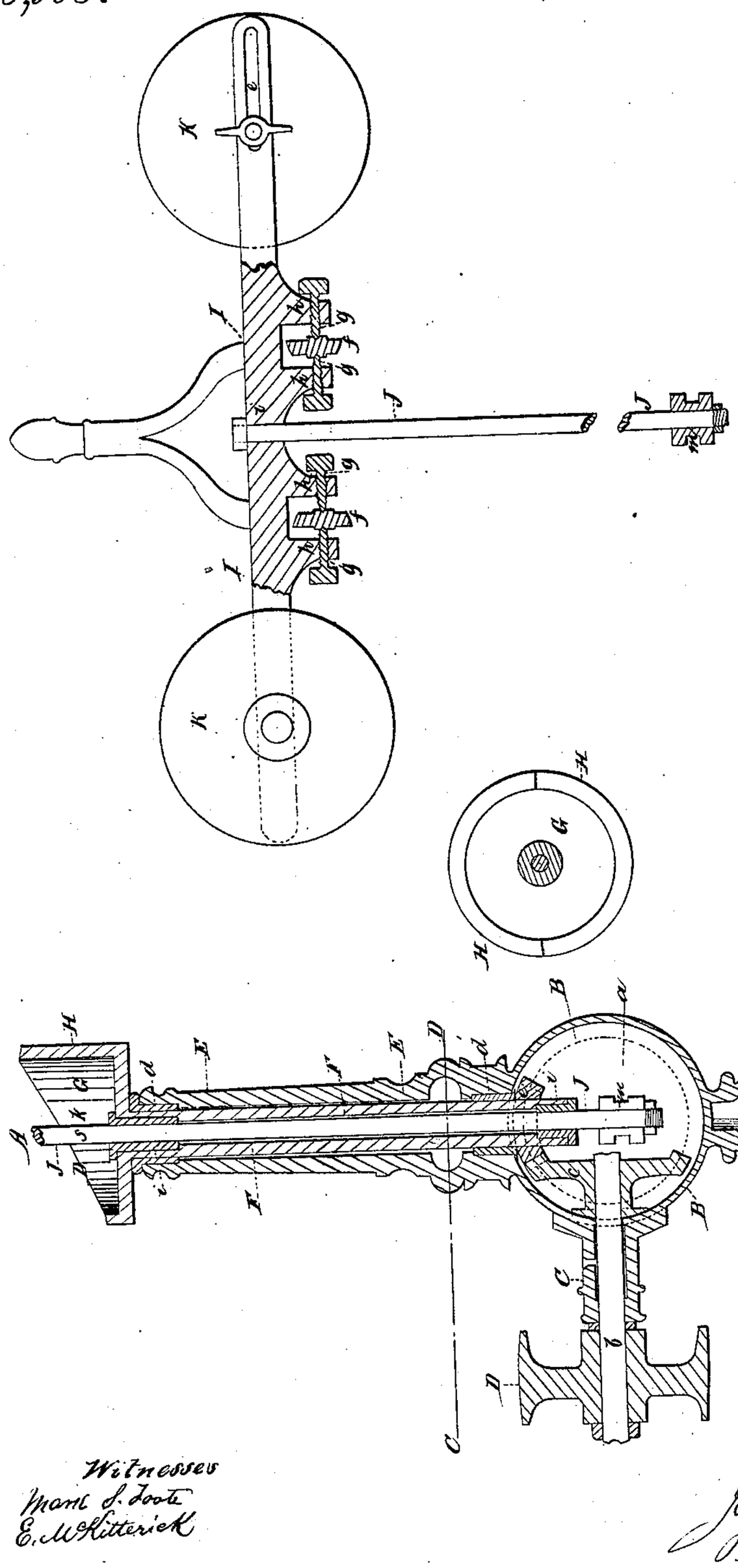
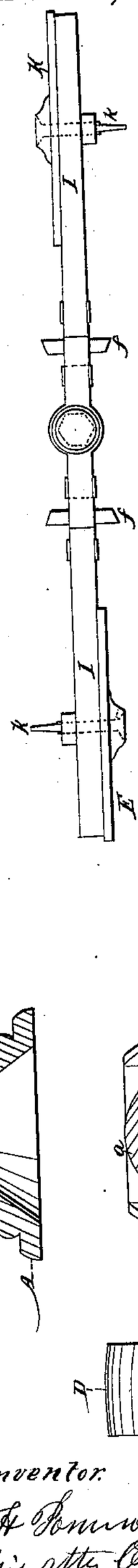
J. H. Pomeroy,

Governor.

