

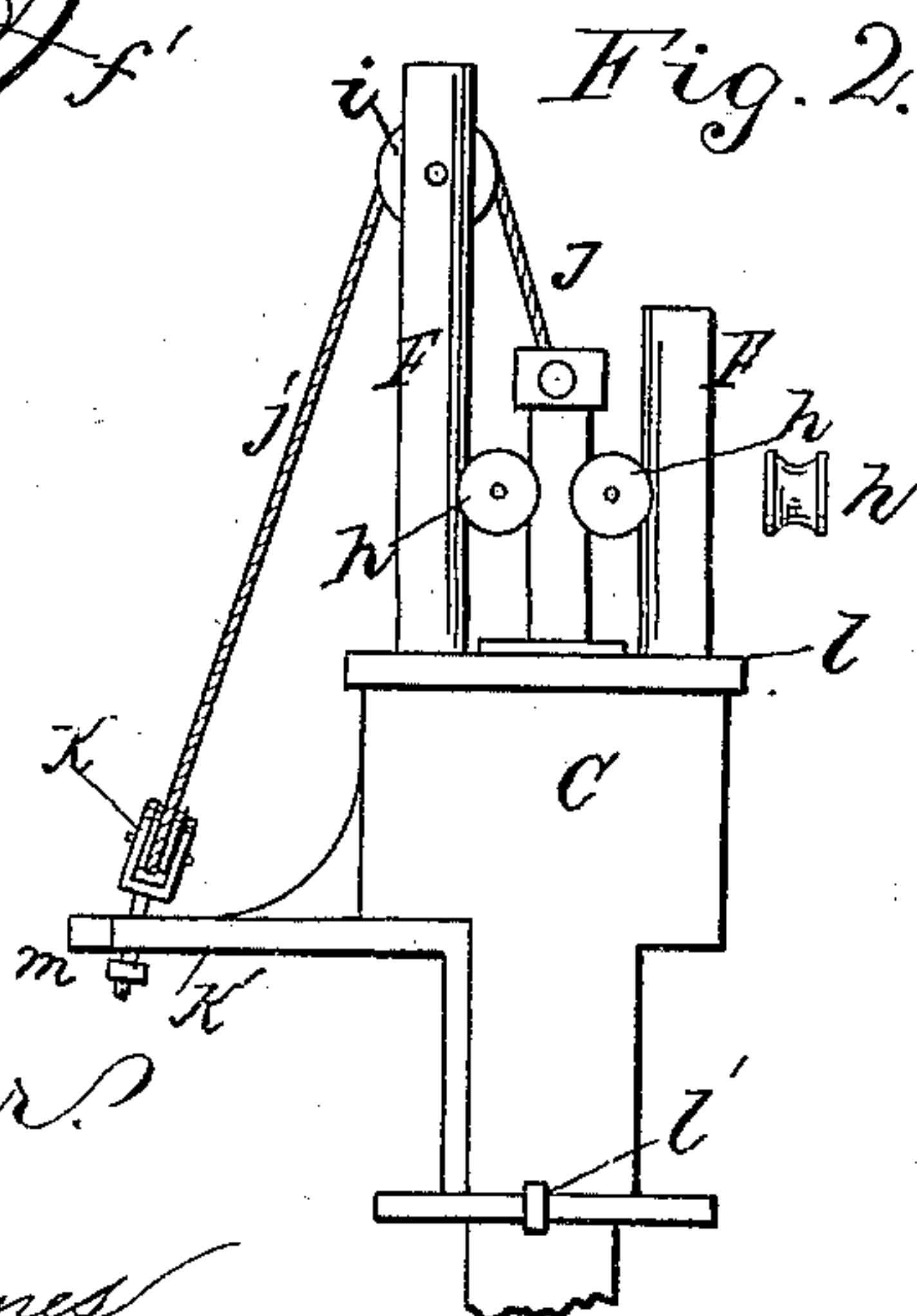
