F. TOMPKINS.

ROTARY ENGINE.

APPLICATION FILED FEB. 18, 1908.

916,225.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

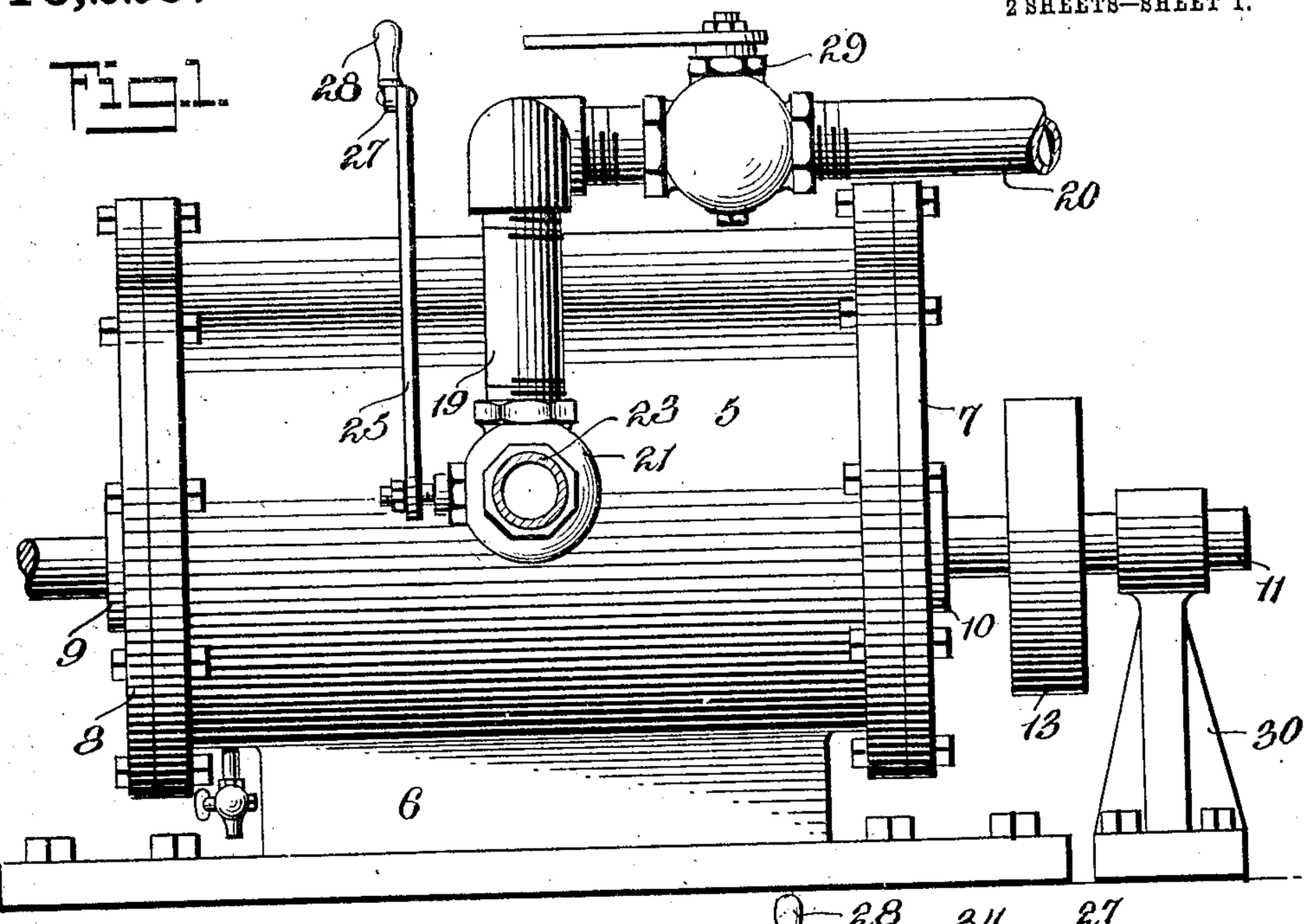
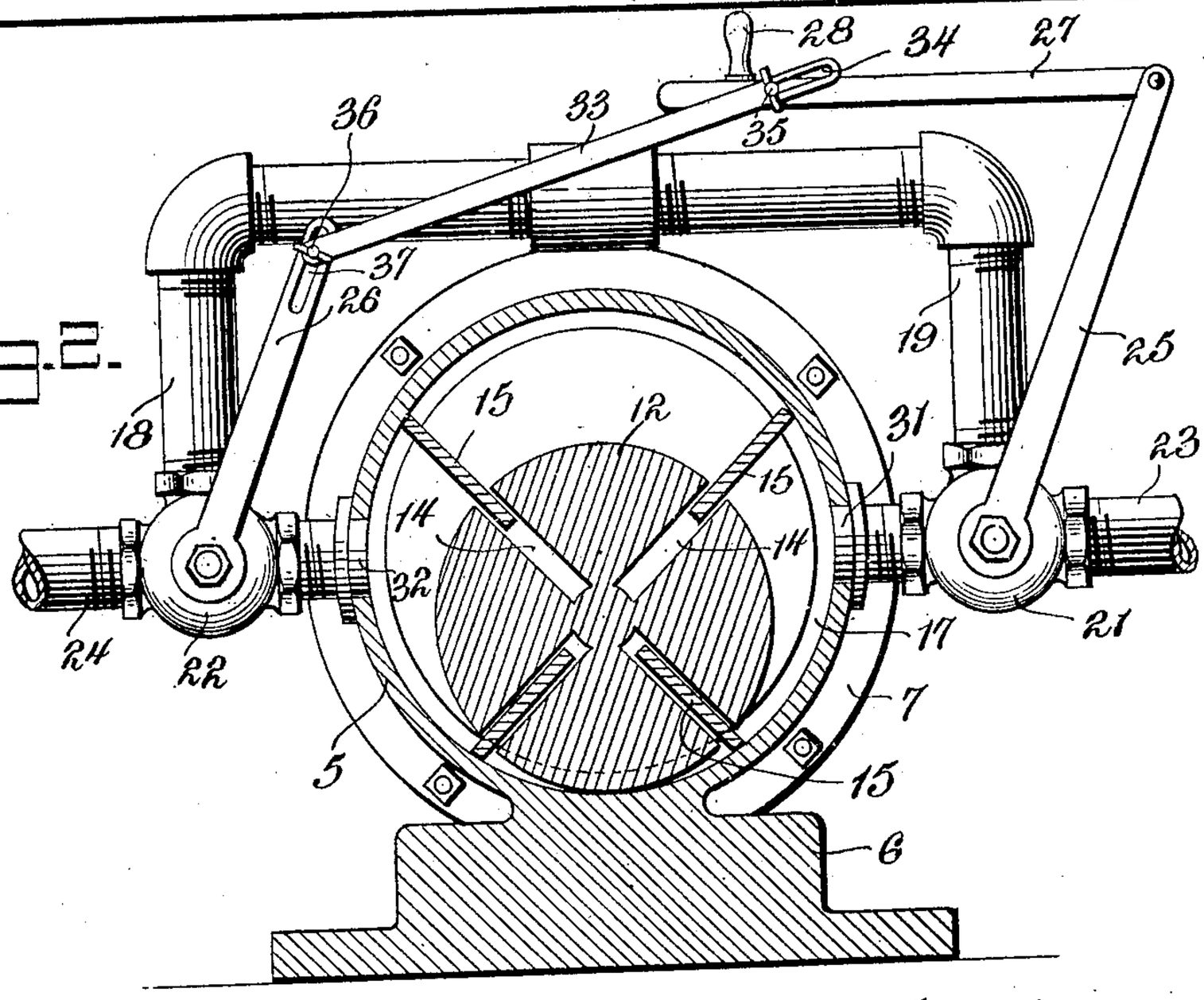


