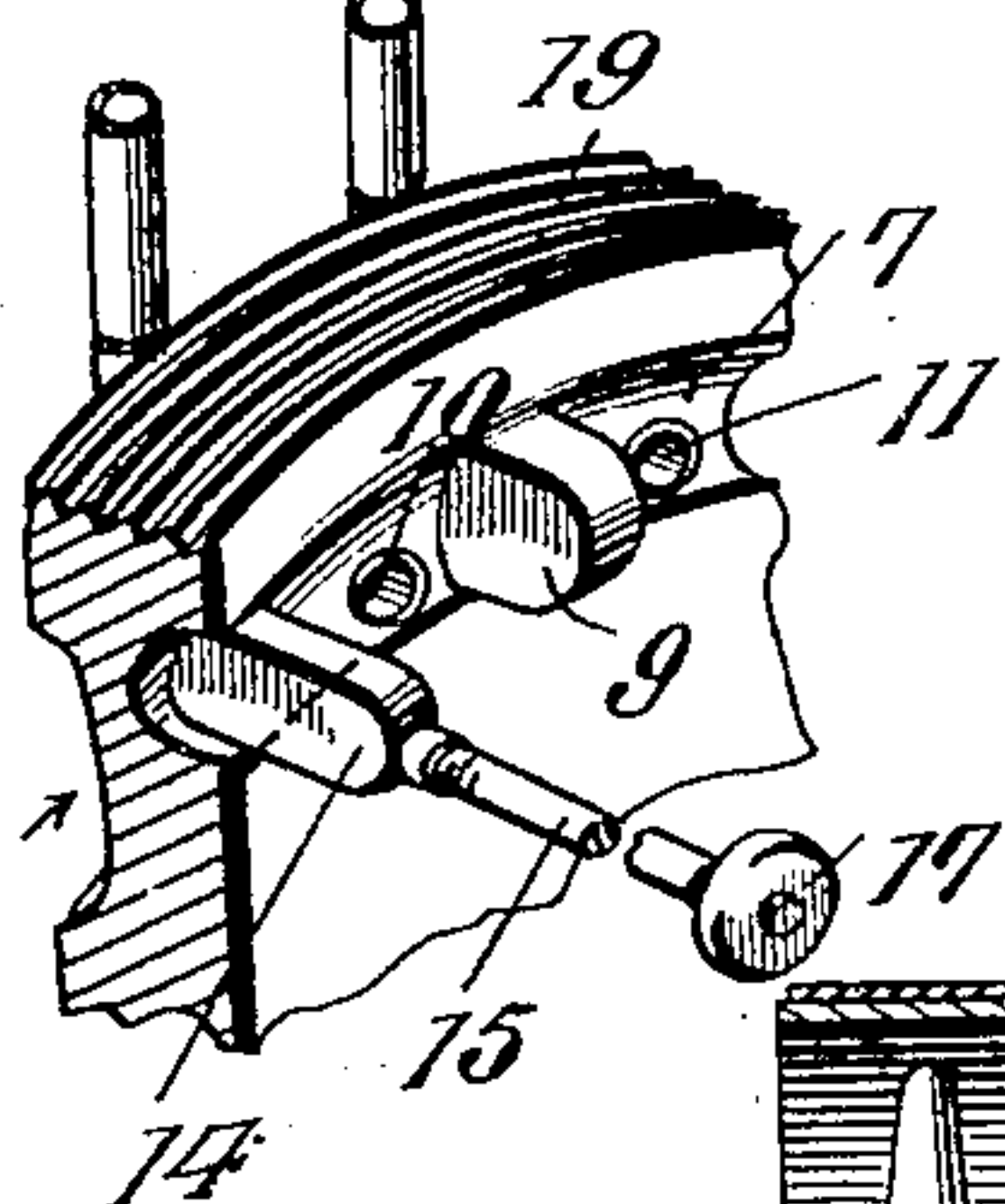