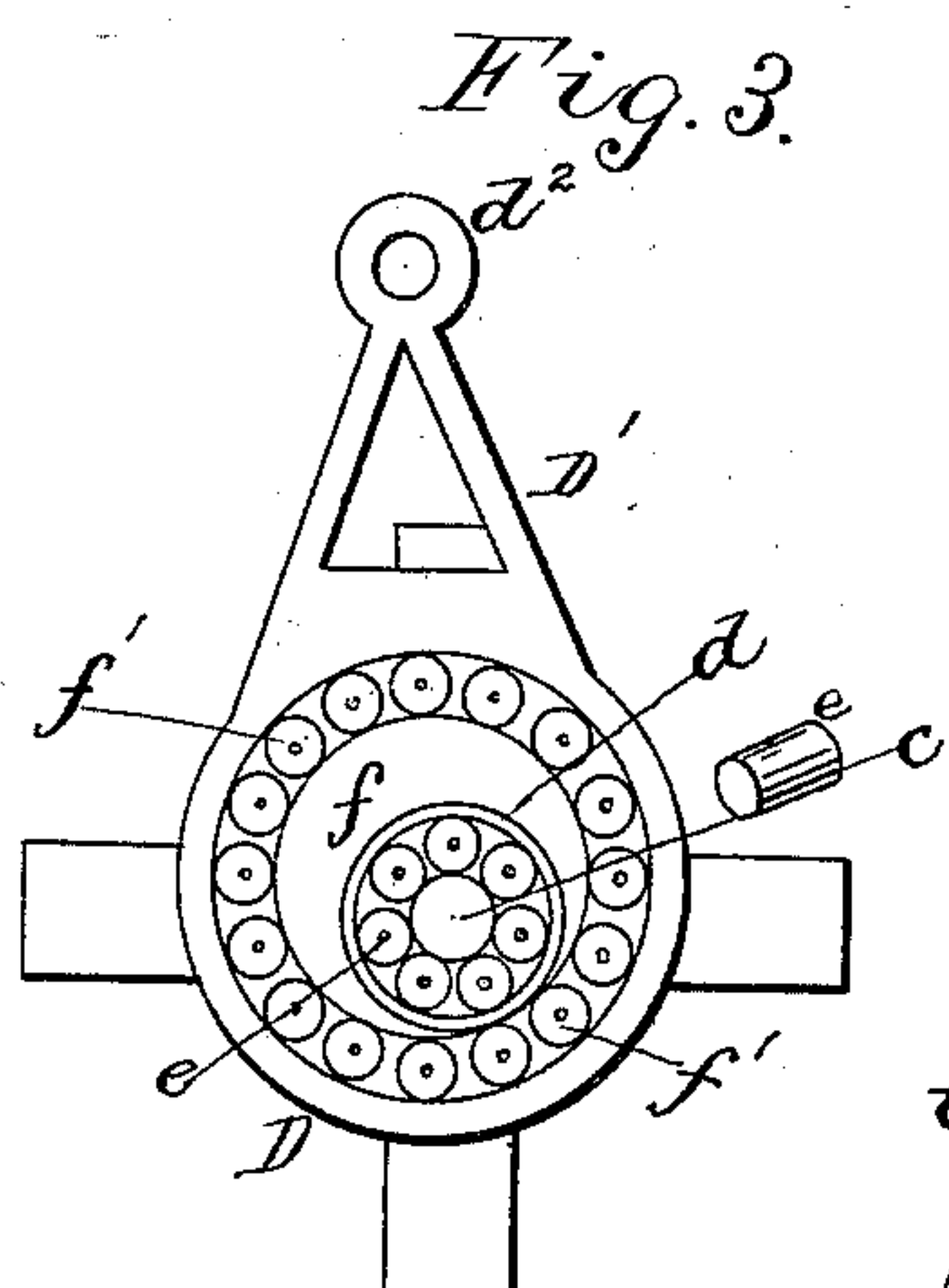
