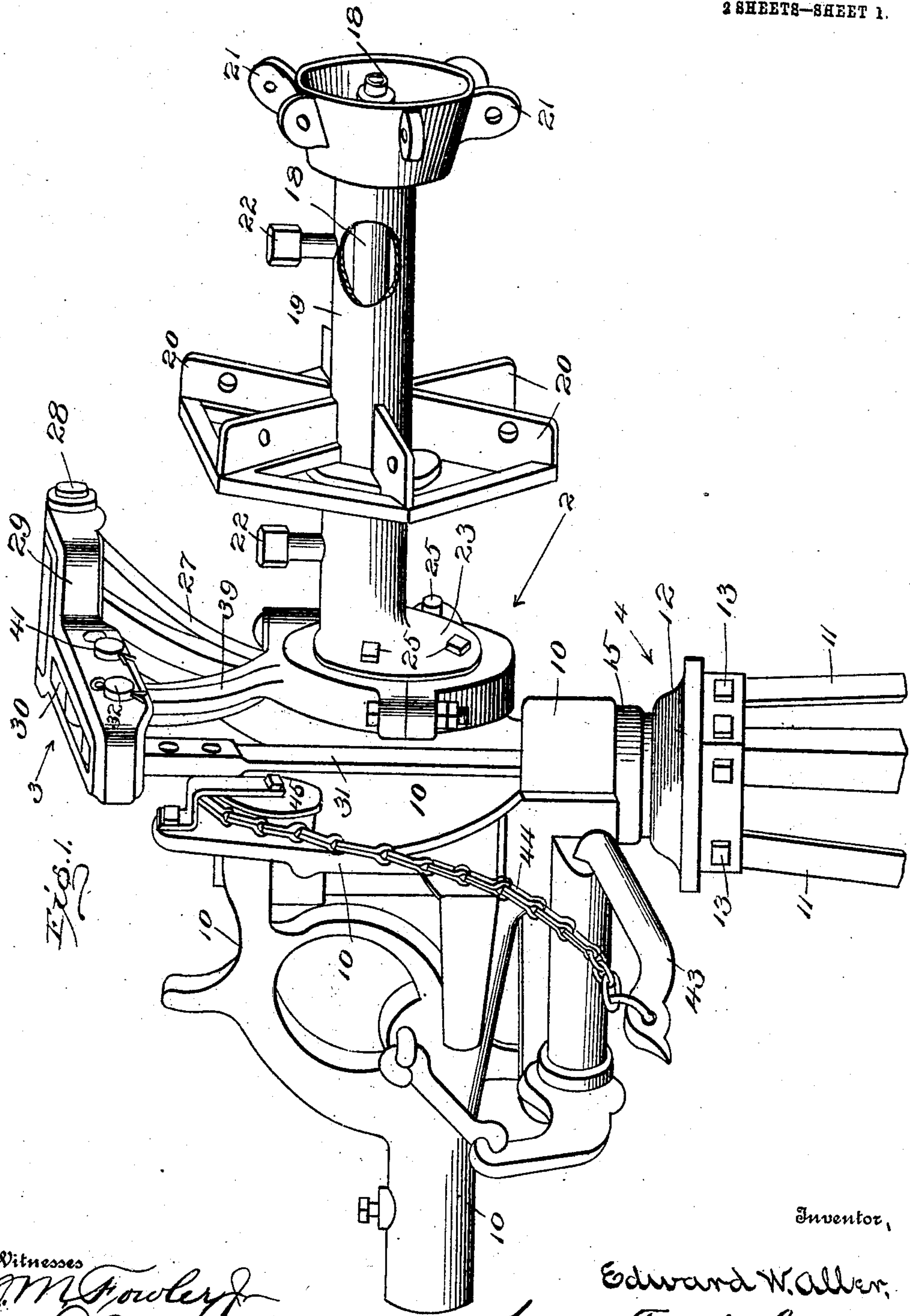


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WIND ENGINE.
APPLICATION FILED SEPT. 10, 1908.

Patented Apr. 13, 1909.
2 SHEETS—SHEET 1.



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Fig. 2.

