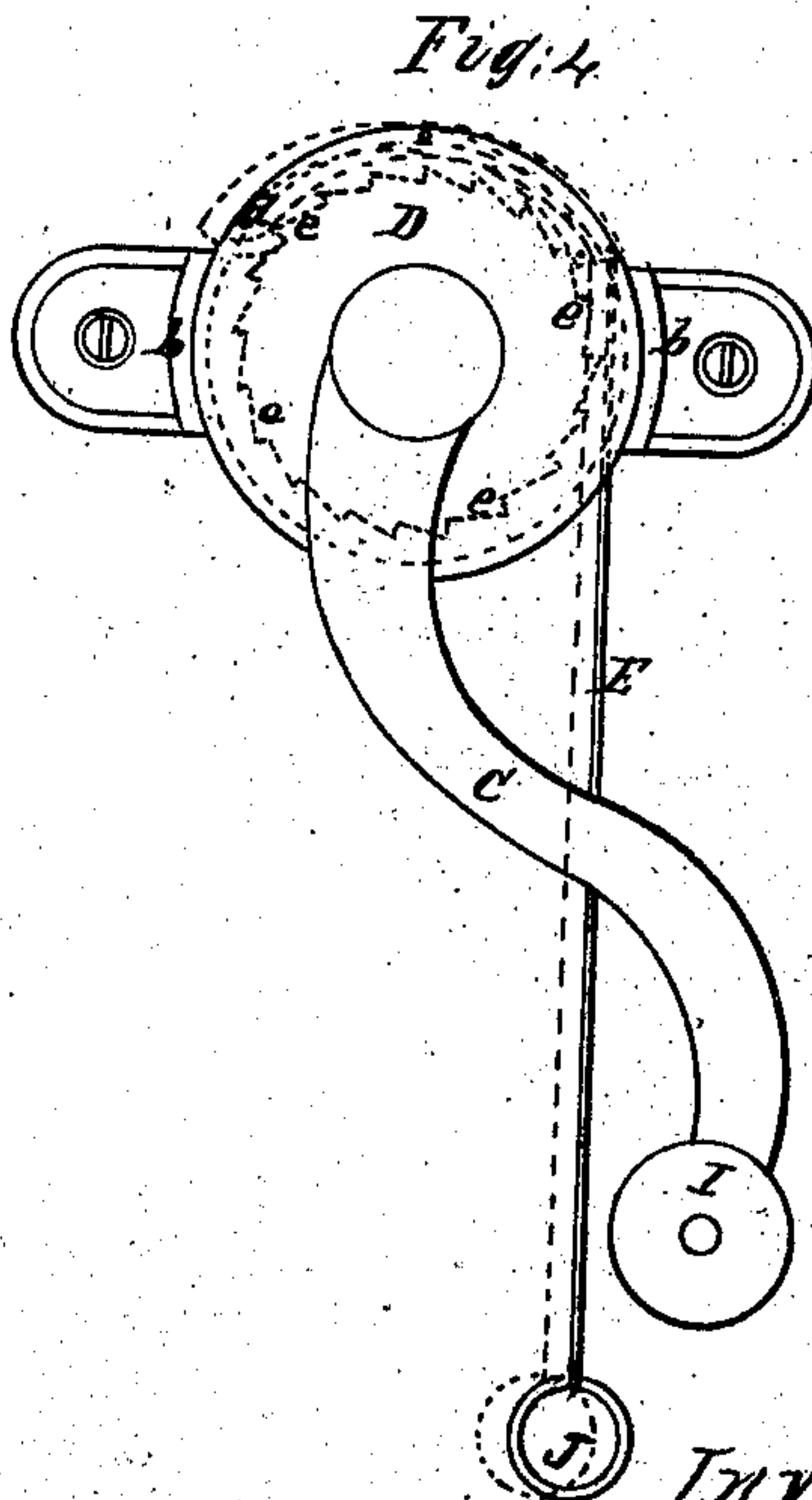
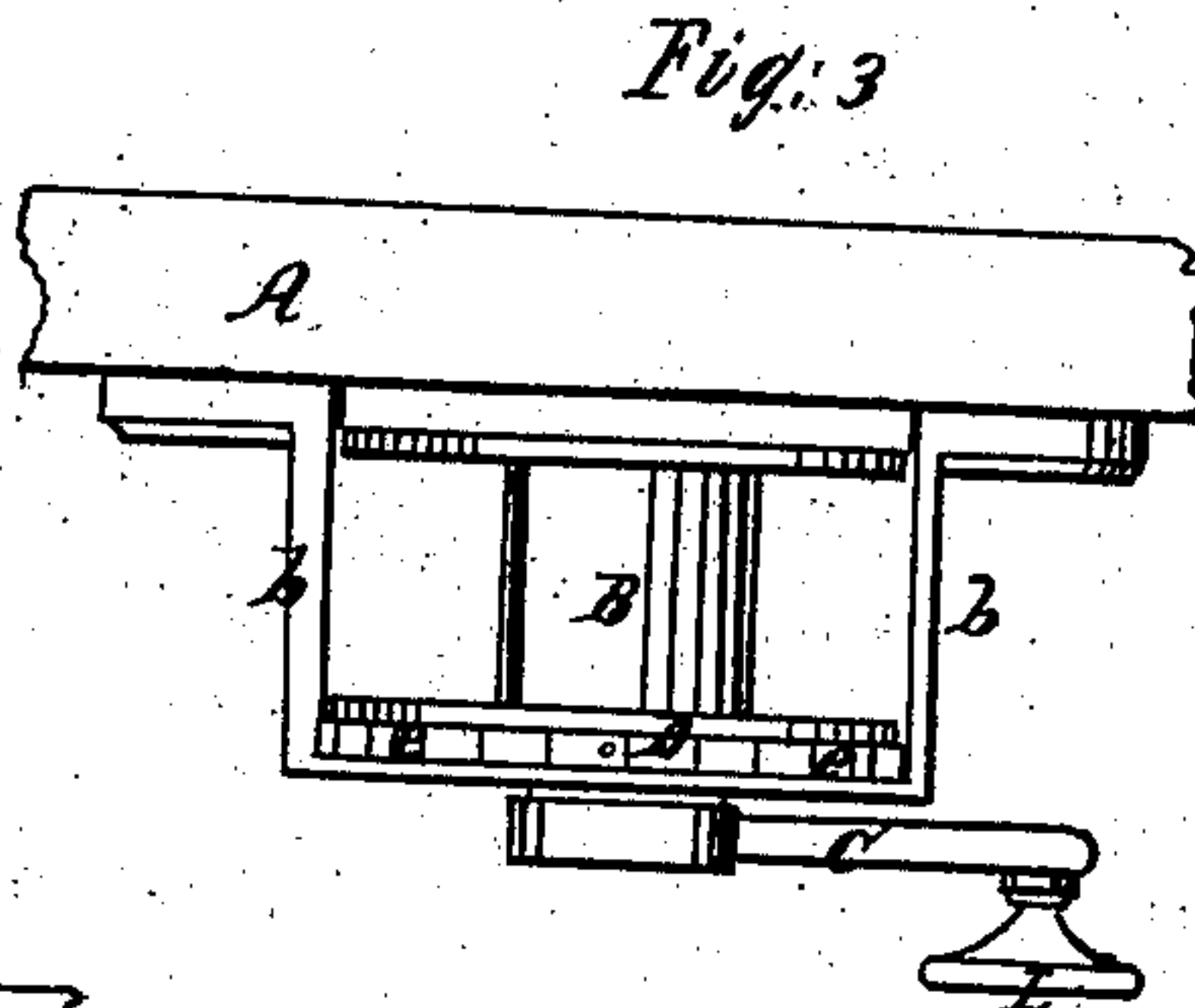
