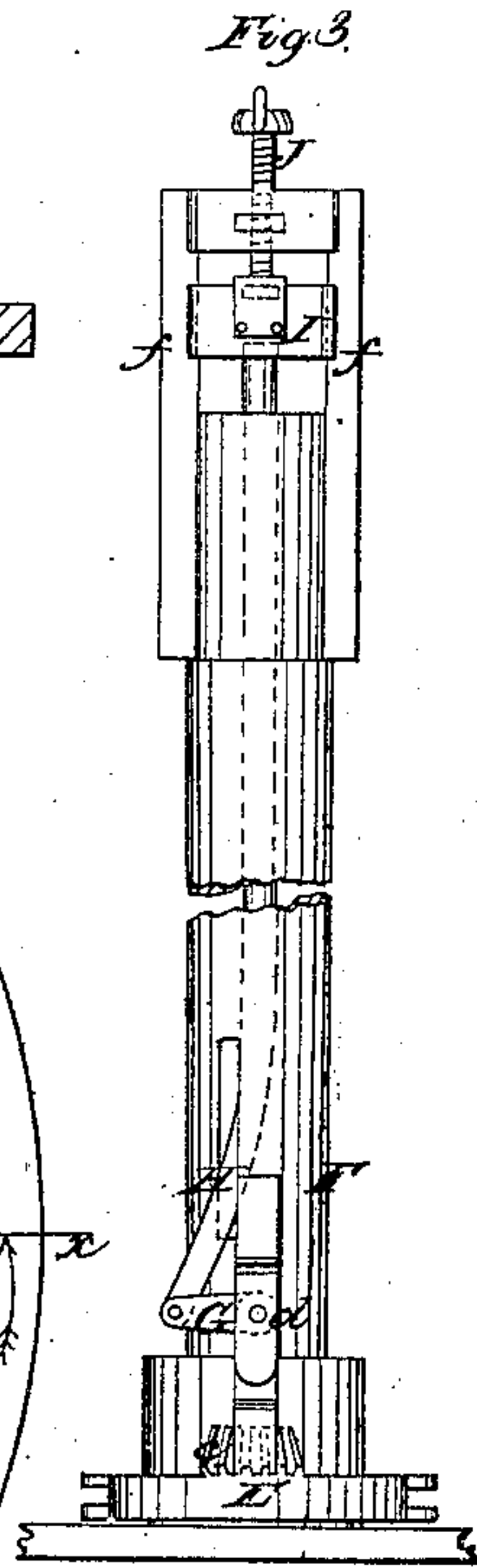
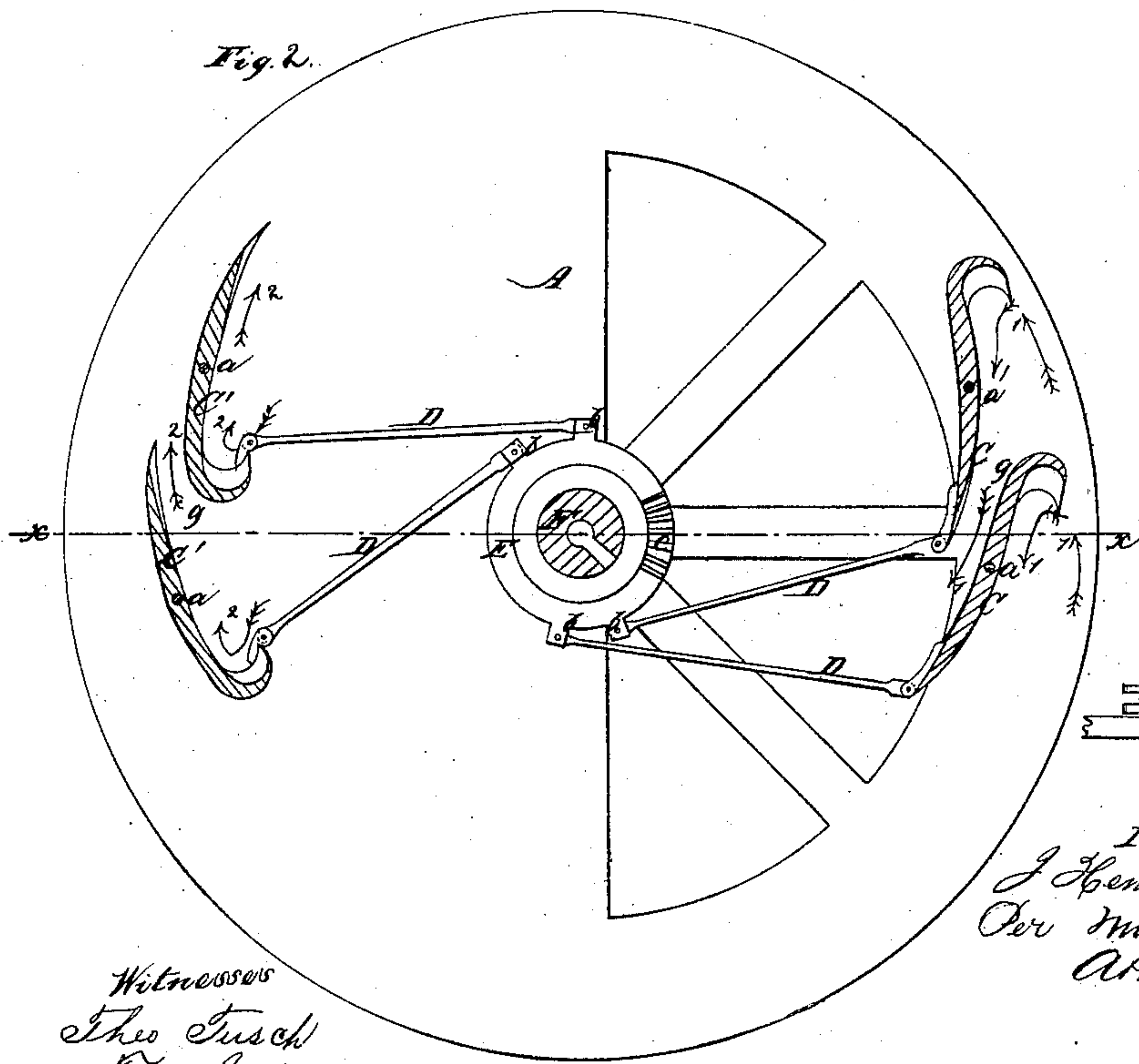
