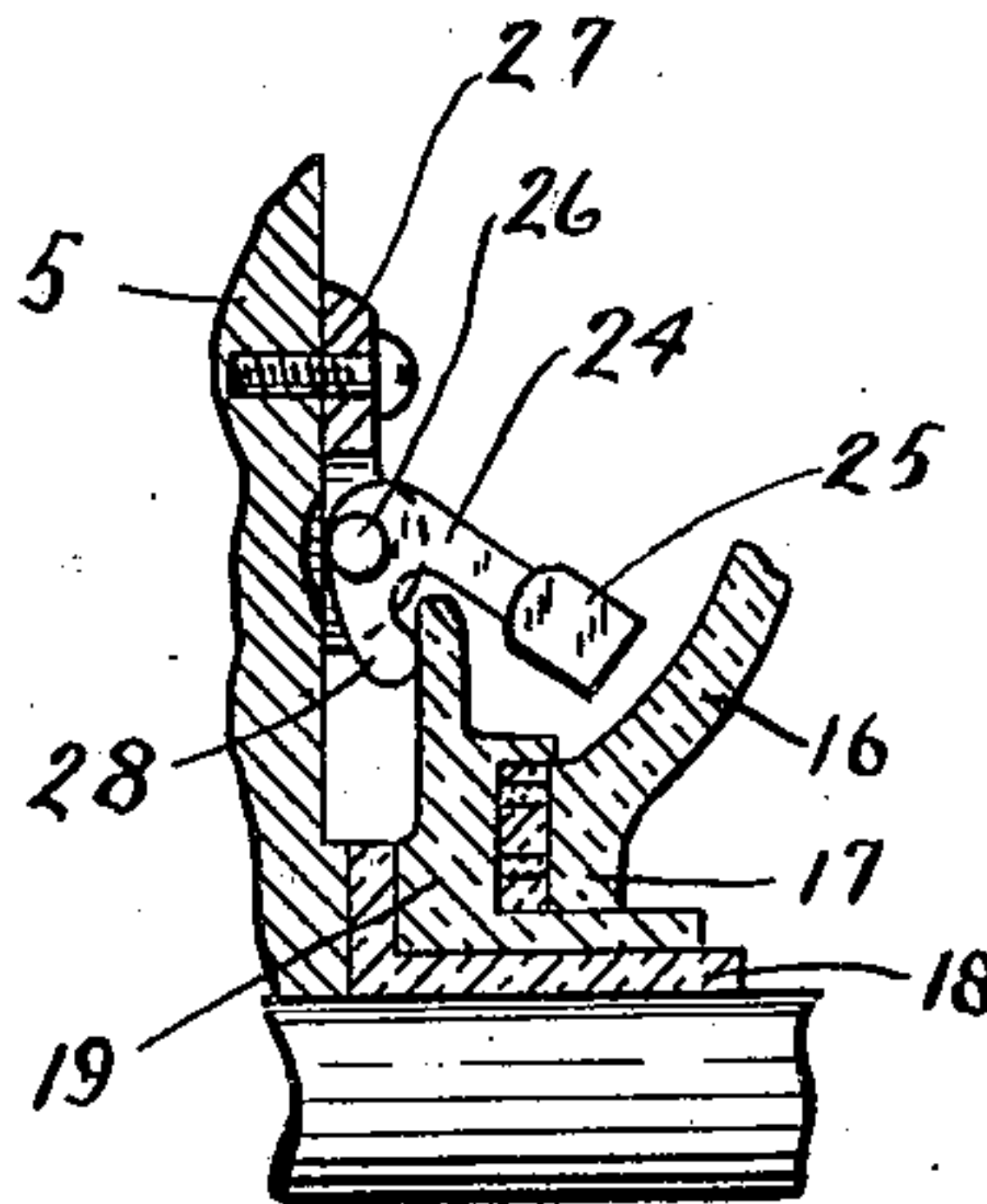


Fig. III.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE C. PYLE, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO
FRANK H. EWERS, OF SAME PLACE.

ROTARY-ENGINE GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 627,782, dated June 27, 1899.

