(No Model.)

G. W. EMERSON.

REVERSING LEVER FOR LOCOMOTIVES.

No. 412,608. Patented Oct. 8, 1889.

Fig. 1.

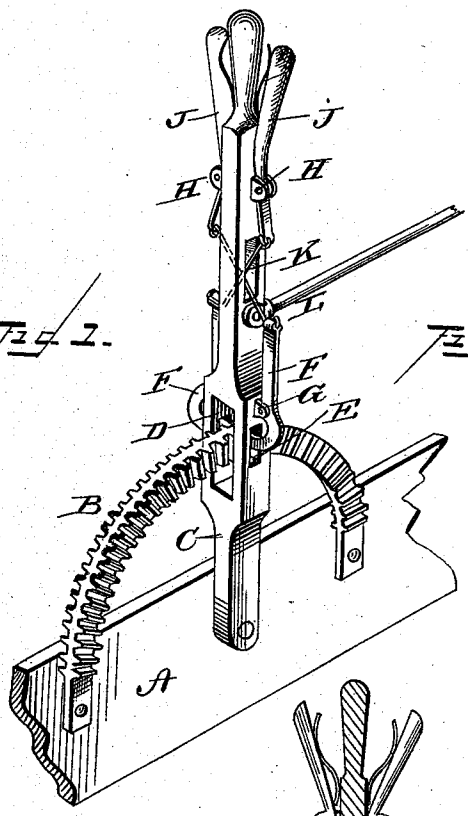


Fig. 2.

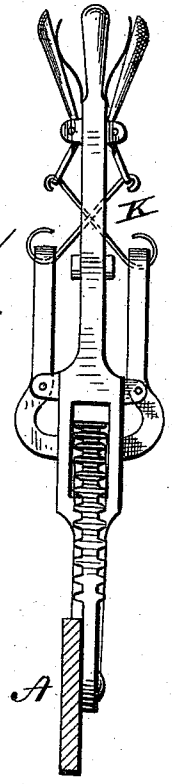
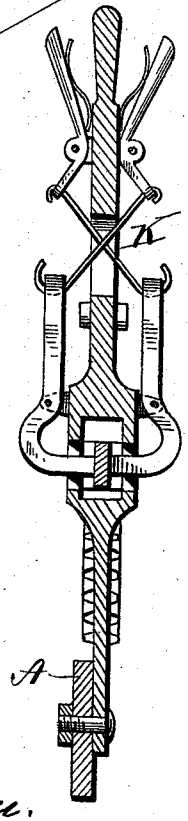


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE W. EMERSON, OF BLAKEMAN, KANSAS.

REVERSING-LEVER FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 412,608, dated October 8, 1889.

Application filed July 8, 1889. Serial No. 316,849. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. EMERSON, a citizen of the United States, and a resident of Blakeman, in the county of Rawlins and State of Kansas, have invented certain new and useful Improvements in Reversing-Levers for Locomotives; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in reversing-levers for locomotives, and has especial reference to an improved construction of lever for operating the mechanism to effect the starting, stopping, or reversing or governing the speed of the locomotive, the object of the invention being the production of a device of this character which can be easily and quickly operated to effect the desired end, and which will be of simple and durable construction and inexpensive.

To attain the desired objects, the invention consists of the improved device illustrated, described, and claimed herein.

Figure 1 represents a perspective view of a device embodying my invention. Fig. 2 represents a front end view thereof, and Fig. 3 represents a vertical sectional view thereof.

Referring by letter to the drawings, in which similar letters of reference denote corresponding parts in said figures, A designates a portion of the housing of the cab of a locomotive, to which is secured the curved segmental rack B, having teeth or cogs on each face.

C designates a lever pivoted at its lower end to the cab and traveling over the curved rack B, by reason of an opening or slot D therein, through which said rack passes, and said lever is also provided on its sides with openings or slots E, through which pass the engaging ends of pivoted detents or dogs F, which are pivoted to lugs G on the lever C, and engage the teeth of the curved rack for retaining the lever at any desired point on the said curved rack. Near the upper end of the lever C are pivoted by means of lugs H the levers J, connected with the detents F by means of springs K, said levers thus operating the dogs or detents to cause them to engage the rack. The springs K, it will be seen, are connected to the lower end of the levers and the upper ends of the detents and pass through an opening in the operating-lever C.

To the operating-lever C is connected a rod or bar L, which connects with the mechanism for causing the engine to move or stop, as desired.

From the foregoing description, taken in connection with the drawings, the operation of the invention will be readily understood. When it is desired to start the engine, the levers are pressed inward, removing the detents from engagement with the curved rack, and the operating-lever is then free to move to any desired place to allow the amount of steam to enter the engine to cause it to move, and the operating-lever may be moved to the desired position to cut off the steam and stop the engine, to supply the steam to cause the engine to travel at any desired speed, or to reverse the travel of the locomotive, as will be readily understood.

The advantages of my device will be readily understood and appreciated by all skilled in the art. The locomotive is placed under easy control of the engineer, enabling him to start, stop, reverse, or govern the travel of the locomotive with ease, and the device is of durable and simple construction, and may be applied to locomotives at a small cost.

I claim—

An attachment for locomotives, consisting of the rack having teeth on each side, the lever traveling on said rack, the detents pivoted to the lever for engaging the teeth of the rack, the levers pivoted to said rack, and the springs connecting the said levers and detents, all arranged and operating substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

GEORGE W. EMERSON.

Witnesses:

J. H. BRINEY,

S. W. CATLETT.