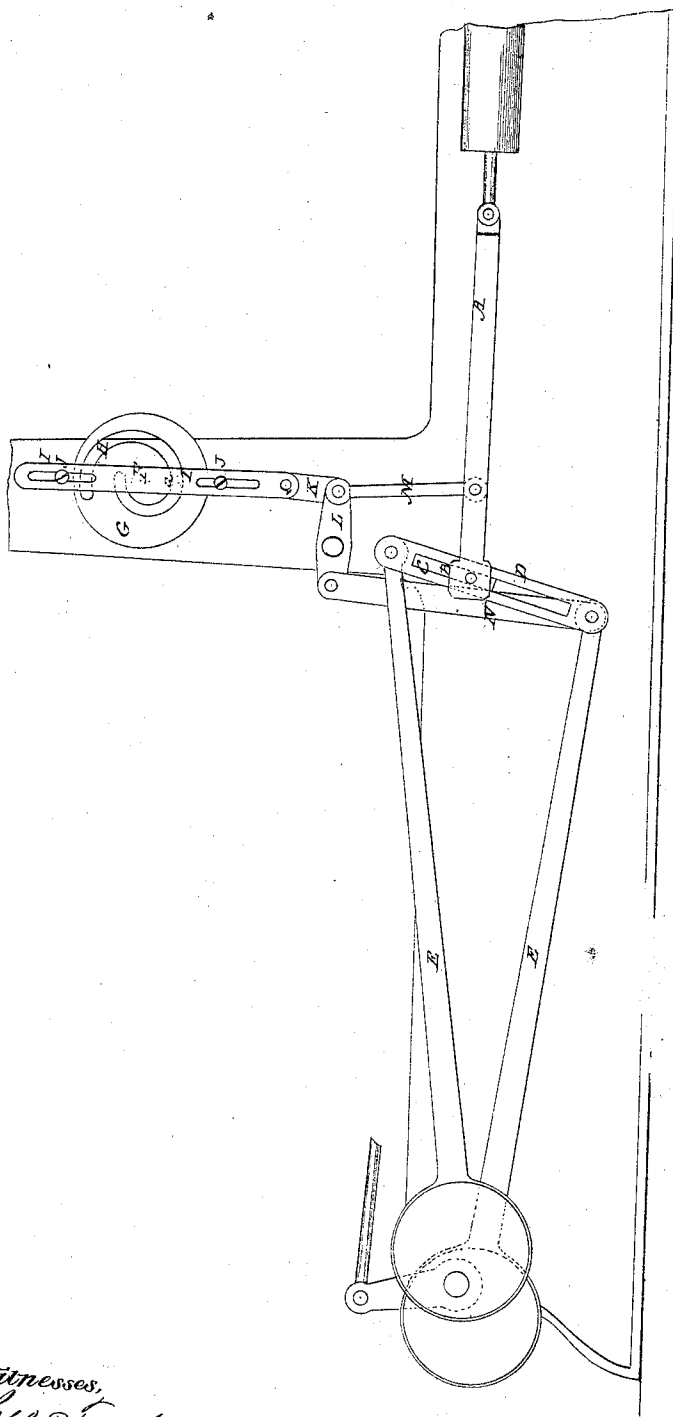


T. S. DAVIS.
STEAM ENGINE GOVERNOR.

No. 65,885.

Patented June 18, 1867.



Witnesses,
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United States Patent Office.

THOMAS S. DAVIS, OF JERSEY CITY, NEW JERSEY.

Letters Patent No. 65,885, dated June 18, 1867.

IMPROVEMENT IN STEAM-ENGINE GOVERNORS.

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, THOMAS S. DAVIS, of Jersey City, in the county of Hudson, and State of New Jersey, have invented a new and improved "Governor and Valve or Cut-off Connection for Steam Engines," and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim, and desire to have secured to me by Letters Patent.

This invention relates to a novel connection between the piston or other valve of a steam engine and the governor; and the invention consists in a scroll or inclined plane, actuated by the governor in combination with a bar or rod, or its equivalent, arranged to operate in connection with the ordinary link or other valve or cut-off motion, and in a plane or direction at a right angle, or nearly so, to and against the said scroll or inclined plane, whereby the governor is given the power or means requisite to overcome and hold steady the link under all circumstances of friction, slip of block, &c., as by the connection between the link and scroll or inclined plane, the thrust of such connection is taken up on the faces of the said incline or scroll, consequently preventing or avoiding all vibration of the balls of the governor, except what is directly due to the increase or decrease in speed of the engine.

In the accompanying drawings my improved governor and cut-off or valve connection for steam engines is illustrated, the figure being a side elevation of the same, showing its construction and arrangement.

A, in the drawings, represents the valve-rod hung at one end by block B in slot C of link D. E, the eccentric-rods, arranged or hung upon the eccentric-shaft F, and pivoted to each end of the link D, as in ordinary link connections. F, a crank-shaft, which, in any suitable manner, is to be connected with a governor of any of the ordinary constructions, so as to be properly affected by the speed of the balls to such governor; and thus through the arrangement of devices to be now described connecting it with the link motion, change it as desired. G, a disk, secured to crank-shaft F, in which disk is a scroll-shaped slot, H. I, a bar or rod, slotted in the direction of and for a portion and at two points of its length, by which slots the bar is arranged to move upon fixed guide-pins or studs, J, in a plane across the face of the disk G, with the scroll-slot H of which it is engaged, through its stud or pin a. This bar I, at its lower end, is pivoted through a link-piece, K, to one end of a short rocker-beam, L. This, at the same end, is connected through a rod, M, to the valve-stem, and at its other end by a rod, N, to the lower end of the link.

The operation of the connection above described is as follows: By the revolution of the governor, its balls raise or lower, as the case may be, and thus, through the scroll-slot H, move the block in the link in the proper direction to change the movement of the valve to admit the requisite amount of steam to the piston cylinder, this operation of the connection being similar to the connections in common use. But, as the thrust of the slotted connection-bar I acts upon the scroll-slot of the plate G, in a direction across the inclination of its faces, or, in other words, at right angles thereto, the governor is given the power requisite to overcome and to hold steady the link under all circumstances of friction, slip of block, &c., thereby preventing and avoiding all vibration of the governor balls, except what is directly due to an increase or decrease in the speed of the engine.

In conclusion it may be here remarked that the slot in plate G can be varied in many respects, it being only necessary that it should be such that the action of the thrust of the connecting-bar to the link or other motion for the valve should act in a direction or plane across that, or, in other words, at right angles to the inclination or direction of such slot.

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

The combination of the plate G, having a scroll, H, with the bar I, pin a, arranged to operate across or at right angles, or nearly so, to the same, substantially as and for the purpose described.

The above specification of my invention signed by me this 30th day of March, 1867.

Witnesses:

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THS. S. DAVIS.