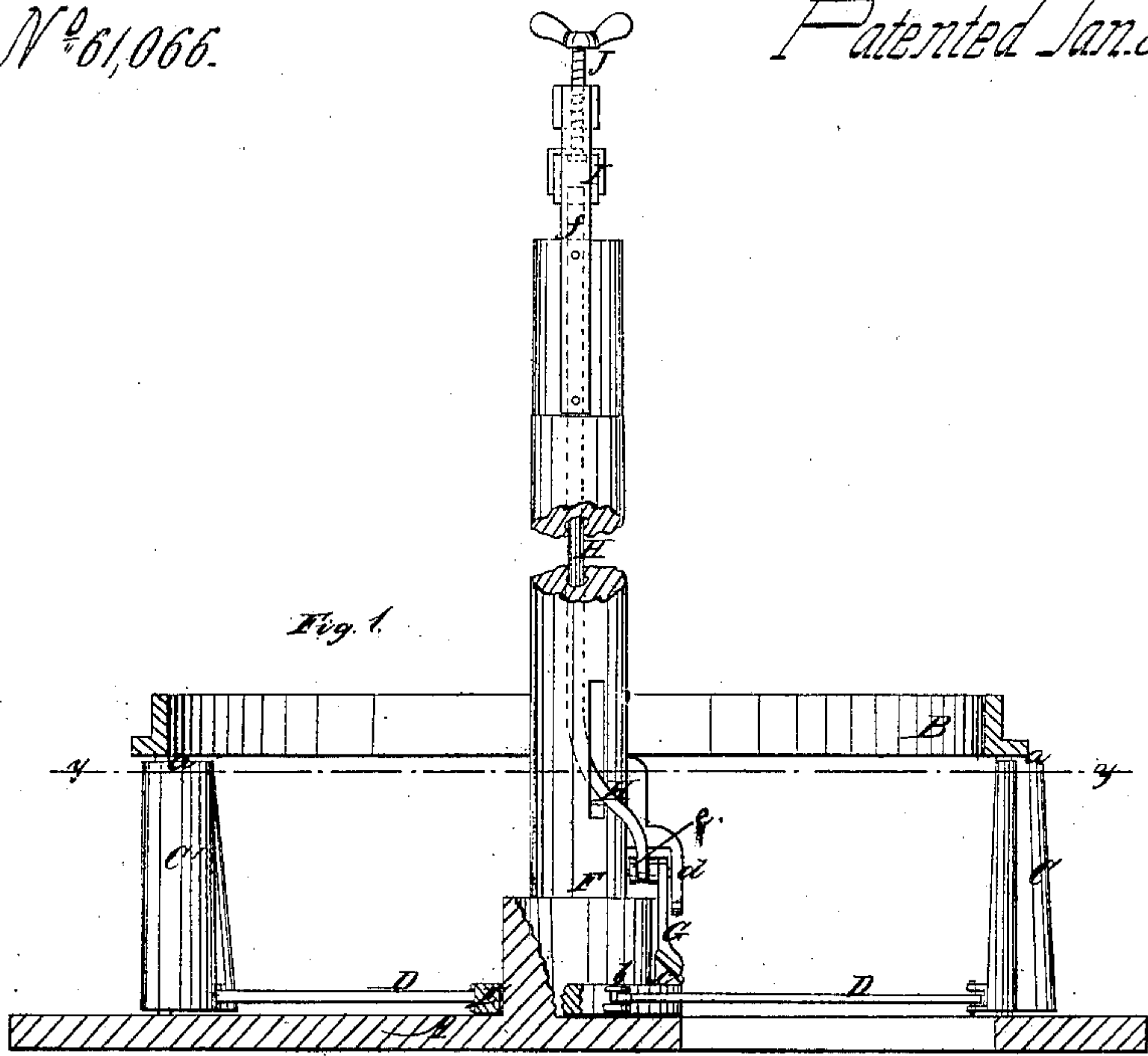


