(No Model.) 2 Sheets—Sheet 1.

C. A. LEHMAN.

THREE THROW SPLIT SWITCH.

No. 356,365. Patented Jan. 18, 1887.

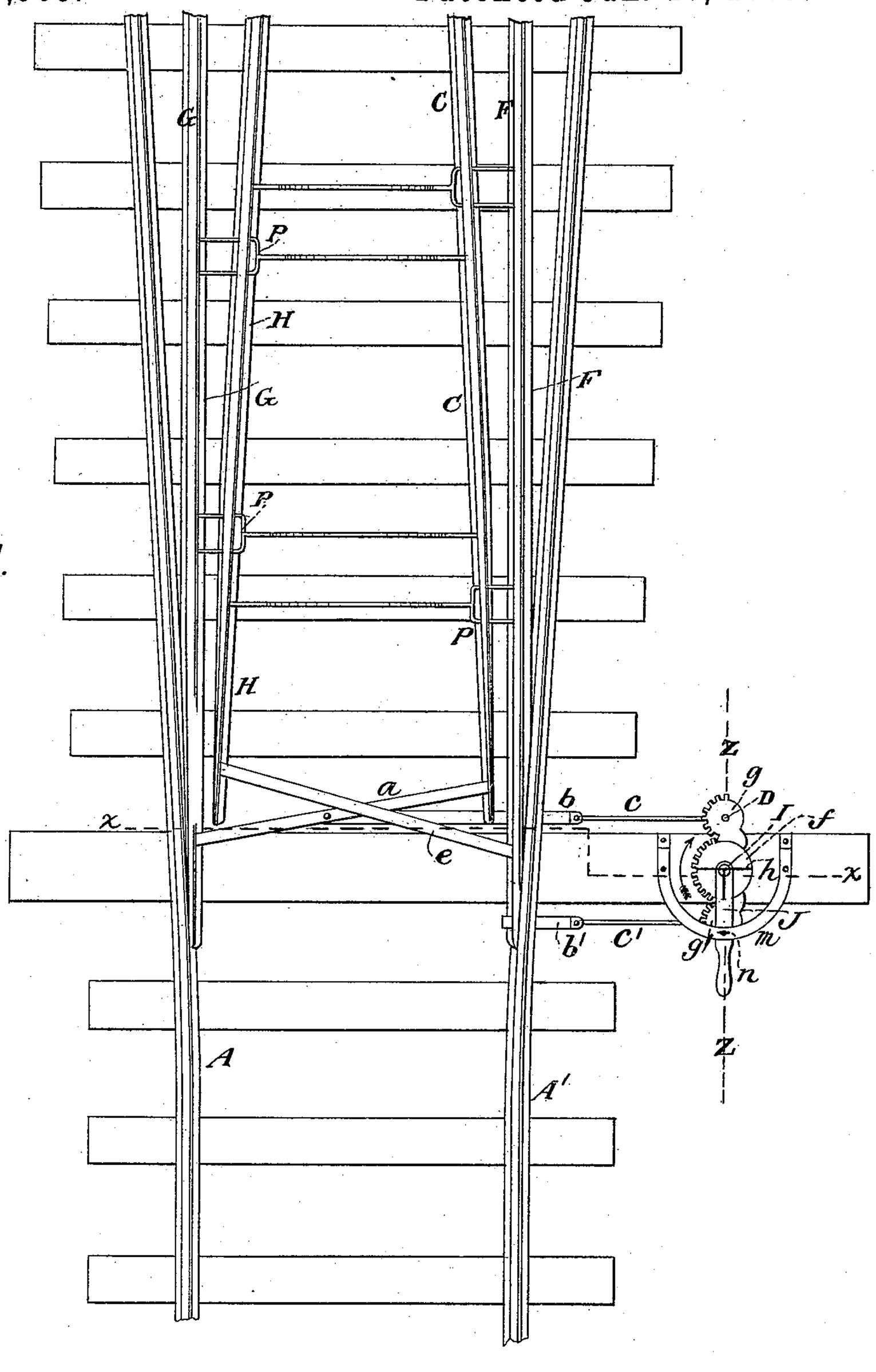

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

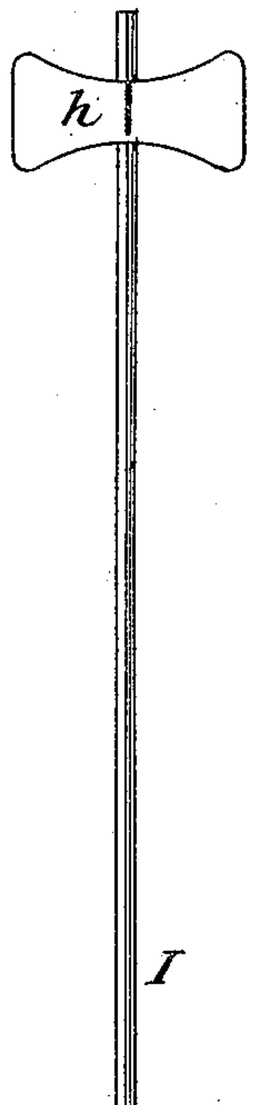
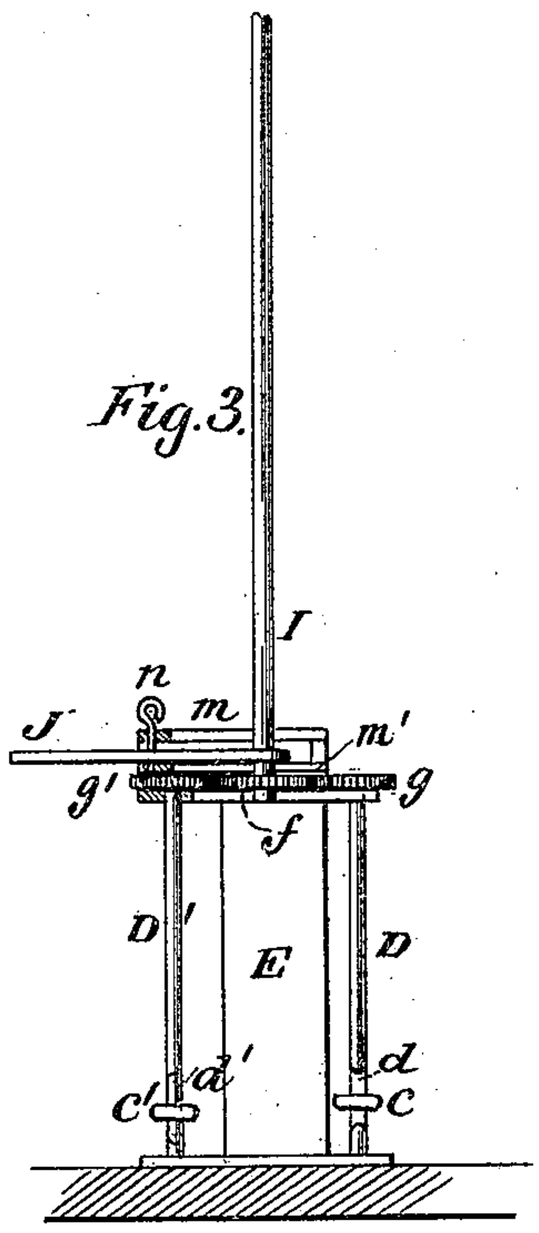


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES A. LEHMAN, OF STERLING, ILLINOIS.

THREE-THROW SPLIT SWITCH.

SPECIFICATION forming part of Letters Patent No. 356,365, dated January 18, 1887.

Application filed April 13, 1886. Serial No. 198,696. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. LEHMAN, of Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Three-Throw Split Switches, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to railway switches and stands; and it consists, first, in a simple arrangement of split switch, and, secondly, its combination with a switch-stand of novel construction.