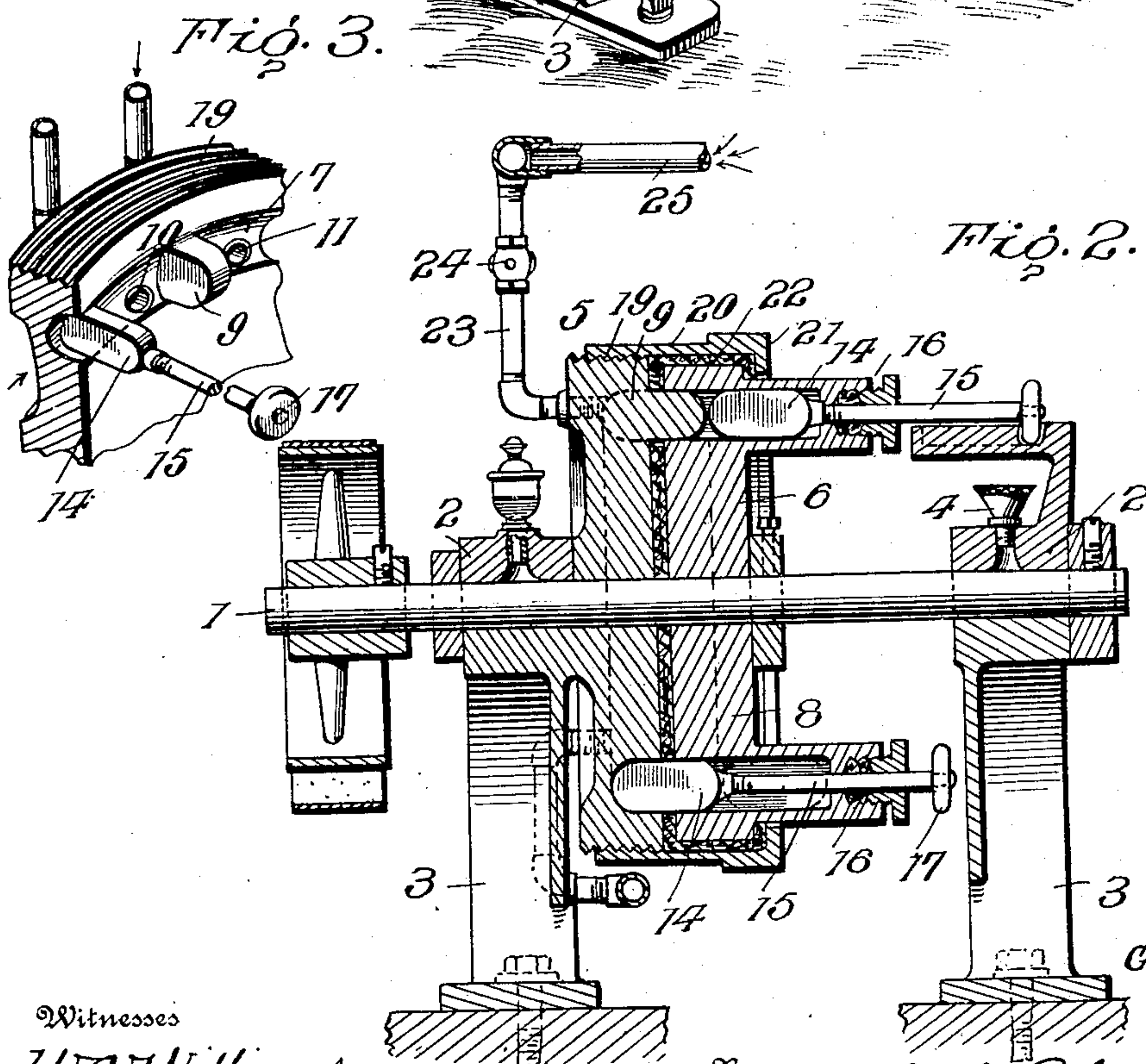