J. Hemenway, Water Wheel.

N^o 61,066.

Patented Jan. 8, 1867.



*Witnesses
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JASON HEMENWAY, OF DEERFIELD, MICHIGAN.

Letters Patent No. 61,066, dated January 8, 1867.

IMPROVEMENT IN WATER-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JASON HEMENWAY, of Deerfield, in the county of Lenawee, and State of Michigan, have invented a new and improved Water-Wheel; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical central section of my invention taken in the line *x x*, fig. 2.

Figure 2 is a horizontal section of the same taken in the line *y y*, fig. 1.

Figure 3 is a detached elevation of the wheel-shaft.

Similar letters of reference indicate like parts.

This invention relates to a new and useful improvement in horizontal water-wheels, and it consists in a novel application of the buckets, and a mode of adjusting the same, as hereinafter fully shown and described, whereby the capacity of the issues between the buckets may be varied as desired, and the wheel adapted to work, under the same velocity, with varying degrees of power commensurate with the quantity of water used.

A represents the lower part or bottom of the wheel, and B the upper part or rim. C C' are the buckets which are pivoted between the lower part and upper rim, as shown at *a*. These buckets have rods, D, attached to their inner ends, and the inner ends of the rods are connected by pivots, *b*, to a ring, E, which is fitted loosely on the shaft F of the wheel, and has a number of teeth, *c*, upon it, in which teeth at the lower end a bent lever, G, gears, said lever G being attached to the shaft F by a fulcrum-pin, *d*, and having its upper end connected by a pivot, *e*, with the lower end of a rod, H, which is fitted centrally in the shaft F, and has its upper end attached to a slide, I, which works between guides, *f f*, on the upper part of the wheel-shaft, as shown in fig. 3. This slide I is operated (raised and lowered) by means of a screw, J, and it will be seen that by turning this screw the rod H may be raised and lowered, the bent lever G attached, and the ring E turned so as to move or adjust the buckets C C', and regulate the capacity of the issues *g* as may be desired. This invention is applicable to either centre or external discharge-wheels. C represents buckets for a centre discharge, and C' the buckets for an external discharge-wheel, the arrows 1 representing the passage of the water in the former case, and the arrows 2 representing the passage of the water in the latter case. In a centre discharge-wheel a tub or scroll is required around the wheel, none being required in the external discharge. By these simple means the capacity of the wheel may be adapted to suit the amount of power that it is required to give out, and the wheel run to give out any power less its maximum without using any more than a proportionate amount of water.

I do not claim broadly a horizontal water-wheel provided with adjustable buckets, for they have been previously used; but I do claim as new, and desire to secure by Letters Patent—

The pivoted buckets C C', connected with the ring E, on the wheel-shaft F, by rods D, in combination with the bent lever G, rod H, and screw J, all arranged to operate in the manner substantially as and for the purpose herein set forth.

JASON HEMENWAY.

Witnesses:

W. E. BURTON,

AARON HEMENWAY.