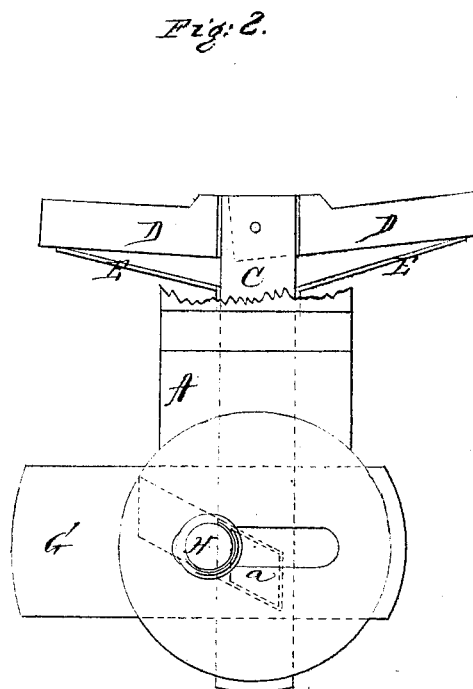
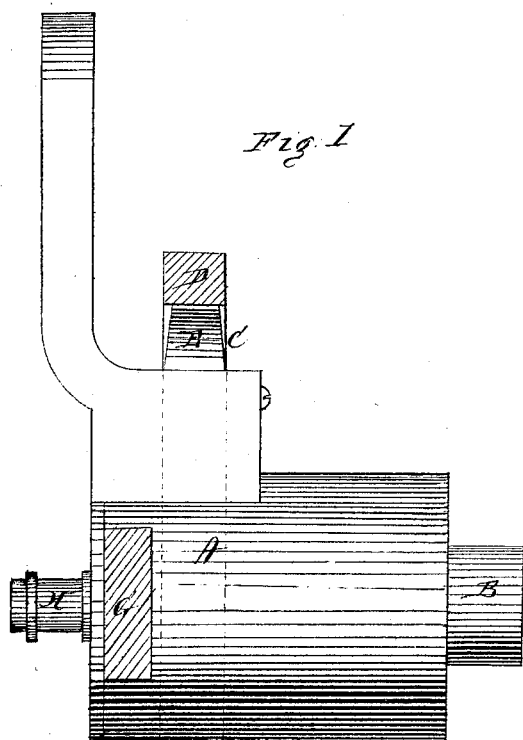


K. H. LOOMIS.

Improvement in Devices for Operating Cut-Off Valves.

No. 114,574.

Patented May 9, 1871.



Witnesses
C. L. Ewert,
J. E. Hutchinson

Inventor
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per *Alexander Mason*
Atty.

United States Patent Office.

KELLOGG H. LOOMIS, OF NEW YORK, N. Y.

Letters Patent No. 114,574, dated May 9, 1871; antedated April 14, 1871.

IMPROVEMENT IN DEVICES FOR OPERATING CUT-OFF VALVES.

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, KELLOGG H. LOOMIS, of New York, in the county of New York and in the State of New York, have invented certain new and useful Improvements in Cut-Offs for Steam-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 "cut-off for steam-engines," as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, and

Figure 2 is a front view.

A represents the head of the cut-off, which rocks upon its journal B.

In this head is a sliding bar, C, provided at its upper end with two hinged arms, D D, which are held in their proper position by means of springs E E, as shown in fig. 2.

These springs bear against the under side of the arms, holding the same up, and at the same time allow the arms to yield to any pressure from above.

Near the lower end, on the front side of the bar C, is a diamond-shaped projection, *a*, which fits in a diagonal groove on a slide, G, which works at right angles with the sliding bar C.

The slide G has arm H extending through a slot in the front of the head A, and to said arm the governor-rod is connected.

As the cut-off thus constructed rocks to either side the arm D on that side opens the valve, which valve

is afterward, at the proper time, closed by any suitable means.

In rocking toward the other side the first arm is allowed to yield or give downward as it passes the end of the rod or piston, which it moved in its downward stroke, while the other arm opens the other valve.

The distance that the valves are opened is regulated by the governor. If too much steam passes through the valves the slide G is moved so as to lower the sliding bar C, with its arms, and, consequently, the valves will be opened less, and not admit so much steam.

If not enough steam is admitted the slide G is moved in the opposite direction by the governor-rod, causing the bar C to rise upward, opening the valves more.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A device for operating cut-off valves in steam-engines, having hinged yielding arms, substantially as and for the purposes herein set forth.

2. The rocking head A, provided with the sliding bar C, arms D D, and springs E E, all substantially as and for the purposes herein set forth.

3. The combination of the sliding bar C with its hinged arms D D and springs E E, the projection *a*, diagonally-grooved slide G, and wrist-pin H, all constructed and arranged as described within the rocking head A, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of August, 1870.

Witnesses:

KELLOGG H. LOOMIS.

C. L. EVERT,

A. N. MARR.