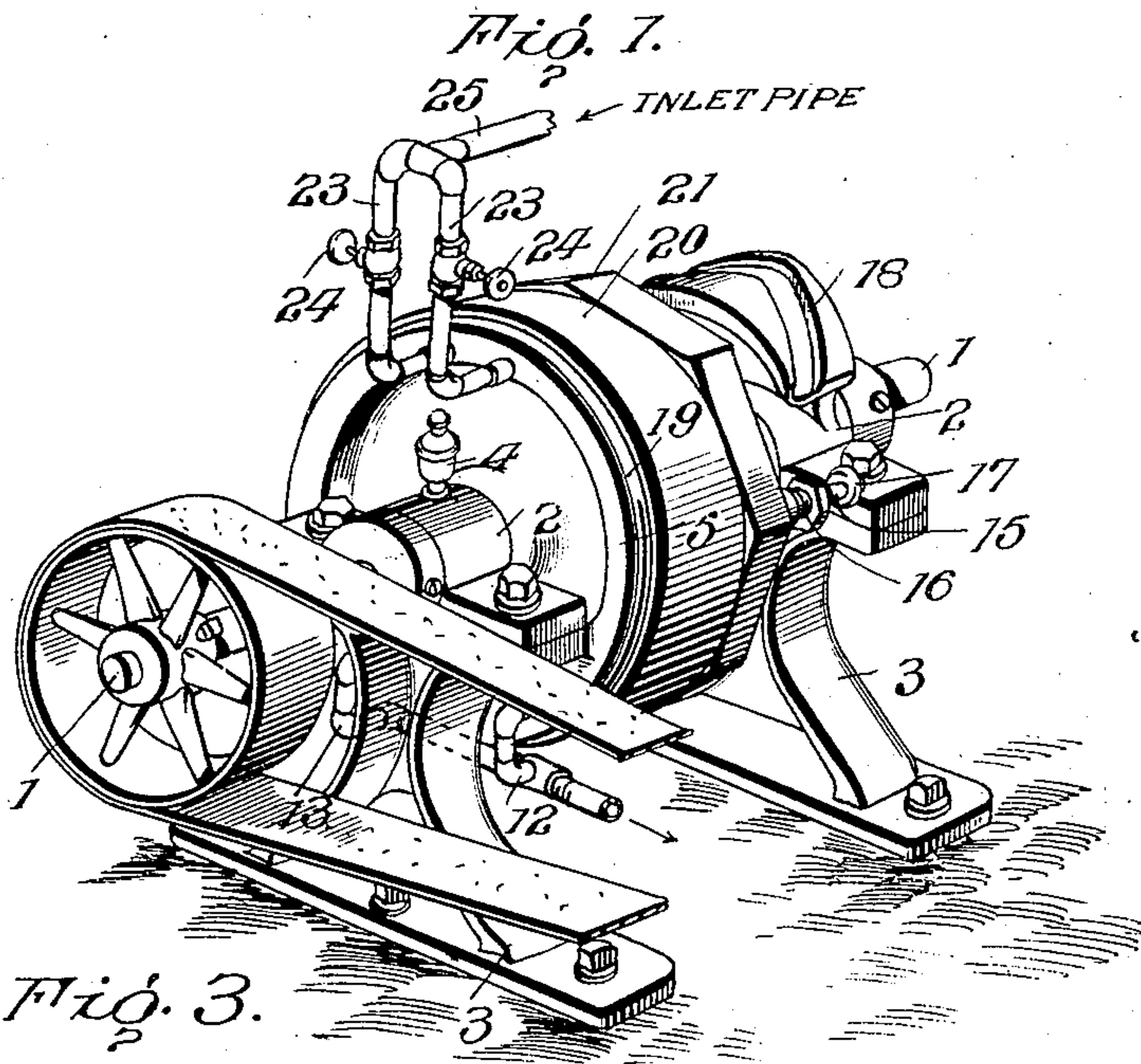


