

W.B. Cross. Variable Cutoff.

117747

PATENTED AUG 8 1871

Fig. 1.

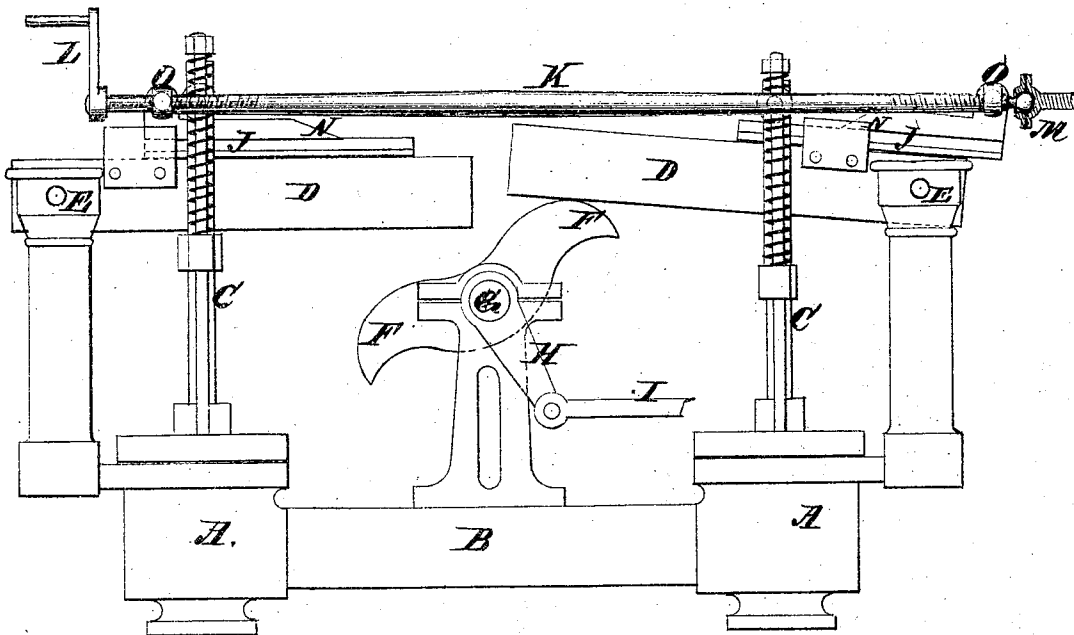
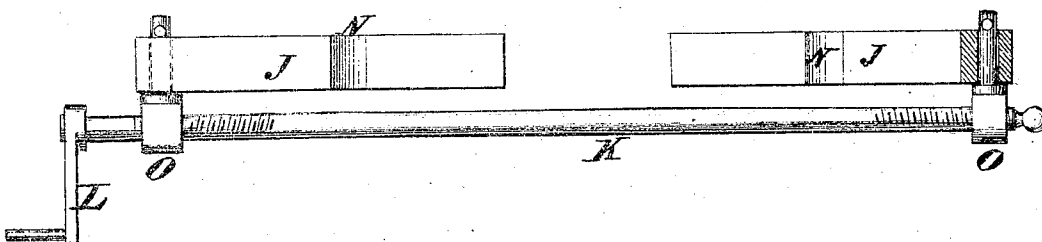


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM B. CROSS, OF SACRAMENTO, CALIFORNIA.

IMPROVEMENT IN VARIABLE CUT-OFFS FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. 117,747, dated August 8, 1871.

To all whom it may concern:

Be it known that I, WILLIAM B. CROSS, of Sacramento, in the county of Sacramento and State of California, have invented a new and useful Improvement in Variable Cut-Offs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to new and useful improvements in variable cut-off apparatus for steam-engines; and consists in a rod with a right-and-left-hand screw thereon working through nuts connected with sliding blocks and with the eccentric, with a crank on the end of the rod, thereby greatly simplifying the steam cut-off apparatus for which Letters Patent of the United States, dated January 24, 1871, were granted to me.

In the accompanying drawing, Figure 1 represents a side view of my improved cut-off. Fig. 2 represents the right-and-left screw-rod detached, with the parts with which it is directly connected.

Similar letters of reference indicate corresponding parts.

A A are two steam-chests, one at each end of the steam-pipe B. C C are the valve-rods. D D are levers, which are pivoted at the points E E. These levers pass through slots in the upper

portions of the valve-stems. F F are toes connected with the horizontal rock-shaft G, and operated by means of the arm H and rod I, the latter being connected with an eccentric. The sliding blocks J J, with which the screw-rod K is immediately connected by means of the nuts o o, slide on the levers D D. With the crank L the rod K is turned and the blocks J J are moved in either direction, by which means the blocks J J are drawn nearer together or moved further apart, thus cutting off the steam sooner or later, according as the rod is turned. The eccentric is connected at the point M with the rod K, by which means the rod and slides receive their uniform longitudinal motion. As the slides work back and forth their inclined surfaces N N enter the slots in the valve-stems sooner or later, according to their position on the rod, and as their position is readily changed by means of the crank L, it will be seen that any required adjustment may be made, and in the most simple and effective manner.

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

A right-and-left screw K, sliding blocks J J, and levers D D, arranged together, as and for the purpose specified.

Witnesses: WILLIAM B. CROSS.

JULIUS WETZLAR,
JOHN BELLMER.