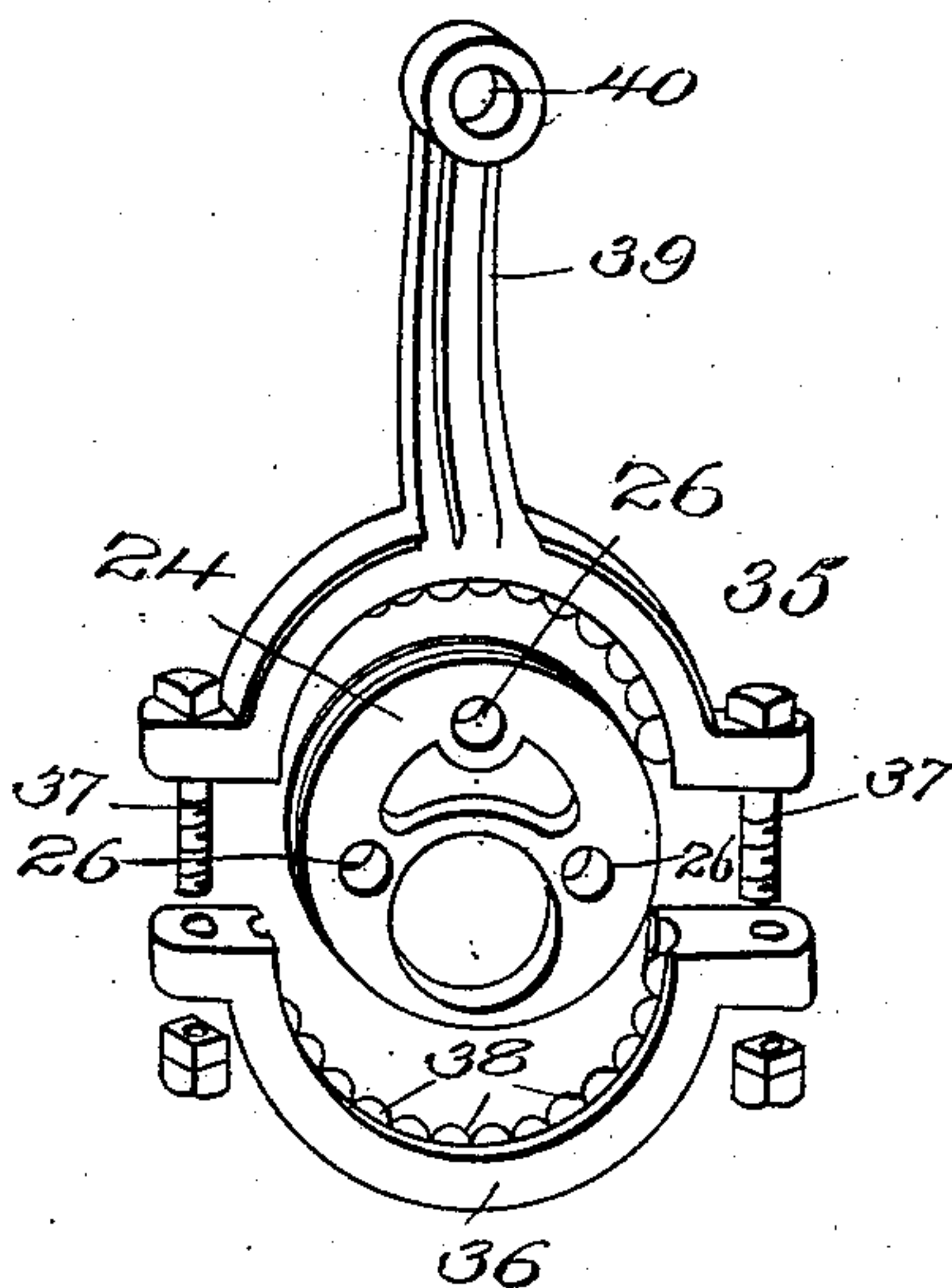


Fig. 3.

