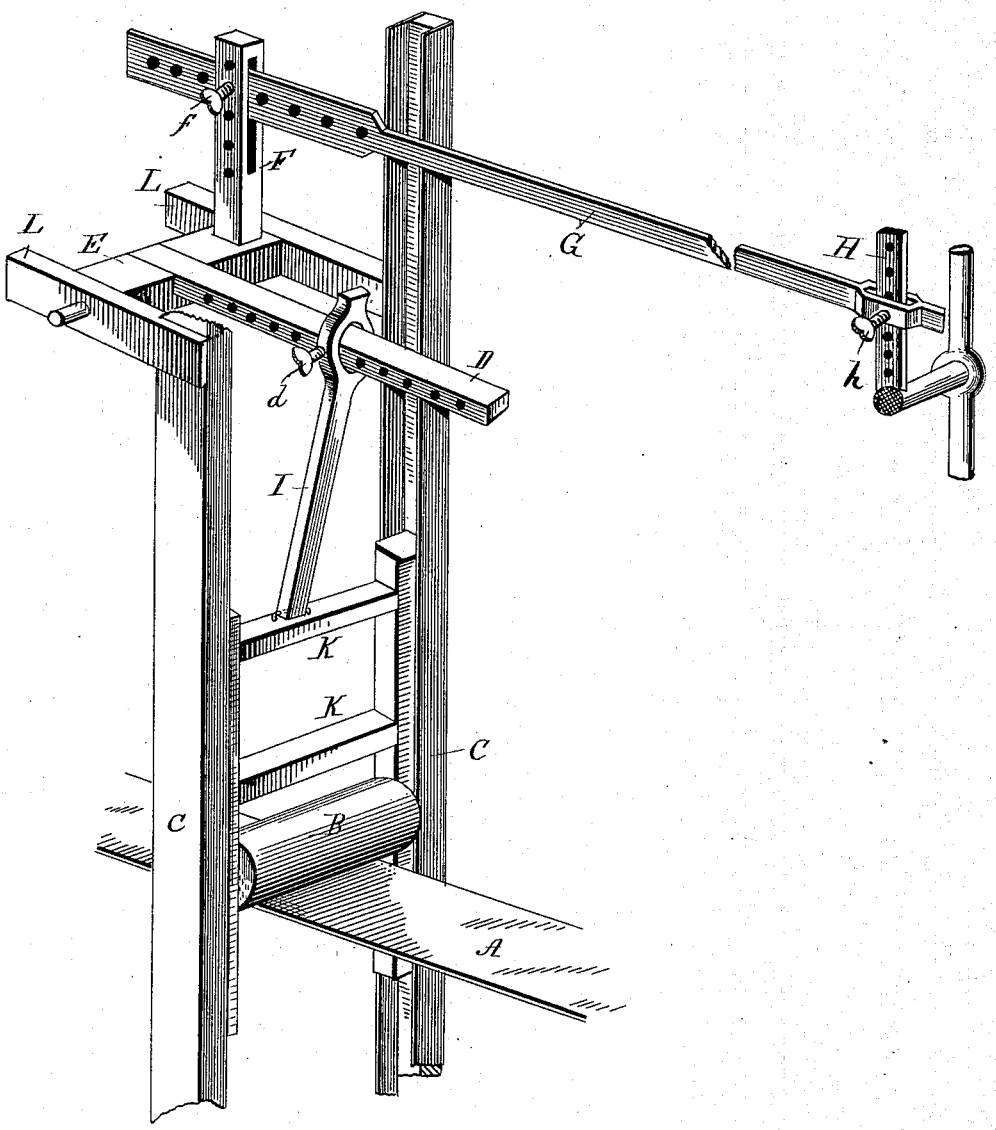
(No Model.)

J. W. TAYLOR.

STEAM REGULATOR.

No. 384,727. Patented June 19, 1888.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN W. TAYLOR, OF PITTSBOROUGH, NORTH CAROLINA.

STEAM-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 384,727, dated June 19, 1888.

Application filed August 26, 1887. Serial No. 247,964. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. TAYLOR, a citizen of the United States, residing at Pittsborough, in the county of Chatham and State of North Carolina, have invented certain new and useful Improvements in Steam-Regulators; and I do 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 drawing, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to regulators or governors for steam engines, and has for its object the construction of a simple mechanism to utilize the varying tension of the belt as a means to control the amount of steam or other power medium to be supplied to the engine. On most engines running machinery a belt is used and extends between and around the fly-wheel and shafting. The bottom portion of the belt travels from the shafting toward the fly-wheel. When additional work is to be performed and the load is increased, as in sawing, when the saw strikes the log, or in a cotton-mill, when an additional set of looms is thrown in gear, more power is required than before. Conversely, when the work is decreased and the load diminished, less power is required. In the first case the upper part of the belt slackens and the lower portion correspondingly tightens, and to preserve a nearly-uniform tension on both parts of the belt a heavy roller mounted to move vertically is placed on the upper portion of the belt and adapts itself to the varying tension of said upper portion of the belt. When the load on the shafting diminishes, the lower portion of the belt proportionately slackens and sagging correspondingly increases the tension on the upper portion of the belt and causes a rising of said roller, which rises and falls proportionately to the load carried and the work to be performed by the engine.

The improvements consist in having interposed between said roller and the throttle-valve of an engine a system of devices composed of an arm adjustably connecting the roller or its frame with a horizontal branch projected from a rock-shaft and a connecting-rod adjustably connected at one end with the throttle-valve lever and at its other end with the vertical extension or branch of said rock-shaft.

The improvement further consists in the novel and peculiar construction and arrangement of parts, more fully hereinafter set forth and claimed, and shown in the annexed drawing, which is a perspective view of my improvement.

The upper portion of the belt, which is interposed between the engine and shafting in the usual way, is shown by A, and the roller B, resting thereon, is journaled in the frame K, working in the guides C, having the lateral bars L, between which is mounted the rock-shaft E, provided with the horizontal branch D, connected with the frame by the arm I, and the vertical branch F, connected with the throttle-valve lever H by the connecting-rod G. The lower end of the arm I is pivotally connected with the roller-carrying frame, and its upper portion terminates in an eye, through which the horizontal branch of the rock-shaft passes, and is adjustably secured therein by the pin *d*. The upper end of the vertical branch F is slotted and receives the end of the connecting-rod G, which is adjustably secured therein by pin *f* in such a manner that it has a vertical and horizontal adjustment relative to said branch F. The outer end of the connecting-rod is apertured, and the throttle-valve lever passing through said aperture is adjustably secured therein by pin *h*.

The device is adjustable in all its parts, and can be readily adapted to any machinery and adjusted to open or close the throttle-valve at the slightest movement of the roller B, proportionately to the amount of work being performed.

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

The combination, with the roller journaled in a frame working in vertical guides and resting on and controlled in its movements by the driving-belt and the throttle-valve lever, of the rock-shaft having vertical and horizontal

branches, the arm pivotally connected at its lower end with the roller-carrying frame and adjustably connected at its other end with the horizontal branch, and the connecting-rod adjustably connected at one end with said lever and adjustable vertically and horizontally with said vertical branch, substantially as set forth.

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

J. W. TAYLOR.

Witnesses:
T. B. WOMACK,
S. M. HOLT.