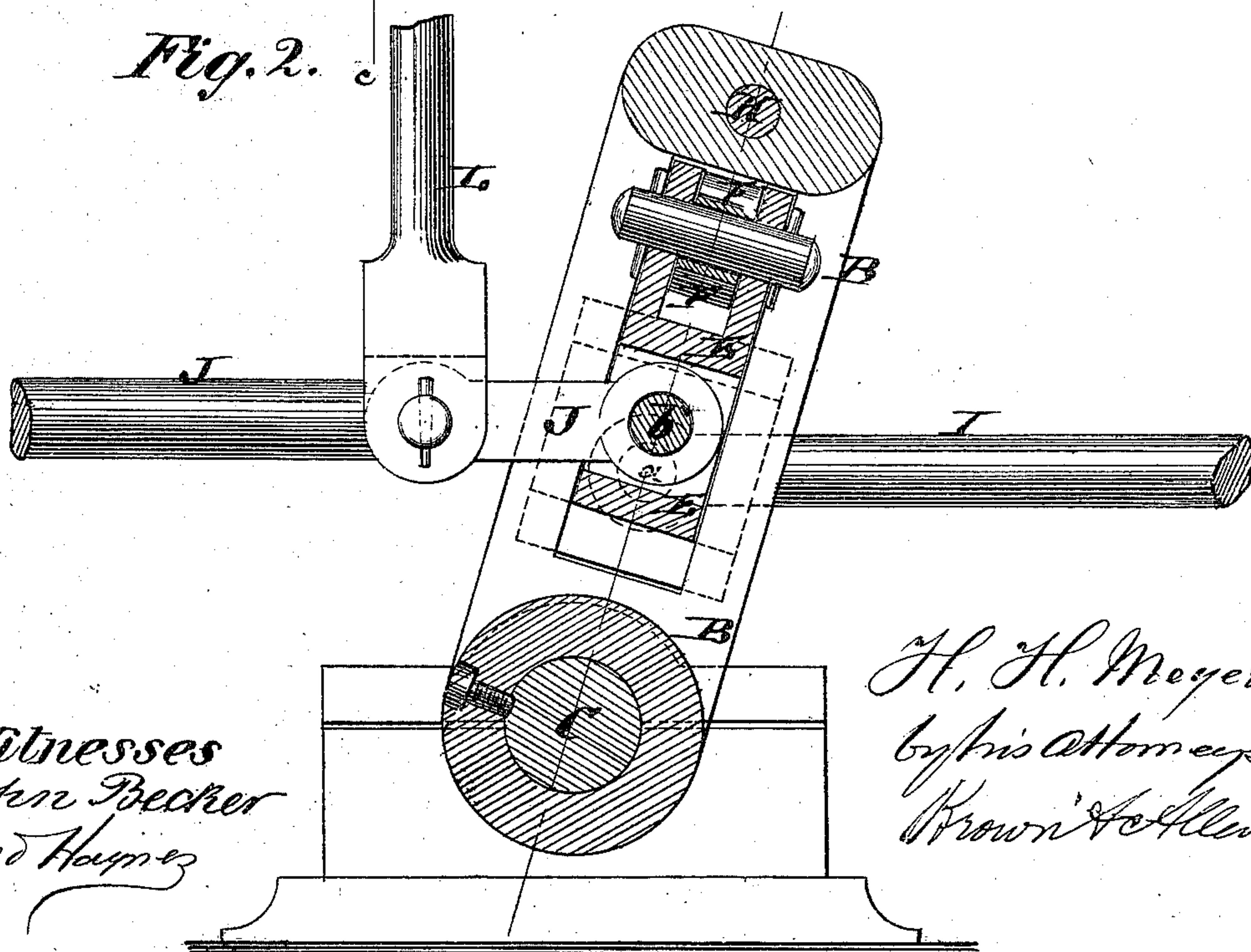
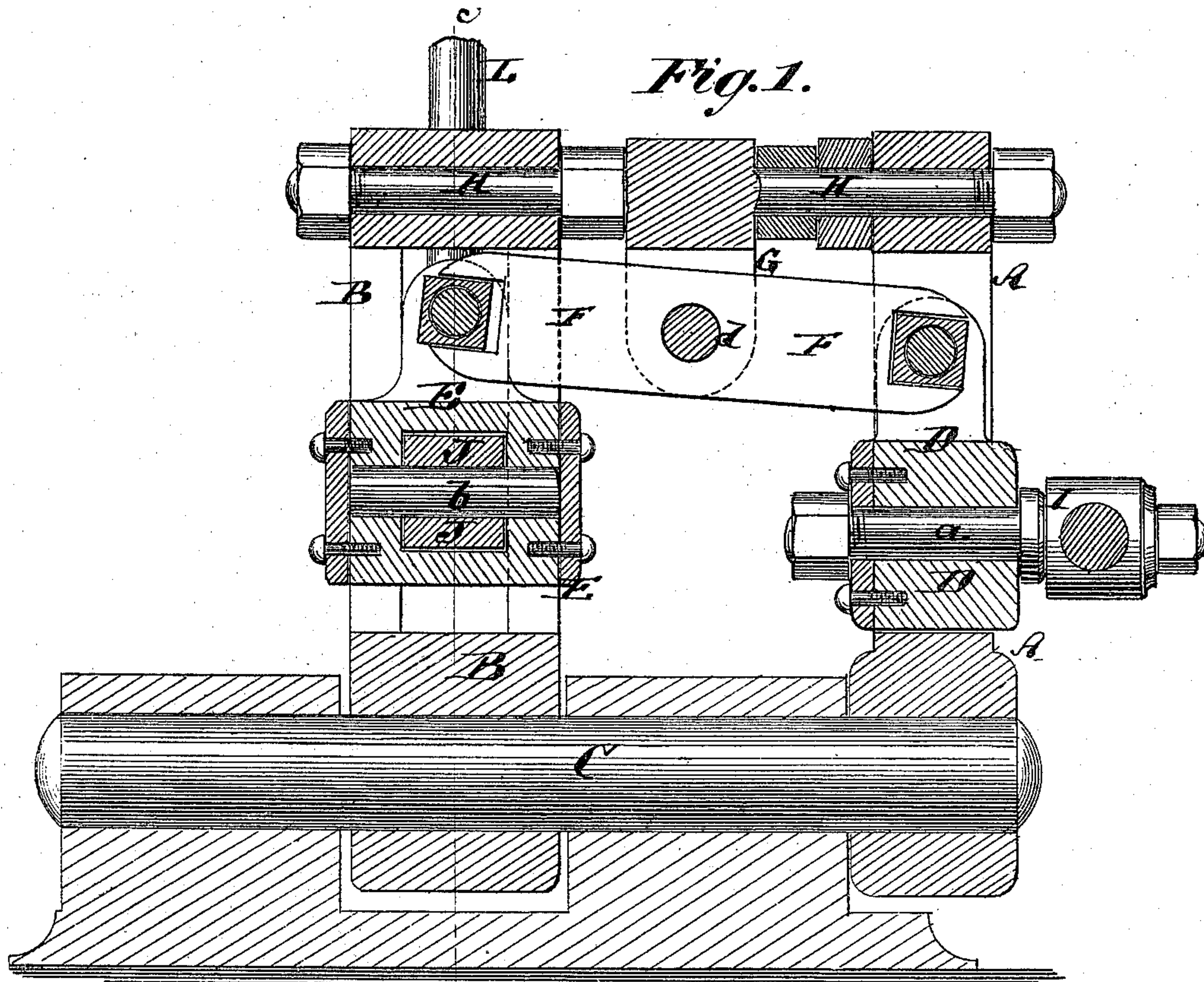


