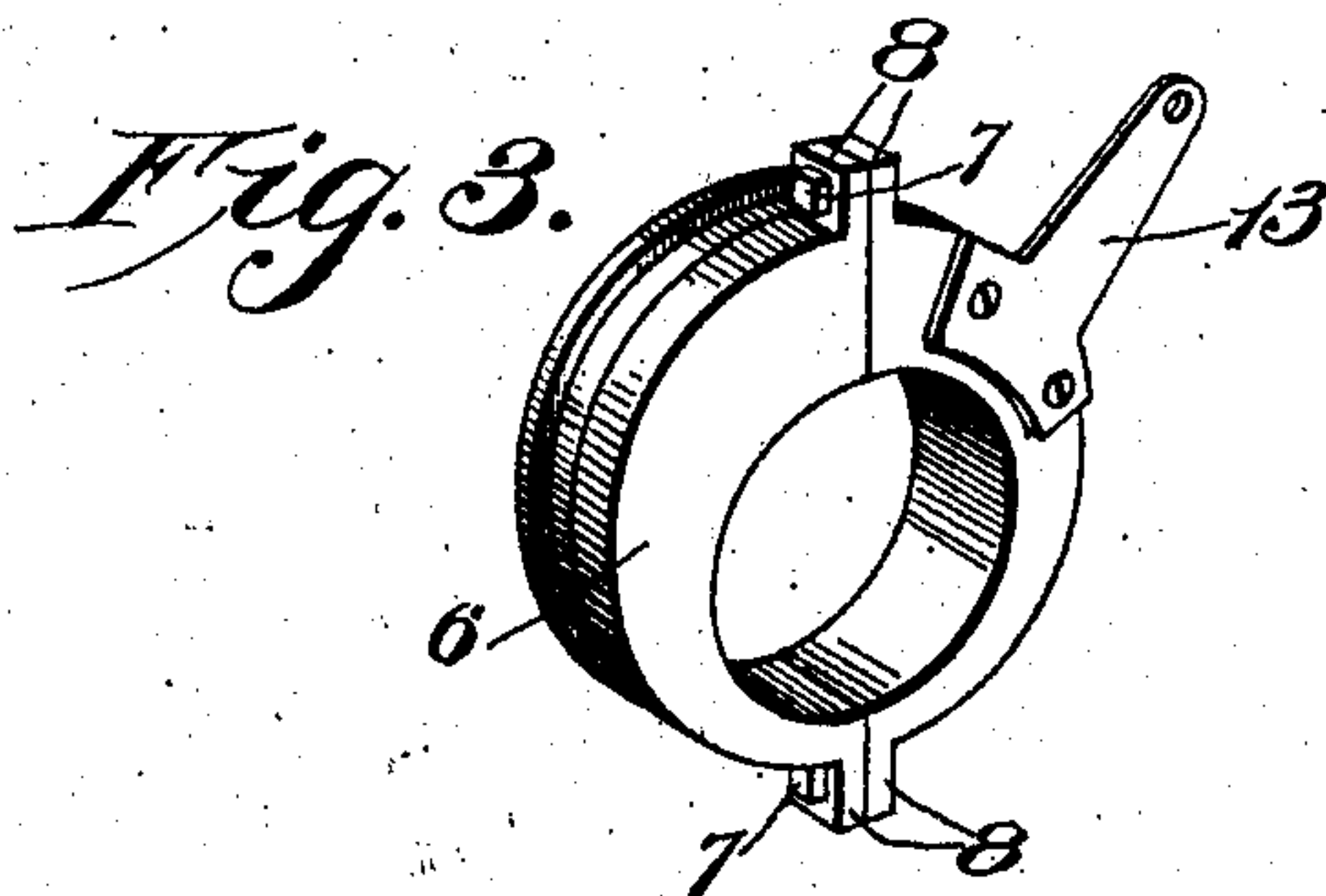
