(No Model.)

G. F. GAGE.

RAILWAY SWITCH STAND.

No. 400,657. Patented Apr. 2, 1889.

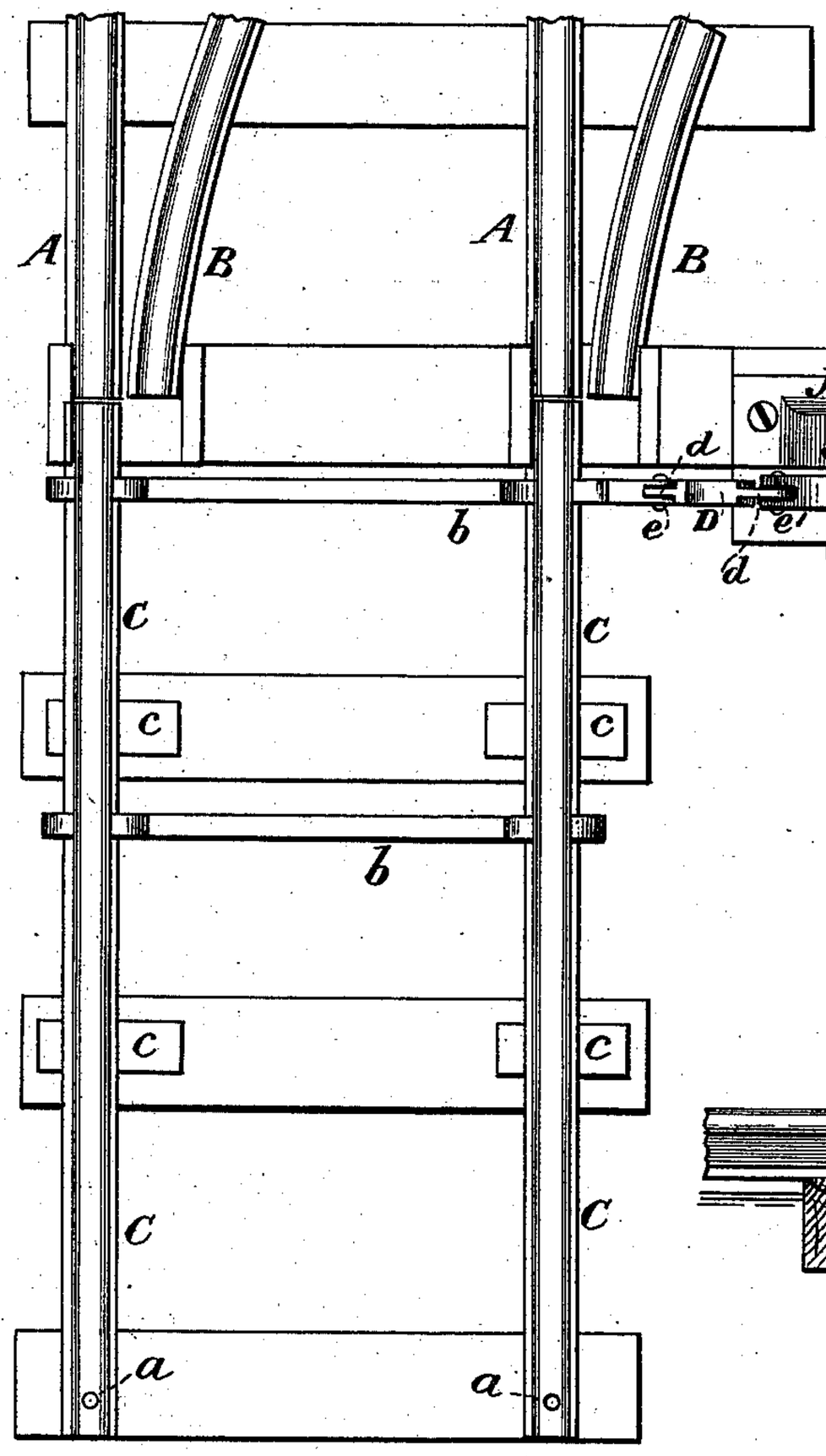


Fig. 1.