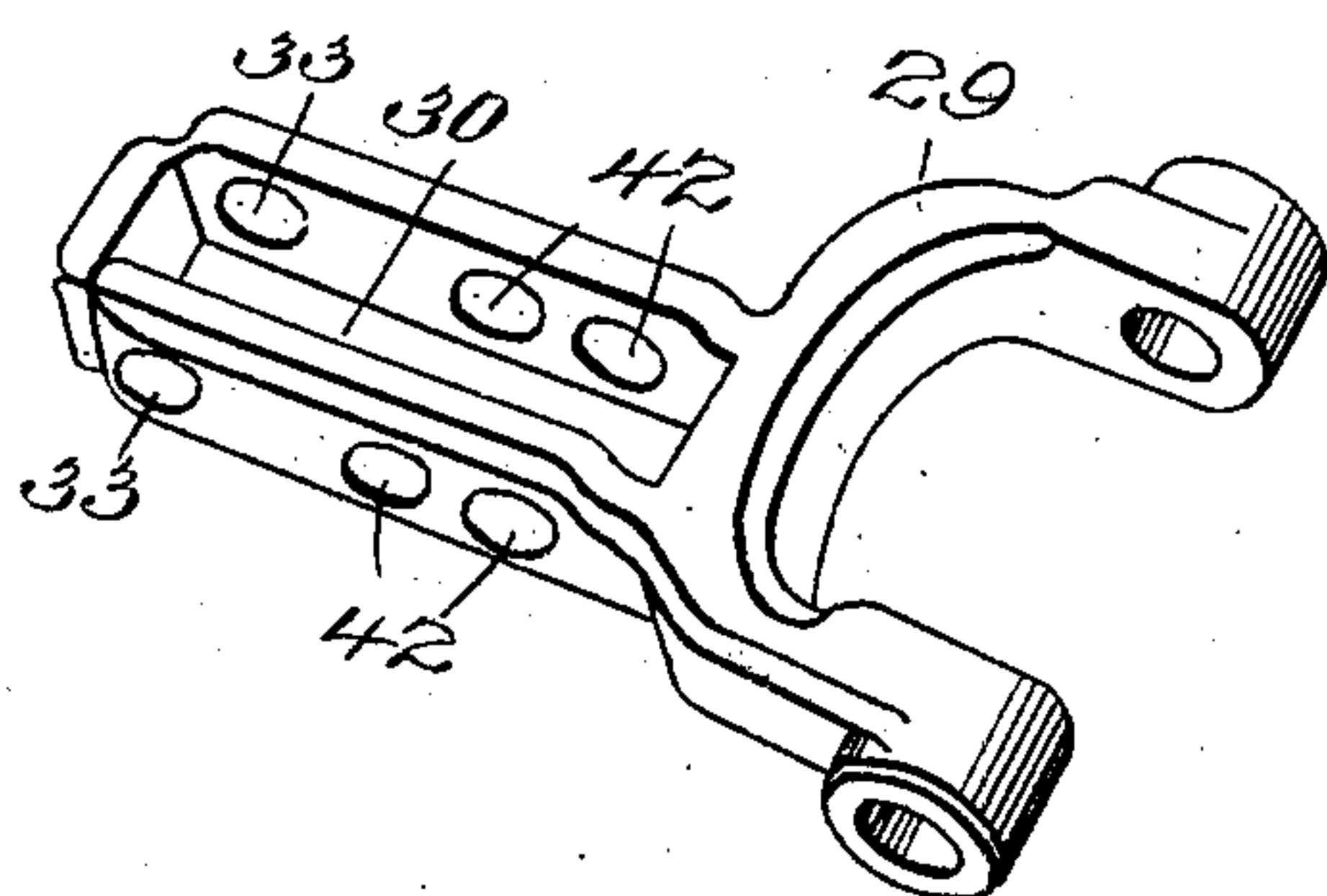
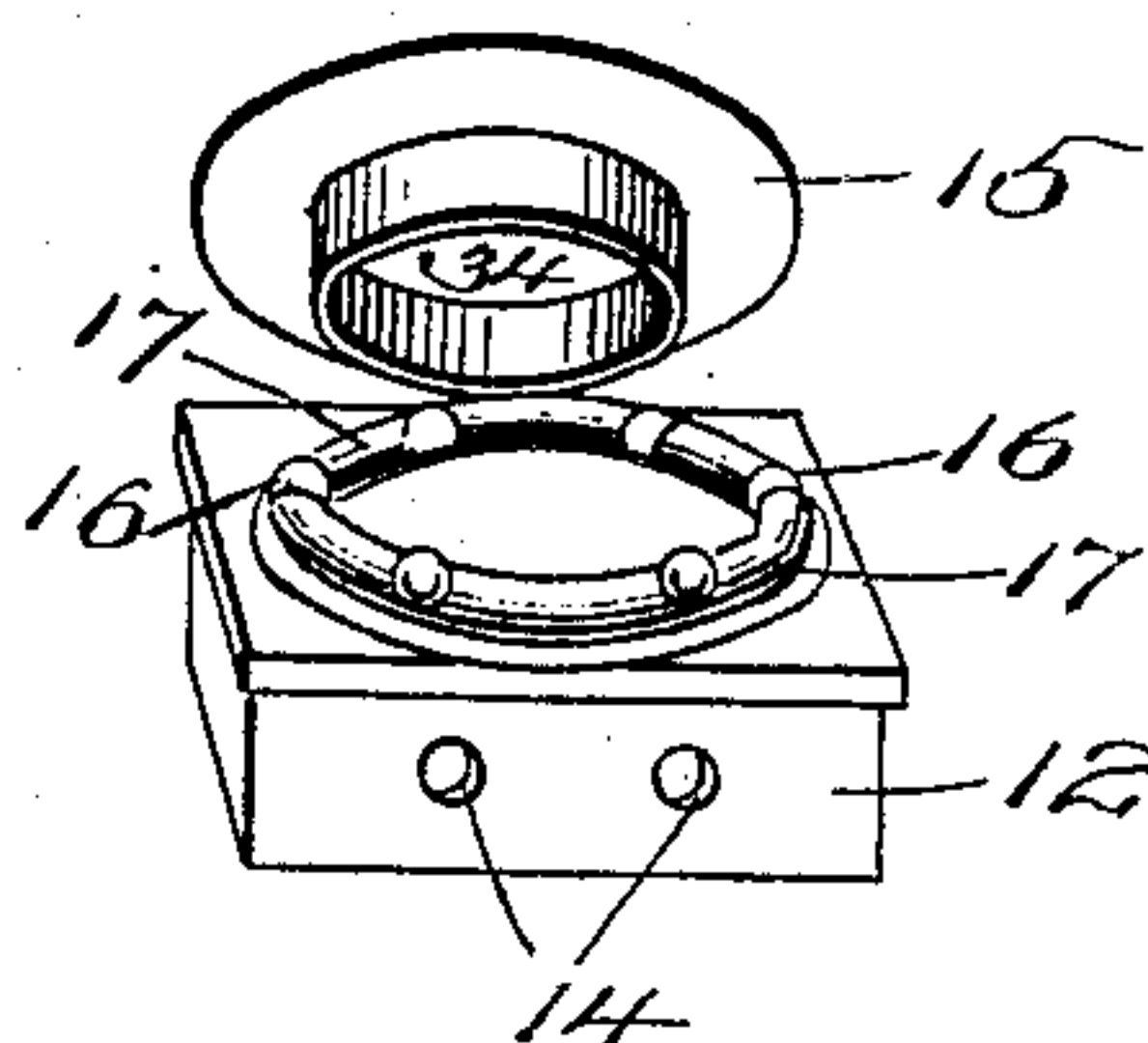