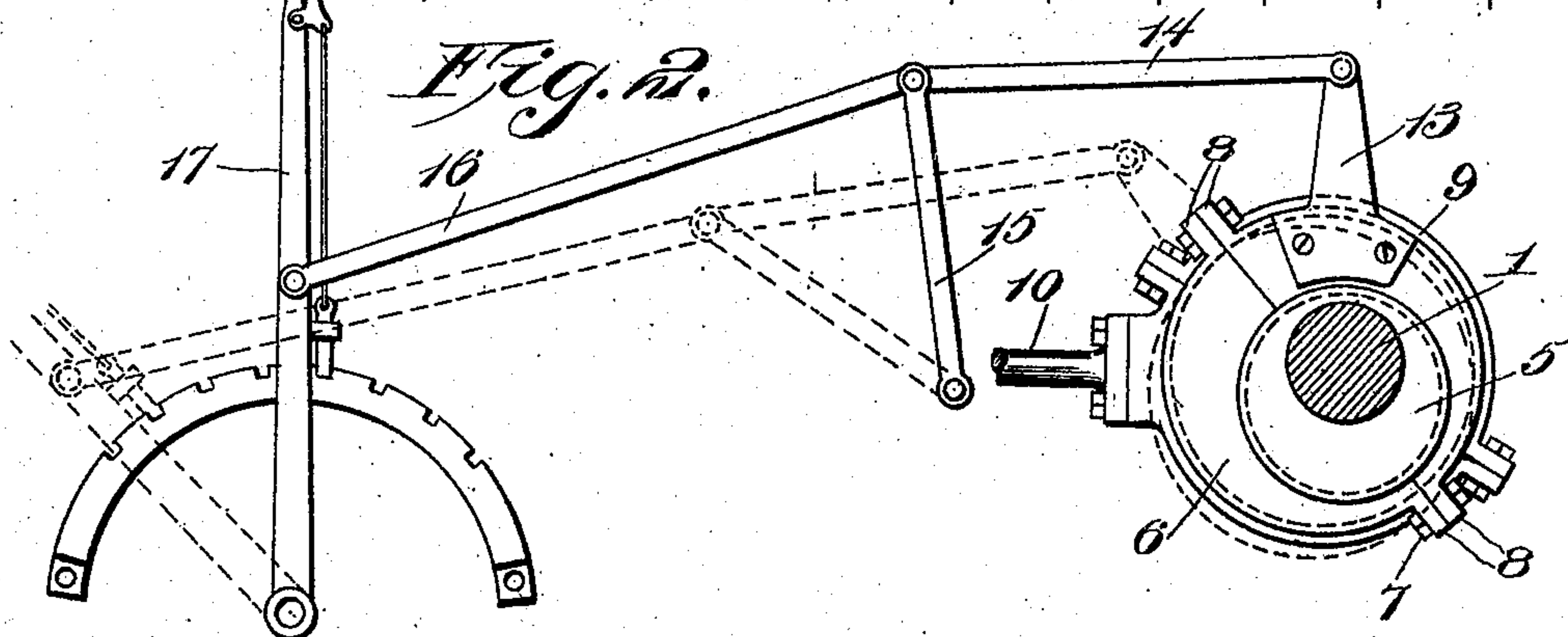