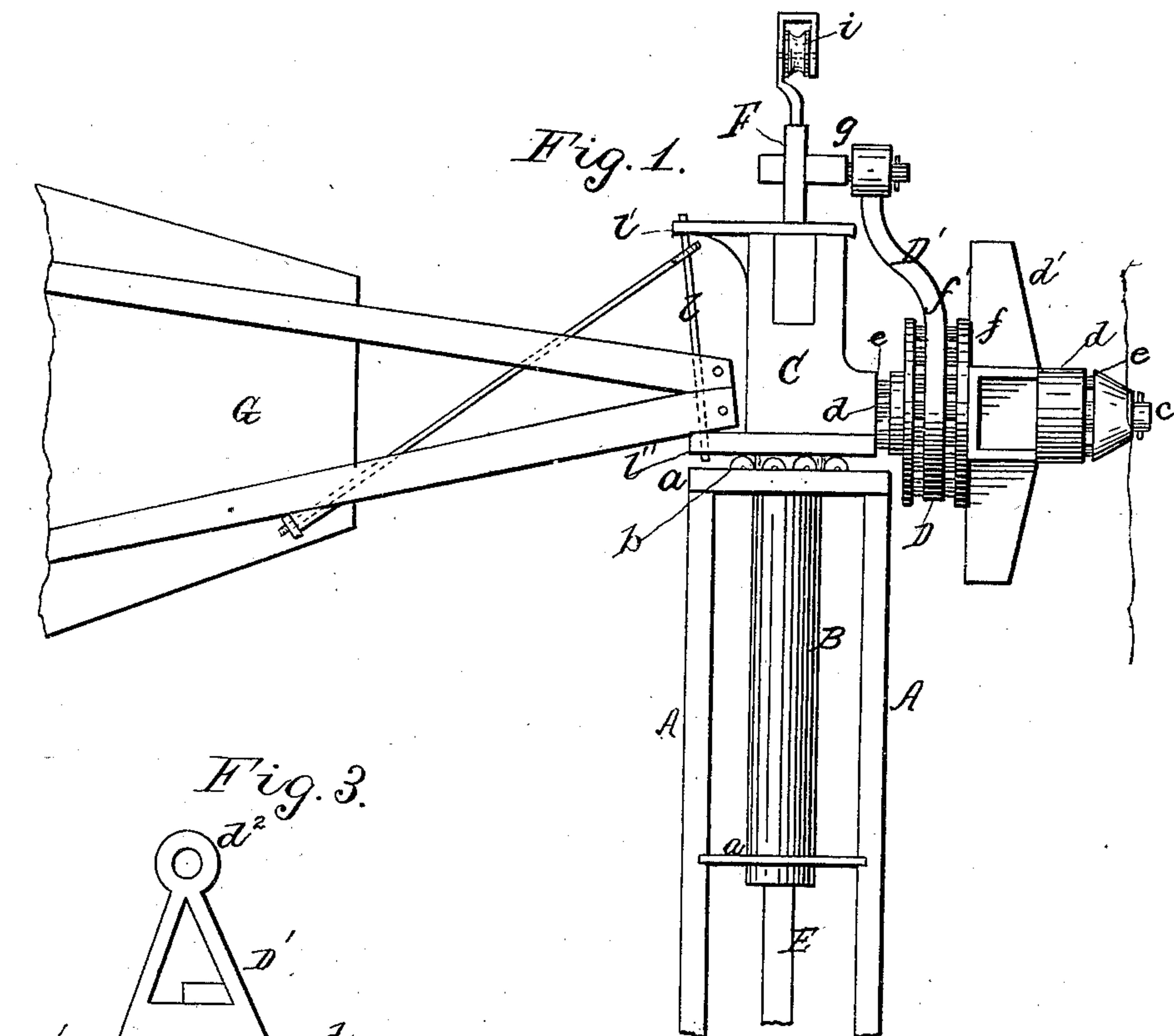
(Model.)