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

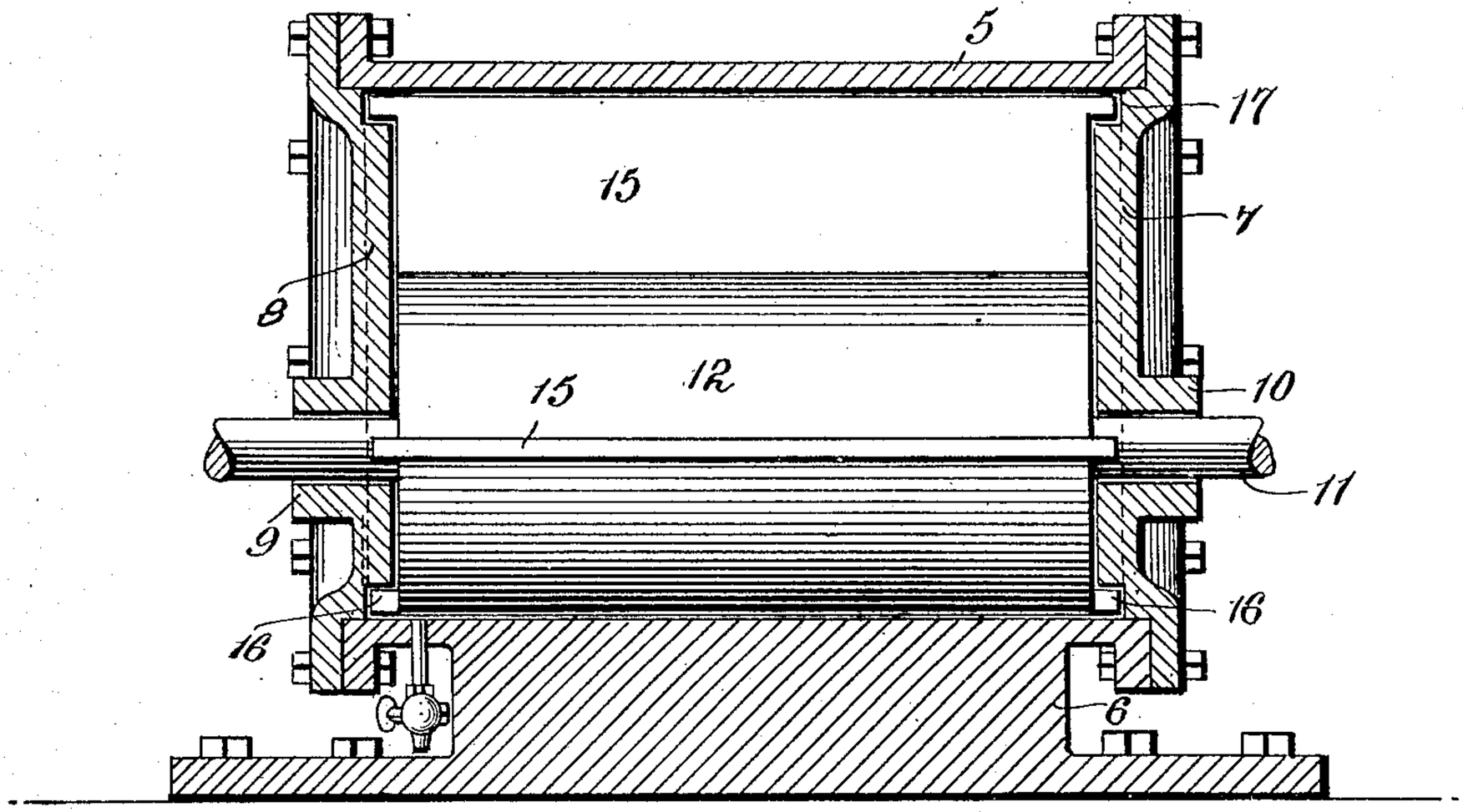


Fig 4.

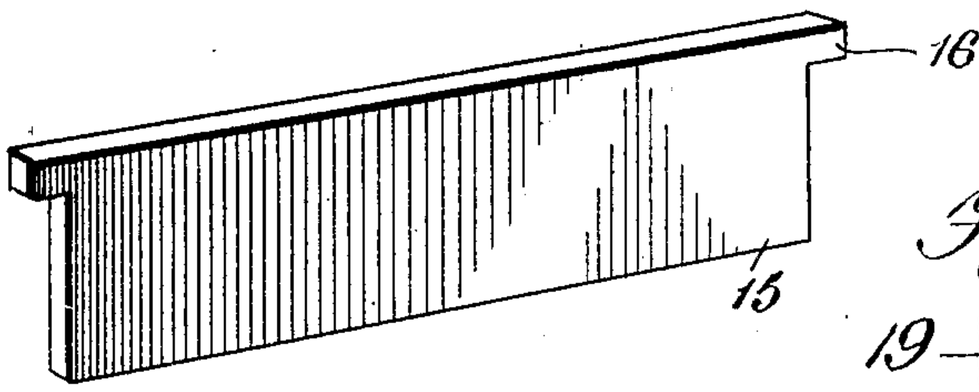
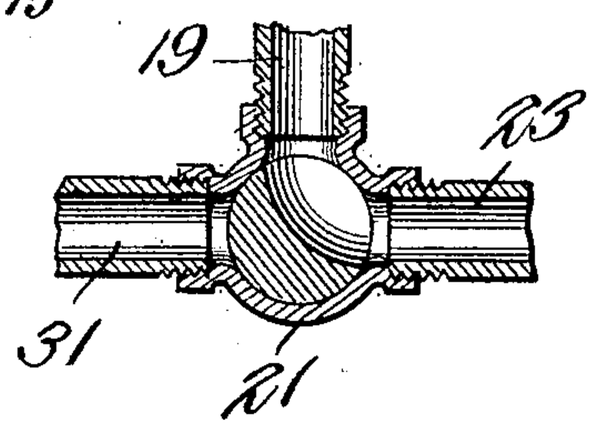


Fig 5.