Application filed July 9, 1898. Serial No. 685,549. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. PYLE, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Rotary-Engine Governor; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

My present invention relates to a governing device for rotary engines whereby the steam-inlet will be modified automatically, and thereby the speed of the engine controlled.

While this invention is adapted for use in connection with various types of rotary engines, I here show it connected with one substantially similar to the rotary engine set forth in a former patent of mine, No. 550,564, dated November 26, 1895.

The full nature of this invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure I is an elevation of a rotary engine, with parts broken away and with the cover removed, showing the governor in place. Fig. II is a section on the line A A of Fig. I. Fig. III is a section on the line B B of Fig. I, parts being broken away.

By referring to my former patent above mentioned the general nature of the rotary engine herein illustrated can be learned.

1 is a shaft having bearings in the casing 2 and upon which the hub 4 of the turbine wheel 5 is rigidly secured. 3 are the buckets, and 6 the cover. 7 is an annular steam-chamber in the casing. 8 is the steam-inlet port leading to the antechamber 9. The foregoing constitutes no part of this present invention.

10 is a cylinder secured to the casing, with its chamber in line with the passage-way 9 or a steam-inlet. A valve or piston 11 operates through said cylinder, and its movement is limited by the screw 12, whose end enters the slot 13 in the piston 11. When the piston 11 is moved inward to the left, it reduces and finally closes the steam-inlet. The piston 11 is actuated by the lever 14, pivoted intermediate its ends on the arm 15 from the cylinder 10. There are two inlets oppositely located,

as seen in Fig. I, and hence there are two pistons 11 and levers 14. The said levers 14 are actuated by the arms 16, that are secured to the plate 17. When said plate 17 is moved to the right, the inner end of the lever 14 is likewise moved to the right, while the piston 11 is forced to the left. The plate 17 is centrally apertured to loosely fit over the extending arm 18 from the sliding collar 19. Said plate 17 is not rotary. When said collar 19 is forced to the right, it consequently forces the plate 17 and the arm 16 in the same direction. The collar 19 is held inward toward the wheel by the springs 20, one of whose ends rests on said collar and the other on a seat 21, formed on the wheel. Its tension is regulated by a set-screw 22. The arms 16 are held down in place by a spring 23, which at one end is bolted to the cover 6 and at the other end rests on said lever 16.

The mechanism in the governing device heretofore described is caused to operate by the weighted bell-crank levers 24. (Seen in Fig. III.) One end of said bell-crank lever is weighted by the weight 25. Its central portion is pivoted at 26 in a slot in the plate 27, that is bolted to the wall 5 of the wheel. The other end 28 of the bell-crank lever engages the collar 19. As the speed of the wheel increases the weight 25 is moved away from the wheel by centrifugal force, and when it is so moved the bell-crank lever 24 by its end 28 slides the collar 19, and therefore the arm 16, laterally to the right, whereupon said arm forces the plunger in toward the inlet-port. Obviously the more rapidly said wheel is rotated greater will be the action of the parts of the governing device, resulting in a greater reduction of the inlet-port until it would finally be closed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A rotary-engine governor including a cylinder secured to the casing opposite the steam-inlet, a piston-valve in said cylinder to close the steam-inlet, a lever pivoted intermediate its ends to an arm from said cylinder for actuating the valve, a spring-withheld rotary collar mounted adjacent to the wheel, a weighted lever pivoted on the wheel to move said collar away from the wheel, a plate

mounted adjacent to said rotary collar carrying an arm pivoted to the valve-actuating lever, and a spring pressing against said arm to hold it toward the wheel.

- 5 2. A rotary-engine governor including the cylinder 10 provided with the arm 15, the piston-valve 11, means for limiting the movement thereof, the lever 14, the plate 17 provided with the arm 16, the spring 23, the collar 19,
10 the spring 20, the plate 27 secured to the

wheel and slotted, and the weighted lever 24 pivoted to said plate, all combined substantially as set forth.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses 15 herein named.

GEORGE C. PYLE.

Witnesses:

V. H. LOCKWOOD,
KATHARINE DUNLAP.