Figure 1 is a plan view illustrating my improved switch and stand. Fig. 2 is a transverse sectional view of the switch and switch-stand on the line *x x*, Fig. 1; and Fig. 3 is a sectional view of the switch-stand on the line *z z*, Fig. 1.

Similar letters of reference indicate similar parts in the respective figures.

A A′ are rails, which, up to the point where the switch commences, constitute the main track, or the track from which the two other tracks diverge. At the point where the switch is located these rails diverge, as shown in Fig. 1, to afford sufficient space between them for locating the switch-rails.

C, F, G, and H are switch-rails, which are split or tapered at one end and adapted to form a substantially continuous track in conjunction with the rails with which they respectively come in contact, as hereinafter described. The rails C and G are connected near their points by the brace *a*, and the rails F and H are similarly connected by the brace *e*, so that the rails C and G will move simultaneously, as also will the rails F and H. To relieve these braces *a* and *e* from the strain occasioned by moving a switch-section, a series of bars connect the sections to be operated, each bar being provided with a bifurcated portion, P, to adapt it to play positively through the switch-section intervening.

The brace *a* is pivotally connected at its center to the inner end of the rod *b*, playing beneath the rails, and having its outer end extending beyond the track proper and perforated for the attachment of a rod, *c*. The other end of the rod *c* is connected to the crank portion *d* of a vertical shaft, D, having bearings at its lower and upper ends in the switch-stand E.

A rod, *b′*, is connected to the section F, extending beyond the track, and attached by a rod, *c′*, with the crank portion *d′* of a second vertical shaft, D′, mounted in the switch-stand.

Between the shafts D D′ is a third vertical shaft, I, which carries immediately above the stand a mutilated gear-disk, *f*, while the shafts D D′ are respectively provided at their upper ends with mutilated gear-disks *g g′*, adapted to gear with the disk *f*. The said shaft I may be extended up and provided with signal-wings *h*, as shown in Fig. 2. It will thus be seen that the rails C and G are moved by means of the rod *b* and its connections to the mutilated gear-disk *g*, and that the rails F and H are moved by means of the rod *b′* and its connections to the mutilated gear-disk *g′*. It will also be seen that the braces *a* and *e* and the switch-operating mechanism are located near the points of the switch-rails. By this arrangement a better leverage is obtained, and the points of the switch-rails are held firmly against the rails with which they come in contact.

The disks of the switch-stand being in the position illustrated in Fig. 1, and the rails and switch-sections being also disposed as shown in said figure, the parts are so adjusted that a train can pass to or from the main rails A A′ and the track composed of the switch-sections F and G. Upon rotating the shaft I by its lever J in the direction indicated by the arrow, Fig. 1, the teeth of the disk *f* will engage those of the disk *g*, rotating the latter and its shaft, and causing the rods *b c* to operate the brace *a*, so as to move the rail G out of position while throwing the rail C against the section F, which still remains in contact with the rail A′. By this adjustment the track is completed so as to switch off or from the track presented by the diverging portion of the rail A and switch-section C.

By moving the lever J from the position illustrated in Fig. 1 in a direction reverse to that indicated by the arrow the rail F will be thrown away from the rail A′, and, through its brace connection, will move the section H to complete the track presented by the diverging portion of the rail A′ and rail H.

The lever J of the stand plays between curved guides *m m*, which are perforated at

points corresponding with the three positions of the lever J, the latter being likewise perforated to register with the holes in the guides, in order that a bolt, *n*, may be passed through said lever and guides to lock the lever in position.

Having described my invention, I claim—

The diverging rails A A′ and a single switch-stand having the operating-rods *c c′* and *b b′*, combined with the switch-rails C G and F H and the braces *a e*, the rod *b* being attached to the brace *a*, and the rod *b′* to the free end of the switch-rail F, substantially as set forth.

In testimony whereof I hereunto set my hand and seal.

CHARLES A. LEHMAN. [L. S.]

Witnesses:
T. J. ELLIOTT,
GEORGE PAYSON.