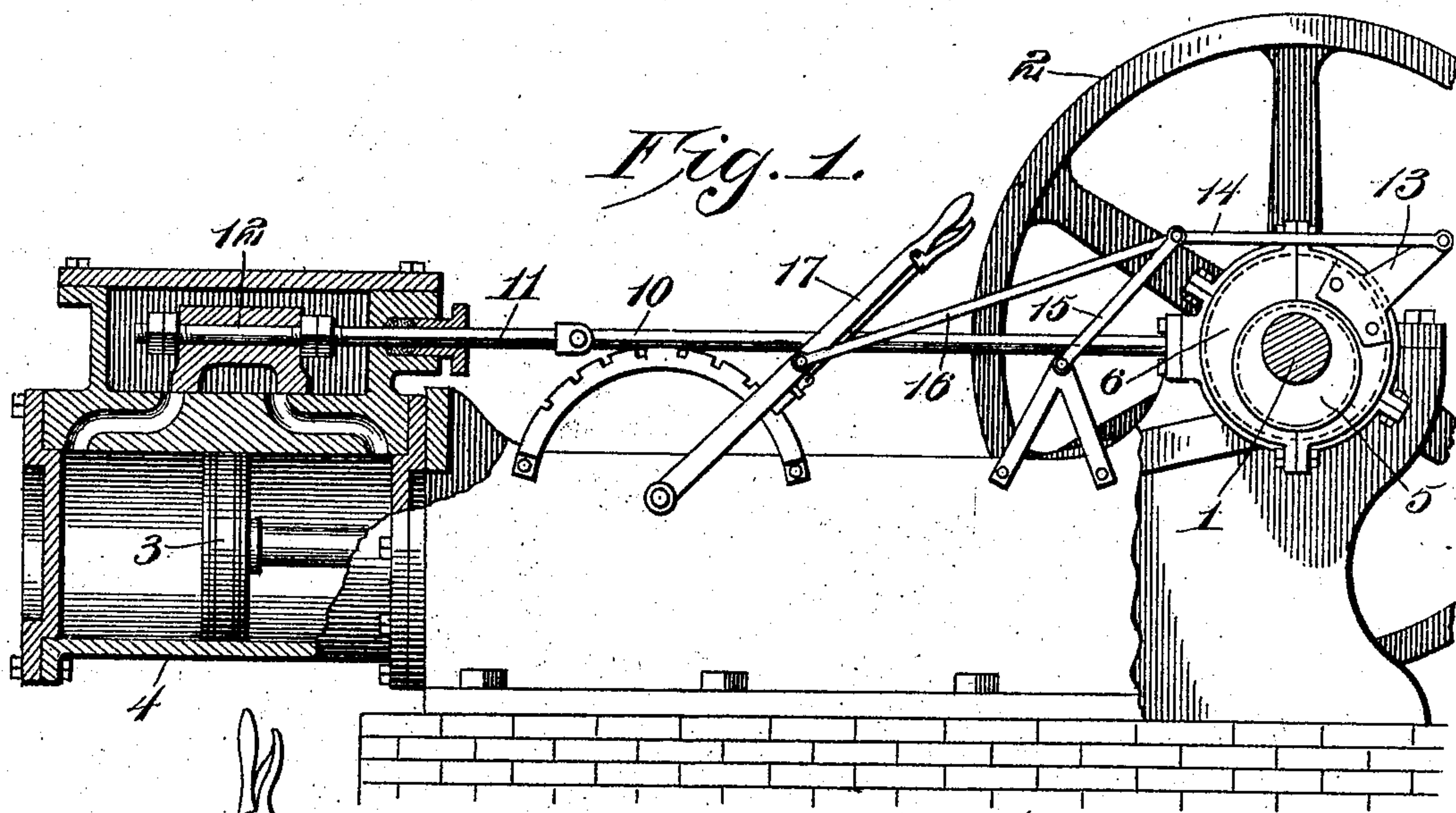