E. M. SCHROCK.

WINDMILL.

No. 256,810

Patented Apr. 18, 1882.



WITNESSES

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WINDMILL.

SPECIFICATION forming part of Letters Patent No. 256,810, dated April 18, 1882.

Application filed April 16, 1881. (Model.)

To all whom it may concern:

Be it known that I, E. M. SCHROCK, a citizen of the United States, residing at Nebraska, in the county of Livingston and State of Illinois, have invented certain new and useful Improvements in Windmills; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved windmill with the wheel not in place, and Figs. 2 and 3 are detailed views thereof.

This invention relates to improvements in windmills or engines adapted to drive or operate pumps or other machinery in an effective and expeditious manner and with the wheel under perfect control; and it consists of the combination and arrangement of certain elements, substantially as hereinafter more fully set forth.

Referring to the accompanying drawings, A is an upright supporting frame or structure, centrally within which is arranged a shaft or cylinder, B, by cross-pieces or brackets *a a*.

C is a casting or upright support cast with and at the upper end of the shaft B and supported upon anti-frictional bearing-rolls *b*, hung in an annular groove in the upper bracket *a*. This casting is provided with a shaft, *c*, at one side, upon which is fitted or slipped a sleeve, *d*, with anti-frictional bearing-rolls *e e* at each end, and cast with a spider, *d'*, which carries the wheel. (Not shown.) The sleeve *d* has a cam or eccentric, *f*, upon which is fitted with intermediate anti-frictional bearing-rolls, *f'*, a collar, D, provided with an arm, D', having an eye, *d''*, at its upper end. The eye of the arm or pitman receives a short axis or pin, *g*, of the piston-rod E, extending down through the tubular shaft B, to be connected to the machinery to be operated.

It will be noticed that the reciprocating motion imparted to the collar D and its arm D' by the cam or eccentric *f* on the sleeve of the shaft *c* of the wheel will transmit a vertically-reciprocating motion to the piston-rod and its piston.

In the upper end of the casting C are inserted two parallel uprights, F F, the line of their parallelism being at right angles to the plane of the wheel-shaft *c*, and their opposite surfaces being rounded to form bearings for anti-frictional guide rolls or pulleys *h*, interposed between the upper portion of the piston-rod E and the said standards or uprights. *i* is a pulley hung in one of the standards or uprights F in its upper end, over which passes a rope, *j*, in a plane at right angles to and between the wheel and vane. One end reaches down within convenient grasp of the attendant, and the other portion, after having been passed in contact with a pulley, *k*, swiveled upon an arm, *k'*, of the casting C, is connected to the vane G, hinged by the turning rod *l*, arranged and pivoted obliquely in arm *l'* and ear *l''* of the casting C. By pulling upon the rope *j*, the vane can be swung around parallel with the wheel, which will leave the wheel free to turn with the casting C out of the wind, and thus its motion will be arrested. An elastic buffer, *m*, is affixed to the outer end of the arm *k'* to break the concussion of the contact of the vane therewith as the latter is swung around parallel with the wheel.

Having thus fully described my invention, I claim and desire to secure by Letters Patent—

1. In a windmill, the combination, with the casting C, carrying the shaft *c*, with a sleeve, *d*, having the wheel-spider *d'* and the eccentric or cam *f*, of the collar D, having the pitman D', and the piston-rod E, substantially as and for the purpose set forth.

2. In a windmill, the combination, with the casting C, having the tubular shaft B and supported upon bearing anti-frictional rolls *b*, the shaft *c*, with its sleeve *d*, fitted with frictional rolls *e*, and having the spider *d'*, cam *f*, with anti-frictional bearing-rolls *f'*, collar D, having pitman D', and guide-standards F, of the piston-rod E, having the pin *g* and interposed between the anti-frictional rolls *h h*, substantially as and for the purpose set forth.

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

EMANUEL M. SCHROCK.

Witnesses:

A. R. DUIR,
GEORGE ADLER.