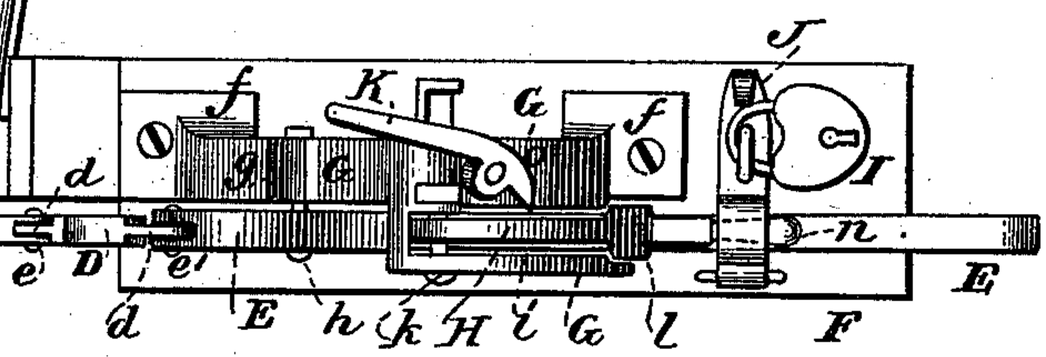


Fig. 3.

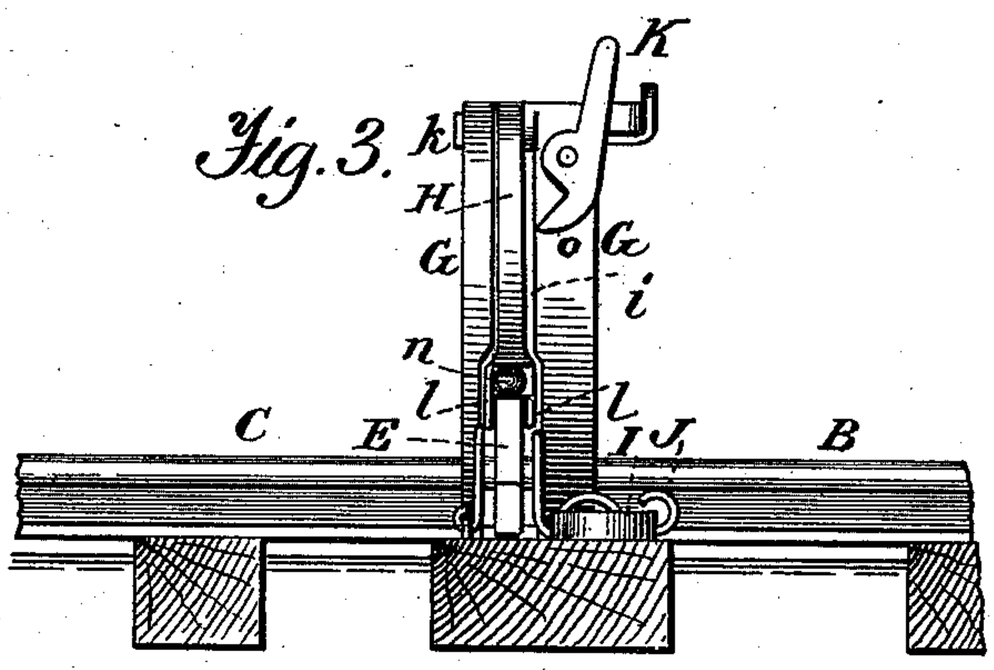
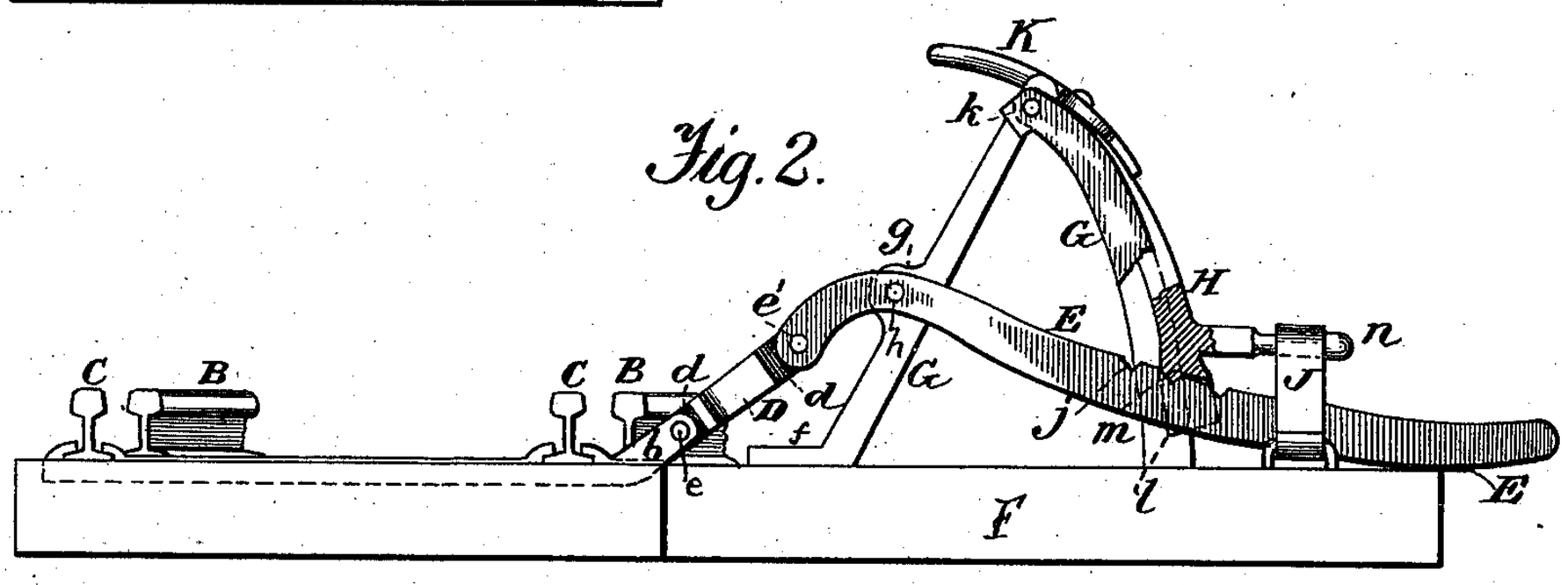


