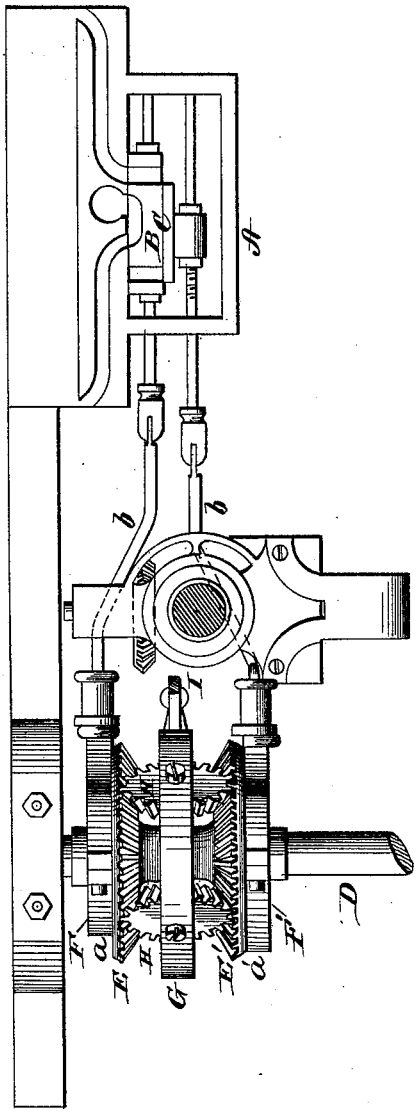
M. L. JACQUEMIN.

Valve-Regulating Mechanism.

No. 220,151. Patented Sept. 30, 1879.



WITNESSES

P. L. Quaud

H. Aubrey Poultney

INVENTOR

Mathias L. Jacquemin

Alexander Mason

ATTORNEYS

UNITED STATES PATENT OFFICE.

MATHIAS L. JACQUEMIN, OF COUNCIL BLUFFS, IOWA.

IMPROVEMENT IN VALVE-REGULATING MECHANISMS.

Specification forming part of Letters Patent No. **220,151**, dated September 30, 1879; application filed April 19, 1879.

To all whom it may concern:

Be it known that I, MATHIAS L. JACQUEMIN, of Council Bluffs, in the county of Pottawattamie, and in the State of Iowa, have invented certain new and useful Improvements in Valve-Regulating Mechanisms for Engines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a valve-regulating mechanism for engines, as will be hereinafter more fully set forth.

In the annexed drawing, the figure represents a plan view of my invention.

A represents the valve-chest of an engine, with slide-valve B therein, of any suitable construction. C is the cut-off valve, working against the back of the slide-valve B. D is the shaft upon which the eccentrics are placed for operating the two valves. F and F′ are the eccentrics, which are respectively provided with the usual straps *a a′*, and these connected, by rods *b b′*, with the two valves B and C, respectively. The eccentric F is made fast on the shaft D, and has a beveled-gear wheel, E, either attached thereto or made in one piece therewith. The eccentric F′ is loose on the shaft, and is also provided with a beveled gear-wheel, E′.

Between the two gear-wheels is placed a loose wheel, G, which is slotted, and carries four equidistant beveled pinions, H, which mesh with the two beveled-gear wheels E E′.

When the shaft D is in motion it will be noticed that the loose eccentric F′ receives its motion from the fast eccentric F through the medium of the beveled-gear wheels and pinions, and the two eccentrics revolve in opposite directions.

If the wheel G, which carries the pinions H, would at all times remain stationary, the relative position of the eccentrics and the movement of the valves would at all times be the same; but this wheel is movable either by hand or by means of a suitable governor, for which purpose said wheel is provided with an arm or lever, I.

By moving the wheel G—that is, turning the same on the shaft—the position of the eccentric F′ on the shaft and with relation to the stationary eccentric F is changed in accordance with such movement, and the effect thereof on the cut-off valve C is that said valve may be set to cut-off sooner or later, as may be desired; or it may be set so as to shut off altogether.

It will be understood that I have thus established a point outside of the shaft for moving the eccentric while the shaft is in motion, and by this established fact I control the entire movement of the cut-off valve from the point where it lets on the full amount of the steam or other power used through every intermediate point to the point where the power is entirely cut off. By this also the engine may be reversed at will, and is under the most perfect control of the engineer.

This device, as stated, may be operated by hand and set at any point desired; or it may be connected to a governor, so as to be operated automatically for regulating the stroke of the cut-off valve.

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

The eccentrics F F′, one fast and the other loose on the shaft D, provided, respectively, with the gear-wheels E E′, and the intermediate loose wheel G, carrying one or more pinions, H, all constructed and combined substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of April, 1879.

MATHIAS L. JACQUEMIN.

Witnesses:

H. AUBREY TOULMIN,

H. J. ENNIS.