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UNITED STATES PATENT OFFICE.

FRANKLIN TOMPKINS, OF NEW DORP, NEW YORK.

ROTARY ENGINE.

No. 916,225. Specification of Letters Patent. Patented March 23, 1909.

Application filed February 18, 1908. Serial No. 416,512.

To all whom it may concern:

Be it known that I, FRANKLIN TOMPKINS, a citizen of the United States, residing at New Dorp, in the county of Richmond and State of New York, have invented new and useful Improvements in Rotary Engines, of which the following is a specification.

This invention relates to rotary engines and has for its object certain novel constructions of the pistons and means for operating same so that as the motive shaft revolves the pistons are automatically positioned to receive the steam blast as will be more fully set forth in the following specification, set forth in the claim and illustrated in the drawings where:

Figure 1 is a side elevation of the improved engine. Fig. 2 is a cross sectional view of same. Fig. 3 is a longitudinal sectional view. Fig. 4 is a perspective view of one of the pistons. Fig. 5 is a sectional detail view taken through one of the three-way valves.

This engine consists of a cylindrical case 5 on a foundation 6 and having the heads 7 and 8 with bearings 9 and 10 to support a shaft 11 which carries on the interior of the cylinder a drum 12 and at one end a pulley 13 or any wheel for communicating motion. The drum 12 is provided with radial slots 14 for the reception of the pistons 15 which are adapted to move inward and outward therein so as to confine the live steam in a certain section of the cylinder so that its pressure will force the piston forward and turn the drum and bring into play the next following piston to be similarly operated on. At each of the outer corners of the piston is a lug 16 extending lengthwise and adapted to enter a groove 17 in each of the heads 7 and 8 near their outer edges and concentric with the axis of the cylinder or casing. The shaft 11 is journaled eccentric with the cylinder so that the lower edge of the drum makes contact with the interior of same at its lowest point and leaving the upper section as a steam chamber which is divided at times by the pistons as the drum revolves.

The steam is admitted through one of the pipes 18 or 19 from the steam pipe 20 but the admission is regulated by the three-way valves 21 and 22 which either admit the steam or allow it to pass off through the exhaust pipes 23 and 24. The valve stems are provided with levers 25 and 26 that are connected by a bar 27 with a handle 28. By throwing the bar and levers in one direction the engine is caused to turn one way but on moving the bar in the opposite direction the engine is reversed.

The steam pipe 20 is provided with a throttle valve 29 and while Fig. 1 shows the shaft as being supported at one end by the standard 30 it is obvious that the other end of the shaft may be similarly supported.

As the steam enters through one of the ports 31 or 32 it acts against the piston presenting the largest bearing surface and forces it around toward the exhaust port on the opposite side. The steam must consequently travel through the upper side of the cylinder as its passage is practically barred through the lower side, and as the drum revolves the pistons also move around, the lugs 16 playing in the eccentric grooves 17 and causing the pistons to move in and out presenting more or less bearing surface to the steam.

Interposed between the rod 27 and the lever 26 is a link 33 with a slot 34 through which passes the thumb screw 35 and at the other end is a thumb screw 36 passing through a slot 37 in the outer end of the lever 26. The object of this link is to lock the levers in any position which they may be set.

What I claim as new and desire to secure by Letters Patent is:

In a rotary engine of the character described having a cylindrical casing, heads provided with grooves concentric with the axis of the cylinder, an eccentrically disposed shaft carrying a radially slotted drum peripherally contacting the cylinder along with the lower portion of the inside of the cylinder, pistons playing in the slots of the drum and having lugs engaging the concentric grooves in the cylinder heads, steam pipes communicating with diametrically opposite sides of the cylinder and three-way valves in said pipes; levers connected with the valve stems, a bar pivotally connected with one of the levers and having a handle, a locking link hav-

ing a slot engaging a thumb screw upon the handle bar, and a thumb screw extending through said locking bar and engaging a slot in the second valve lever, thereby enabling the valve levers and the valve controlled thereby to be adjusted and secured in various positions.

In testimony whereof, I affix my signature in presence of two witnesses.

FRANKLIN TOMPKINS.

Witnesses.
ANDREW E. PRIER,
JAMES F. DUHAMEL.