No. 806,138.

PATENTED DEC. 5, 1905.

W. P. HASKITT.
VALVE GEAR.
APPLICATION FILED MAR. 21, 1905.



Witnesses

Louis D. Heinrichs
Herbert D. Lawson

Inventor
William P. Haskitt

By W. J. Fitzgerald & Co.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM P. HASKITT, OF GWYNNEVILLE, INDIANA.

VALVE-GEAR.

No. 806,138.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed March 21, 1905. Serial No. 251,294.

To all whom it may concern:

Be it known that I, WILLIAM P. HASKITT, a citizen of the United States, residing at Gwynneville, in the county of Shelby and State of Indiana, have invented certain new and useful Improvements in Valve-Gear for Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to valve-gear for engines, and more particularly to mechanism for reversing the valve.

The object of the invention is to provide a simple connection between the valve-rod and its operating-eccentric whereby the valve may be shifted backward or forward without first interfering with the operation of the engine.

With the above and other objects in view the invention consists of a power-shaft having an eccentric thereon, which is surrounded by and adapted to actuate an eccentric-ring, which in turn is surrounded by an eccentric-strap connected in the usual manner to the slide-valve of an engine. By shifting the eccentric-ring the relation between the strap and its operating-eccentric can be changed, thereby imparting movement to the slide-valve, so as to reverse the engine during the operation thereof.

The invention also consists of the further novel constructions and combinations of parts hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a view, partly in elevation and partly in section, of an engine having my improved valve-gear thereon. Fig. 2 is an elevation showing the eccentric and its operating mechanism detached from the engine, the eccentric-ring being illustrated in a different position from that shown in Fig. 1. This figure also shows in dotted lines another position to which the eccentric-ring may be adjusted. Fig. 3 is a detail view of the eccentric-ring.

Referring to the figures by numerals of reference, 1 is a power-shaft having a fly-wheel 2, such as is ordinarily employed, and this shaft is adapted to be propelled in the usual manner by a piston 3, located in the engine-cylinder 4. An eccentric 5 is secured

to and rotates with the shaft 1, and inclosing this eccentric and slidably mounted upon it is an eccentric-ring 6, preferably formed of sections, which are held together upon opposite sides of the eccentric 5 by means of bolts or screws 7, extending through ears integral with the sections of the ring. The periphery of this eccentric-ring is grooved to form a guide-way for a strap 9, which is secured in any preferred manner around the ring 6, and is fastened to one end of a rod 10, which in turn is pivoted to a rod 11, extending from the slide-valve 12 of the engine. An arm 13 is rigidly secured to ring 6 and pivoted to a link 14, which in turn is pivoted to one end of a pivoted supporting-bar 15. A rod 16 is also pivoted to this bar 15 and to an operating-lever 17, having means for securing it in any position to which it may be adjusted.

It will be understood that by shifting lever 17 upon its fulcrum the widest portion of ring 6 may be moved into position between the strap 9 and any portion of the periphery of eccentric 5. In other words, this portion of the ring can be shifted into any desired relation to the horizontal plane extending through shaft 1. It will be understood that when the ring is in the position shown in Fig. 2 the distance between shaft 1 and the sliding valve 12 is greater than when the ring 6 is in the position shown in Fig. 1. If therefore the engine is operating while the parts are in the positions shown in the first figure and it is desired to quickly reverse the engine, it is merely necessary to rotate ring 6 by means of lever 17 until the widest portion thereof is brought into or adjacent the plane extending from shaft 1 through the pivot of rod 11. The distance between said pivot and the shaft is therefore increased, and the sliding valve is caused to shift independently of any movement which may be transmitted thereto through the ordinary operation of the eccentric, and this movement will be sufficient to cause the reversal of the operation of the engine.

It will be seen that the device is very simple and durable in construction and dispenses with numerous and intricate parts which are liable to break or otherwise get out of order.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the

advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus fully described my invention, 5 what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with an engine having a slide-valve; of a rotatable eccentric, a strap surrounding the eccentric and connected to 10 the slide-valve, a ring of varying width interposed between the eccentric and the strap, means for manually rotating said ring independently of the movement of the eccentric and strap, and means for locking the ring in 15 adjusted position.

2. The combination with an engine having a slide-valve; of means for reversing said engine comprising a rotatable eccentric, a strap surrounding the eccentric and connected to the 20 slide-valve, a ring of varying width interposed between the eccentric and the strap, and means

for manually rotating said ring independently of the movement of the eccentric and strap for shifting the valve to reverse the engine.

3. The combination with an engine having 25 a slide-valve; of means for reversing said engine comprising a rotatable eccentric, the strap surrounding the eccentric and connected to the slide-valve, a ring of varying width interposed between the eccentric and the strap, an 30 arm extending from the ring, an operating-lever, connecting devices secured to the arm and lever, and means for locking the lever in any position to which it may be adjusted.

In testimony whereof I have signed my name 35 to this specification in the presence of two subscribing witnesses.

WILLIAM P. HASKITT.

Witnesses:

W. W. WILCOXON,
D. H. WILCOXON.