S. Heywood.

Railroad Switch.

No. 29,786. Patented Aug. 28, 1860.

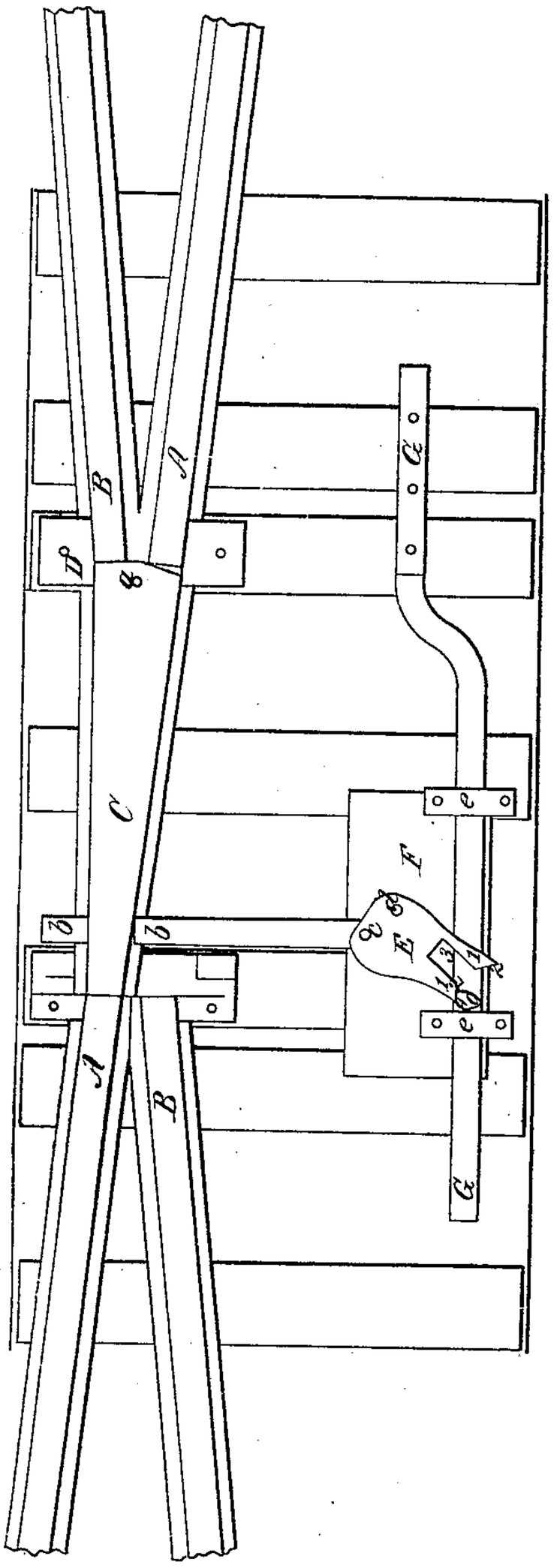

Fig. 1.