Fig. 4.



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UNITED STATES PATENT OFFICE.

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WIND-ENGINE.

No. 918,252.

Specification of Letters Patent.

Patented April 13, 1909.

Application filed September 10, 1908. Serial No. 452,381.

To all whom it may concern:

Be it known that I, EDWARD W. ALLER, citizen of the United States, residing at Napoleon, in the county of Henry and State of Ohio, have invented certain new and useful Improvements in Wind-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.

This invention relates to wind engines and has for an object to provide new and improved parts and new and improved combinations of parts for producing new and improved effects and functions.

A further object of the invention is to provide a frame work adapted to carry the moving parts of the wind engine and with an improved rigidly connected stud upon which the rotating part of the wind engine moves.

A further object of the invention is to provide an eccentric, carried by the rotating parts of the wind engine and connected in an improved manner with the piston rod of the pump.

A further object of the invention is to provide an improved form of lever connecting the eccentric and piston rod.

A further object of the invention is to provide a turn table of improved form upon which the mechanism is mounted and adapted to turn under the action of veering winds.

With these and other objects in view, the invention comprises certain novel constructions, combinations and arrangement of parts as will hereinafter be fully described and claimed.

In the drawings, Figure 1, is a perspective view of the wind engine head and operating parts. Fig. 2, is a perspective view of the eccentric seen at arrow 2, in Fig. 1, and shown with the strap disassociated from the eccentric member. Fig. 3, is a perspective view of the lever, connecting the eccentric and piston rod and fulcrumed upon the frame work of the head and seen at arrow 3, of Fig. 1. Fig. 4, is a perspective view of the turn-table members separated, such members appearing at arrow 4, of Fig. 1.

Like characters of reference designate similar parts throughout the several views.