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE F. GAGE, OF HUNTINGDON, PENNSYLVANIA.

RAILWAY-SWITCH STAND.

SPECIFICATION forming part of Letters Patent No. 400,657, dated April 2, 1889.

Application filed November 9, 1888. Serial No. 290,362. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. GAGE, a citizen of the United States, residing at Huntingdon, in the county of Huntingdon and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Switches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in railway-switches, and more particularly to the means for operating the switch; and while it is designed more particularly as an improvement upon the mechanism illustrated in my application, No. 288,529, filed October 19, 1888, it is of course not restricted to such application.

The invention has for its object to simplify the prior construction, to dispense with the cogs, and to otherwise simplify and improve upon the same.

To the above ends, and to such others as the invention may pertain, the same consists in the peculiar combinations, and in the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a plan view of a portion of the main track, switch-rails, and switch-stand sufficient to illustrate my invention. Fig. 2 is a side elevation of the same, and Fig. 3 is an edge view.

Reference now being had to the details of the drawings by letter, A designates portions of the rails of the main track, and B those of a siding, all of which are secured to the cross-ties, and may be of the form and construction common in devices of this kind.

C C are the switch-rails, having their fulcrum at *a*, and connected by the cross-braces *b* in the usual manner.

c are metal wearing-plates on the cross-ties, and on which the switch-rails move. The brace connecting the ends of the switch-rails farthest from their fulcrum extends beyond one side of one of the rails, and has pivotally connected thereto one end of the link D, the other end of which is pivotally connected to one end of the switch-lever E. The pivotal connections may be formed in any well-known way—for instance, by forming the ends of the links with reduced portions *d*, which fit in the slotted end of the brace-rod and lever, and are there retained by the pivot-pins *e* and *e'*.