H. H. MEYER.  
Governor Cut-off Gears.

No. 142,491.

Patented September 2, 1873.



Witnesses  
John Becker  
Fred Haynes

H. H. Meyer  
by his Attorneys  
Brown & Allen



# UNITED STATES PATENT OFFICE.

HERMAN H. MEYER, OF DENVER, COLORADO TERRITORY.

## IMPROVEMENT IN GOVERNOR CUT-OFF GEARS.

Specification forming part of Letters Patent No. **142,491**, dated September 2, 1873; application filed April 9, 1873.

*To all whom it may concern:*

Be it known that I, HERMAN H. MEYER, of Denver, in the county of Arapahoe and Territory of Colorado, have invented a certain new and Improved Governor Cut-Off Gear, of which the following is a specification:

Figure 1 is a sectional side elevation of my improved cut-off gear, and Fig. 2 a vertical transverse section of the same on the line C C, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to produce a very simple, positive, and quick cut-off gear for steam-engines; and the invention consists in connecting the eccentric-rod of the engine and the valve-rod of the same with opposite ends of a vibrating beam, with which the governor is also connected, and which is hung in a frame that is vibrated by the action of the eccentric-rod, so that, when the governor raises or lowers its connection with said beam, the vibratory motion imparted to the valve-rod will thereby be varied in the desired manner by moving the connection of the valve-rod and eccentric-rod nearer to or farther away from the pivot of the aforementioned vibrating frame. In this manner the weight of the eccentric and valve rod is caused to rest on the bearing of the beam, and is thereby balanced to the action of the governor, and, by connecting the two rods to the aforementioned beam, but very little force from the governor is required to advance the cut-off, as the distance through which the governor has to move the valve-rod is but small and the apparatus consequently very sensitive.

In the accompanying drawing, the letters A and B represent two slotted posts or arms secured to a rock-shaft, C, which has its bearings in the bed-plate of the engine, about mid-

way between the cylinder and main shaft. The upper ends of the slotted arms are connected by a rod, H. The eccentric-rod I from the engine-shaft is, by a pin, *a*, pivoted to a slide or block, D, that is vertically movable on the slotted arm A. The valve-rod J connects in a similar manner by a pivot-pin, *b*, with a sliding-block, E, which is up and down movable on the arm B. The two blocks D and E are connected by a beam, F, the center of which works on a pin, *d*, hung in arms G, that are extended from the rod H, as clearly shown in Fig. 1. The valve-rod or eccentric-rod may, either one of them, be connected to the governor-rod L, or such governor connection may be directly obtained with one of the slides D E. If the speed of the engine changes, the governor raises or lowers its connection, and thereby carries the valve-rod and block E, when connected therewith, nearer to or farther away from the center of the rock-shaft C, thereby varying the stroke of the valve in the desired manner, and, at the same time that the governor pushes down or raises the valve-rod, the eccentric-rod is moved farther away from, or nearer to, the center of the rock-shaft, thus varying the stroke of the valve still more effectively. The object of the invention is thus fully attained.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination of the eccentric-rod I, slide D, beam F, and slide E with the valve-rod J and governor-connection L, when the beam F, connecting with the slides D E, is hung in a vibrating frame, A B, for operation, substantially as described.

HERMAN H. MEYER.

Witnesses:

F. JENSEN,  
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