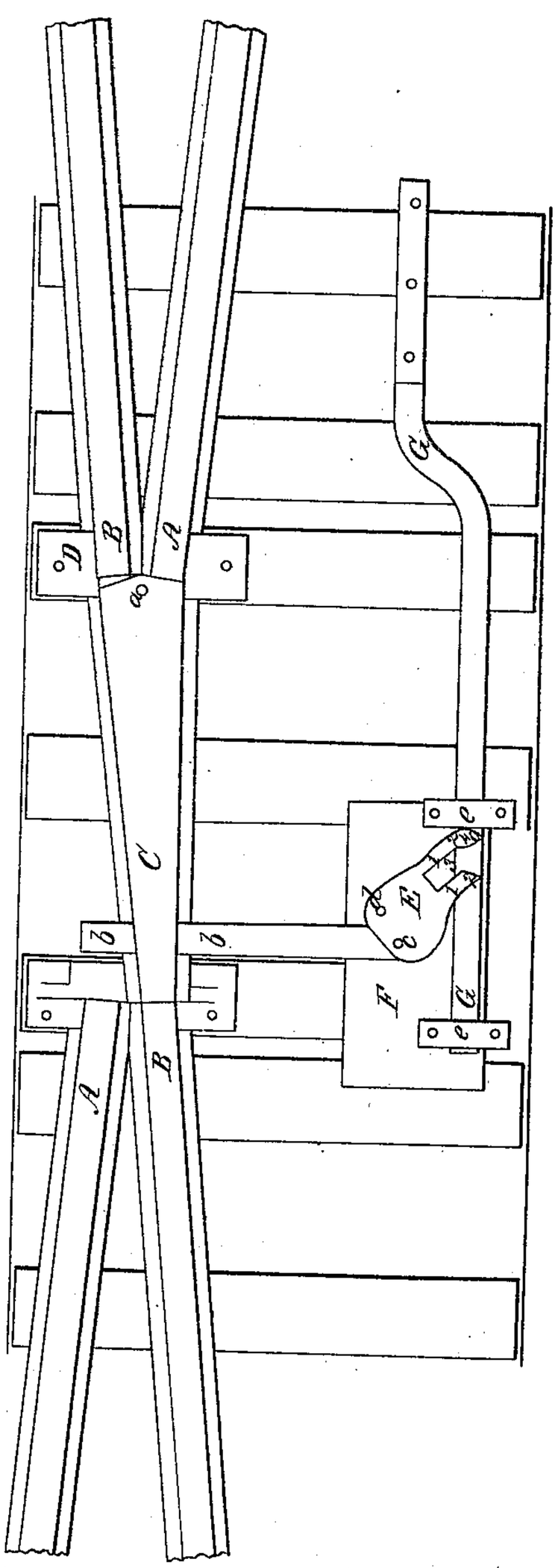

Fig. 2.

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UNITED STATES PATENT OFFICE.

SIMEON HEYWOOD, OF CLAREMONT, NEW HAMPSHIRE.

OPERATING RAILROAD-SWITCHES.

Specification of Letters Patent No. 29,786, dated August 28, 1860.

To all whom it may concern:

Be it known that I, SIMEON HEYWOOD, of Claremont, in the county of Sullivan and State of New Hampshire, have invented certain new and useful Improvements in Operating Frog or Rail Switches on Railroads; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, represents a frog switch in one of its positions, and with its operative parts in their respective positions, and Fig. 2, represents the same switch in its opposite position, and showing the relative positions of the several operative parts as they appear when the frog-switch is shifted to this position.

Similar letters of reference where they occur in the separate figures denote like parts of the switch mechanism in both of them.

Although I have shown the application of my switch mechanism to "frog-switches" alone, I desire it to be understood that, I also claim it, to operate "rail-switches," and whether both kinds of switches be operated at the same time as in my patent of the 26th of October 1858, or separately.

My invention consists, in the combination of a pivoted slotted knee, with a traversing bar and stud, for the purpose of operating the switches of railroads.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A, A and B, B, represent two lines of rails which cross each other at the frog C. The frog C, is represented in this case as pivoted at *a* to the chair or frog-plate D, to the point (or near it) of this frog—or frog-switch C, is secured in any ordinary manner, one end of the rod or bar *b*, the other end thereof being pivoted at *c*, to the forked knee or tumbler E, which in turn is pivoted at *d*, to a permanent bedplate or sill F. This knee or tumbler E, has two arms 1, 1, which are beveled off as seen at 2, 2, and which leave a slot 3 between them, for a purpose that will be hereafter mentioned.

G, is a bar, which can be slid through proper guides *e*, *e*, either by means of rack and pinion or other gearing, or by a lever or levers, or even by the cars or truck of any passing train, the object being to move it longitudinally to operate the switch or switches. On this bar G, there is a pin or stud *o*, which has one square side 4, the others being rounded off slightly so as to easily swing the slotted tumbler or knee E.

The switch being in one of its positions as seen in Fig. 1, the stud *o* has passed out of the slot 3, and its square side 4 rests against the inclined end 2, of one of the arms 1, which locks the switch against any lateral pressure upon it. When the switch is to be changed from this to its other position, the bar G, is moved in its bearings—the stud *o*, will slide along until it comes in contact with the opposite arm 1, of the tumbler E; it then turns said tumbler on its pivot *d* until the pivot or stud passes out of the slot 3, and still moving along its square side 4 comes against the other inclined end 2 of the arm 1, moving and locking the switch in its other position as shown in Fig. 2. It is obvious that, a rail switch or switches may be moved in the same way, and by the same motor, and at the same time, if it is desirable to do so. And I contemplate so using this device when occasion requires it. A switch pivoted at its center or thereabout may be moved also by this same mechanism. I have described the stud *o*, as having one square side, the other portions being rounded off. This is not actually and positively the case, for a round stud, or an oval or elliptical one, will accomplish the purpose, and I do not therefore confine myself to the use of a stud that has a portion of it flat or square, as it may be round or curved.

Having thus fully described my invention what I claim therein, and desire to secure by Letters Patent, is—

The combination of a pivoted slotted knee or tumbler, with a traversing bar and stud, for the purpose of operating the switches of rail roads, substantially as described.

SIMEON HEYWOOD.

Witnesses:

GEO. B. HEYWOOD,

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