Secured to a suitable base-plate or other suitable support, F, is the bracket G, formed with lugs or ears *f*, by which it is held in position, and in an enlargement, *g*, of this bracket is pivoted, as at *h*, the switch-lever E. The said lever works in a slot, *i*, of the bracket G, as shown, and is provided at a point between its free end and its fulcrum with a notch or a plurality of notches, *j*.

H is what I term a "safety-lock." It is pivoted at one end, as at *k*, to the upper end of the bracket G, and works in the above-described slot of said bracket. It is preferably slightly curved to conform somewhat to the curvature of the front portion of the bracket, and at its lower end is formed or provided with the jaws or fingers *l*, to embrace the switch-lever, and between said jaws with a detent or tooth, *m*, to engage the notch of said lever. The said safety-lock is also provided with a suitable handle, *n*, by which it is operated.

To lock the lever in its normal position against meddlesome persons, I provide the lock and hasp I and J, as seen in the drawings; but of course other fastenings may be employed, if desired.

For use on side tracks a catch-lever, K, is provided, which is pivoted on the bracket G, near the upper end thereof, and curved, as shown, with its free end beveled, as shown at *o*, for the purpose of holding said lock in an elevated position.

The operation is simple and apparent. With the parts in the position shown in Fig. 1 the switch-lever is locked. When it is designed to switch a train onto the siding, the safety-lock is lifted up until its detent is disengaged from

the notch of the switch-lever, when the said switch-lever is free to be manipulated to move the switch-rails. The safety-lock follows the switch-lever in its upward movement, and when the said lever is lowered or allowed to fall the safety-lock falls with it, and as soon as it reaches its lowest position the detent engages the notch of the lever and locks it.

Having thus described my invention, what I claim is—

1. The combination, with the main track and the switch-rails, of the operating mechanism for said switch-rails, and a safety gravity-lock for the operating-lever of said mechanism, pivoted in a higher plane than said lever, and moving over the lever and engaging and locking the same when it is in the substantially horizontal position, substantially as described.

2. The combination, with the main track and the switch-rails, of the operating mechanism for said switch-rails, the operating-lever of which works through a slotted bracket, and the gravity safety-lock, also working through said slot and pivoted at its upper end, with its lower end embracing the lever, substantially as shown and described.

3. The combination, with the main track and the switch-rails, of the operating mechanism for said switch-rails, and a gravity safety-lock pivoted at its upper end above the lever of the operating mechanism, with its free end riding on said lever, and adapted to engage said lever below the pivot thereof when the lever is in a substantially horizontal position and lock the same, substantially as shown and described, and for the purpose specified.

4. The combination, with the main track and switch-rails and the operating mechanism for said switch-rails, of a safety-lock for the operating-lever, and a pivoted catch working at right angles to said safety-lock, substantially as and for the purpose specified.

5. The combination, with the main track and the switch-rails, of the operating mechanism for said switch-rails, the gravity safety-lock riding over the lever of said operating mechanism and provided with a handle, *n*, the lock and hasp I J, for locking said handle, and a pivoted catch working at right angles to the safety-lock, substantially as and for the purpose specified.

6. The combination, with the main and switch rails and the operating mechanism for the switch-rails, the operating-lever of which is formed with a notch, of a gravity safety-lock pivoted to the rear of the pivot of said operating-lever and on a higher plane and moving over and with the same, and formed with a detent to engage said notch and with jaws to embrace the lever, substantially as shown and described.

7. The combination, with the support F and the brackets G, secured thereto and provided with a slot, as described, of the operating-lever pivoted on said bracket and working in the slot thereof, and connected at its end to the mechanism for operating the rails, and the safety-lock pivoted at one end to said bracket and working in the slot thereof over said lever, substantially as described.

8. The combination, with the switch-rails, the support F, and the bracket G, secured to said support and formed with curved slotted portion, as described, of the operating-lever pivoted to said bracket and the curved safety-lock pivoted at one end to the apex of said bracket and working in said slot over and with the operating-lever, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE F. GAGE.

Witnesses:
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J. A. GREENLEAF.