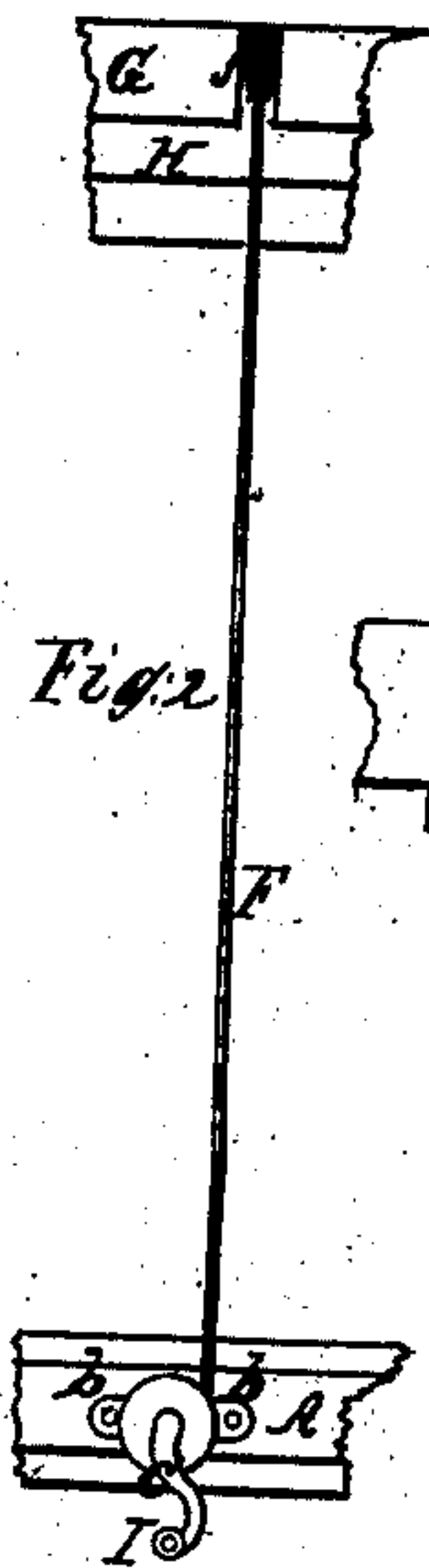
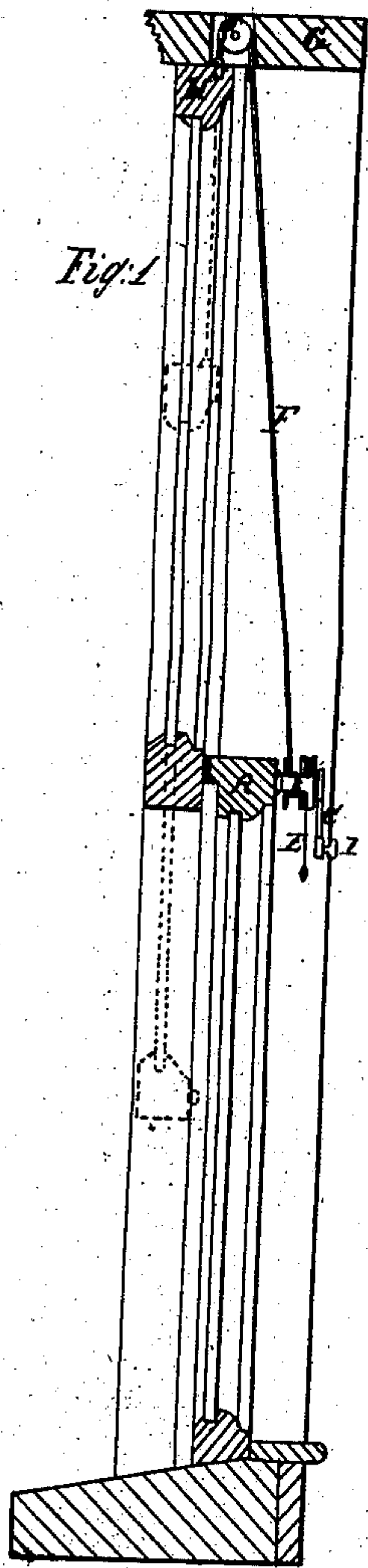