No. 33,903. Patented Dec. 10, 1861.





Witnesses
Mont. L. Doote
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UNITED STATES PATENT OFFICE.

JOHN H. POMEROY, OF JORDAN, NEW YORK.

IMPROVED STEAM-ENGINE GOVERNOR.

Specification forming part of Letters Patent No. **33,903,** dated December 10, 1861.

To all whom it may concern:

Be it known that I, JOHN H. POMEROY, of Jordan, in the county of Onondaga and State of New York, have invented a new and Improved Mode of Regulating and Controlling Steam-Engines; and I do declare that the following is a full and exact description of said invention.

The nature of my invention consists in constructing a steam-engine governor or equivalent thereto as follows:

A A is the base; B B, a globe cast with A A, with two of its faces removed, as shown at *a a*. C is a sleeve or barrel cast or attached to B B, through which passes shaft *b*. To this is attached pulley D. To the inner end of the shaft is attached a beveled gear *c*, which runs inside of globe B B.

E E is a standard or column cast or attached to B B. Inside of E E runs shaft F F, which has suitable bearings *d d* of brass or other suitable material.

G is a disk not confined to any particular diameter or size. Attached to the disk and symmetrically arranged on opposite sides thereof are two screw-shaped inclined planes H H of uniform pitch, which I simply denominate "inclines." Disk G is cast with and forms part of shaft F F. At the lower end of this shaft is pinion or gear *e* to mesh into the pinion or gear *c* and running inside of globe.

I I are arms revolving on a center *i* and made as light as is consistent with the requisite strength in order to avoid all unnecessary momentum. Attached to these arms are wheels *f f*. These are held in place by the bearings *g g g g*. The bearings are screwed through the frame at *h h h h* and are adjustable and pointed to form centers for wheels *f f* to run upon.

J J is a rod attached to frame I I at *i*. The rod passes through disk G and shaft F F, terminating in the globe B B, or passing through the globe or base, if desired. This rod has bearings at *i i*. The wheels *f f* rest on the inclines H H of the disk G.

K K are are round sheet-iron plates (or may be of any other suitable material and shape) fastened to arms I I by screws *k k* or any other suitable device, so as to allow the plates to be adjustable, to be shifted in or out, as may be desired, as shown at *l*.

The frame or arms I I, with all its attachments, are freely to run up the inclines H H when sufficient force resulting from atmospheric resistance is applied to wings or plates K K and run back of their own gravity when released in part or the whole of said force. At *m* a suitable lever may be attached, so as to operate any valve or cut-off belonging to a steam-engine, in the usual way.

The governor is operated by running a belt from a shaft or pulley to pulley D. It with its shaft *b* and gear *c*, drives pinion *e*, shaft F F, and disk G, and carries with them the frame I I and attachments. When at rest, the frame I I and attachments are at the lowest point of inclines H H. If the wings or plates K K are so adjusted as to require the disk G, frame I I, and attachments to run at the speed of two hundred (200) revolutions per minute (or any other speed desired) before the plates or wings gather sufficient force from resistance of the air to retard their motion, they will, on arriving at that motion, travel up the inclines, and not before. By that means operating the valve or cut-off, cutting off steam. Again, if the speed in the least falls short of two hundred (200) revolutions, it follows that there would be less force from the air on the wings, therefore allowing the frame and its attachments to run down the inclines of their own weight or gravity, thereby giving more steam, and in this manner keep up a uniform motion not yet attained by any other governor.

It is evident that this same contrivance may be used for regulating the movement of machinery which is driven by water or other motive power. It is also manifest that instead of the wheels *f f* being attached to the arms I I and the inclines H H to the disk G the arrangement may be inverted without affecting the principle of their action.

I am aware that a governor has heretofore been constructed by means of atmospheric resistance acting upon wings attached to revolving arms. Therefore I do not claim, broadly, the use of all machines constructed upon that principle; but

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

1. In such governor, the combination of the wings K K with the inclines H H, arranged

and operating substantially as above described.

2. The combination of the wings K K, the inclines H H, and the wheels or rollers *f f*, arranged substantially in the manner and for the purpose above described.

3. The combination of the wings K K, the inclines H H, the wheels *f f*, and the rod J, the whole operating for the purpose and substantially in the manner above described.

Dated at the city of Syracuse, in the State of New York, this 12th day of September, 1861.

JOHN H. POMEROY.

Witnesses:

JOHN P. HULBERT,

ALONZO B. CALDWELL.