No. 859,158.

PATENTED JULY 2, 1907.

G. J. WEDELL.
ROTARY ENGINE.

APPLICATION FILED JUNE 8, 1906.



Witnesses
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By

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UNITED STATES PATENT OFFICE.

GEORGE J. WEDELL, OF OGDEN, UTAH.

ROTARY ENGINE.

No. 859,158.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed June 8, 1906. Serial No. 320,727.

To all whom it may concern:

Be it known that I, GEORGE J. WEDELL, a citizen of the United States, residing at Ogden, in the county of Weber and State of Utah, have invented a new and useful Rotary Engine, of which the following is a specification.

This invention relates to rotary engines.

The principal object is to provide a machine of this type simple in construction and mode of operation and of high efficiency and which shall be economical in respect to installation and maintenance.

To these and other ends hereinafter stated, the invention consists in the rotary engine, and in the novel construction, arrangement and combination of the component parts thereof as will be defined in the claims hereto appended.

The nature, characteristic features and scope of the invention will be more readily understood upon reference to the following description taken in connection with the accompanying drawing, forming a part hereof, wherein

Figure 1, is a perspective view of a rotary engine embodying features of my invention. Fig. 2, is a view principally in central vertical section; and Fig. 3, is a detail showing the inlet part of the cylinder.

Referring to the drawing, 1, is the engine shaft supported in suitable bearings 2, borne upon the frames or standards 3. The bearings may be supplied with lubricant in any approved manner, for example by means of oil-cups 4.

Mounted upon the shaft 1, and intermediate the end standards are two co-axial circular disks 5 and 6, both of which are substantially solid, and whereof one is fixed to some suitable part of the framework of the engine and whereof the other is revoluble with the shaft.

The circular members or disks 5 and 6, are provided on their adjoining faces with annular grooves or channels 7 and 8, which register with one another and form a chamber or passage for the motive fluid. The stationary disk 5, is formed or provided with an abutment 9, that extends across the fluid chamber and divides the same into two sections or compartments, for, respectively, supplying and exhausting the motive fluid and effecting a reversal of the engine.

10, and 11, are the inlet ports located one on each side of the abutment and 12 and 13, are complementary exhaust pipes.

The rotary element or disk 6, is served with diametrically opposed pistons, valves, or slides 14, against which the steam or other motive fluid impacts to effect the rotation of said disk. The members 14, are shiftable in any suitable manner transversely of the fluid chamber in order to clean the abutment 9. This is exemplified

in the drawing, in which the rods 15, of the valves or pistons 14, extend through glands or stuffing boxes 16, and carry at their ends friction rollers 17. The arrangement is such that at the proper time the rollers 17, engage a cam groove 18, which operates to withdraw the parts or members 14, until they have cleared the abutment 9, and then replaces them.

In order to render the fluid chamber steam tight, the disk or element 5, is formed or provided on its periphery with screw threads 19, to accommodate a band or annulus 20, that overhangs the periphery of the rotating element or disk 6, and has a flange 21.

22, represents packing of any approved material, that is interposed between the disks and the annulus or band, and it will be understood that the engine may be kept steam-tight by advancing the annulus from time to time.

I have provided for reversing this engine in a facile and expeditious manner and this is accomplished by employing a separate branch pipe 23, for each inlet part, said branch pipes having valves 24, and connecting with a common supply pipe 25.

While this machine is primarily intended for use as a rotary engine, it is manifestly also useful as a pump.

It will be obvious to those skilled in the art to which the invention appertains that modifications may be made in detail without departing from the spirit and scope of same, hence I do not limit myself to the precise arrangement and construction of parts hereinabove described, but

Having described the nature and objects of the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A rotary engine comprising a main shaft, two co-axial disks whereof one is stationary and whereof the other revolves with said shaft an annulus or band secured to the stationary disk and overhanging the periphery of the other, said disks forming between them a chamber for the motive fluid, an abutment on said stationary disk extending across the fluid chamber, valves or pistons carried by the revoluble disk and arranged to clear the abutment, suitable supply and exhaust connections, and means for effecting a reversal of the engine.

2. In a rotary engine, the combination with two co-axial circular disks forming between them a chamber for the motive fluid, and whereof one is rotatable in respect to the other, of an annulus or band secured to the stationary disk and overhanging the periphery of the other, and packing interposed between said annulus and the revoluble disk.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEORGE J. WEDELL.

Witnesses:

J. D. YOAKLEY,

JAS. A. RICHMOND.