A. H. Reed.

Sash Balance.

N^o 86,689.

Patented Feb 9, 1869.



Witnesses,

Jas. F. Fear
Am. C. Capwell

Inventor
A. H. Reed

United States Patent Office.

ASA H. READ, OF FACTORYVILLE, PENNSYLVANIA. . .

Letters Patent No. 86,689, dated February 9, 1869.

IMPROVEMENT IN WINDOW-SASH SUPPORTER.

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, ASA H. READ, of Factoryville, in the county of Wyoming, in the State of Pennsylvania, have invented new and useful Improvements in Apparatus for Raising and Lowering Window-Sash, and holding them in any desired position in the frame; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a vertical edge view of a double sash, in section, with the apparatus attached.

Figure 2 shows a broken-off section of frame, top sash, rail, and apparatus—front view.

Figure 3 shows a top view of the windlass, attached to the top rail of bottom sash.

Figure 4 is a front sectional view of the apparatus, showing the ratchet, pawl, and brake, in red lines.

The object of my invention is to control the raising and lowering of both bottom and top window-sash, without the application and use of weights to balance them, and to easily regulate the opening either at the top or bottom, or both, without handling the sash.

My invention consists in the windlass, as constructed, combined with a cord and single pulley, and applied to operate in the manner hereinafter described and set forth.

To enable others to make, apply, and use my invention, I will describe it more fully, referring to the drawings, and to the letters marked thereon.

To the middle of the top rail A of the lower sash, I attach the windlass B, supported in the frame b b, so as to easily turn in either direction by the crank C, in front, the windlass B being provided with a ratchet-wheel, D, and a hook-pawl, d, pivoted in its centre over the ratchet D, and provided with a rod, E, at the opposite end from the hook d, to lift the hook from the

teeth e e e, and, at the same time, operate as a brake on the windlass, to prevent the weight of the sash from moving too fast.

To the barrel of the windlass B is attached a cord, F, which passes over the stationary pulley f, in the top of the window-frame G, and connects with the top sash H, so that when both the sashes are closed it is only necessary to lift the bottom sash, and the top sash will let down in the same proportion, the same as those which balance each other. And when the lower sash is to be raised, it is only necessary to take hold of the crank-handle I, and turn to the right and wind the sash up. And when the sash A is to be let down, it is only necessary to take hold of the ring J, on the rod E, and lift the pawl d from the teeth of the ratchet D, the other end acting as a brake to ease the sash down. And when it is desirable to let down the top sash only, the same operation of lifting the pawl d from the ratchet wheel D, by the rod E, is performed.

Thus, it will be seen that my improved apparatus for raising, lowering, and balancing sash, is both simple, cheap, and efficient.

Having thus fully described my invention, and its practical operation,

What I claim as new, and desire to secure by Letters Patent, is—

The direct action of the windlass B and cord F, on a single central pulley f, whereby the raising and lowering of both the top and bottom sash are effected, substantially in the manner herein shown and set forth.

Signed on this 16th day of May, 1867, in the presence of—

ASA H. READ.

Witnesses:

JAMES FREAR,
AMY C. CAPWELL.