The improved wind engine forming the subject matter of this application, comprises

a frame 10, preferably cast integral and mounted upon a tower, represented by the side pieces 11, by means of a head or turn table shown at Fig. 4, and comprising the base 12 secured to the tower in any approved manner as by the bolts 13, through the openings 14 and a co-acting member 15 rotatably mounted upon the base 12.

Between the base 12 and the upper member 15 a ball race is provided in which the balls 16 are adapted to rotate spaced by the spacers 17. The frame 10 is provided with a shaft 18, rigidly connected therewith and upon such shaft a sleeve 19 is journaled, provided with means as blades 20 and ears 21 for securing to such sleeves the vanes of the wind engine. It may be noted from Fig. 1, that the sleeve 19 is internally larger than the shaft 18, providing a receptacle for a lubricant, which lubricant is inserted through ordinary oil valves or inlets shown conventionally, 22. The sleeve 19 is also provided with an eccentric disk 23, which is secured to the eccentric 24 in any approved manner as by the bolts 25, through the openings 26 of such eccentric 24, such openings being shown in Fig. 2 and the bolts being seen in Fig. 1.

Integral with the frame 10 is an arm 27, having at its upper end, means for accommodating a pivot bolt 28 and upon such pivot bolt 28 is fulcrumed a lever 29, shown in perspective Fig. 3, provided with a slot 30. A piston rod 31, is pivotally connected with the outer end of such lever 29 by means of a pivot pin 32, extending through openings 33, seen at Fig. 3. The piston rod 31, is adapted to reciprocate through the opening 34, within the upper member of the turn table, seen in perspective in Fig. 4.

About the eccentric 24 an eccentric strap is employed comprising the parts 35 and 36 secured together in any approved manner as by the bolts 37, and the section of such strap as well as the periphery of the eccentric 24 are provided with grooves forming ball races in which balls 38 are mounted, such balls being seen in Fig. 2, where the strap members are separated. The upper strap member 35, is provided with an arm 39 extending upwardly and provided at its upper end with a pivot opening 40, adapted to receive a pivot pin 41 inserted through either of the pivot openings 42, such openings being specially seen in Fig. 3.

Especial emphasis is laid on the connec-

tion between the rotating sleeve and the eccentric, also on the form of the lever 29 and the means of connecting such lever with the eccentric and with the piston rod as well as
 5 on the rigidly connected shaft 18, and the sleeve 19, rotatable thereon and provided with means for retaining a lubricant within such rotating sleeve.

Pivoted to the frame 10 is a lever 43 connected by means of a link with a portion of the frame adapted to swing in a horizontal plane and by which a vane or tail is carried. The lever 43 is controlled by means of a chain 44 passing over a pulley 45 and
 15 connected with any approved means extending downwardly within the tower 11 and in position to be manipulated.

From the above and foregoing description of the construction, arrangement and association of the parts, it is believed that the operation and function of the device, both as to its elements and as to combinations, will be fully and clearly understood without a description of such operation.

25 I claim:

1. In a wind engine, a rotatably mounted frame, a horizontally disposed spindle rigid with the frame, a sleeve rotatably embracing the spindle, means adjacent the extremity of the spindle to retain the sleeve in position, said sleeve having an internal bore intermediate its ends larger than the spindle, providing a lubricant receptacle, means to introduce lubricant into the receptacle,
 30 and means to attach vanes to the sleeve at points spaced longitudinally of the sleeve.

2. In a wind engine, a frame rotatably mounted, a spindle horizontally disposed and rigidly connected with the frame, a sleeve embracing the spindle, means carried
 40 by the sleeve adapted to engage the vanes of the wind engine at points spaced longitudinally of such sleeve, a disk formed integrally with one end of the sleeve and eccentric thereto, an eccentric removably secured
 45 to the disk integral with the sleeve, an eccentric strap embracing the eccentric, a reciprocating pump rod, and means connecting the eccentric strap with the pump rod.

3. In a wind engine, a frame rotatably mounted, a spindle horizontally disposed and rigidly connected with the frame, a sleeve embracing the spindle and having an internal bore larger than the spindle intermediate its ends, means at the extremity of
 50 the spindle adapted to maintain the sleeve in position, means whereby vanes may be attached to the sleeve at points spaced longitudinally thereof, an eccentric disk formed integral with the sleeve, an eccentric removably secured to the integral disk, an eccentric strap embracing the eccentric, a reciprocating pump rod, a lever fulcrumed upon the frame and pivoted to the pump rod, and means connecting the eccentric strap with
 65 the lever.

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

EDWARD W. ALLER.

Witnesses:

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