

(No Model.)

3 Sheets—Sheet 1.

R. RUEPING.
COMBINED RAILWAY SWITCH AND CROSSING.

No. 462,852.

Patented Nov. 10, 1891.

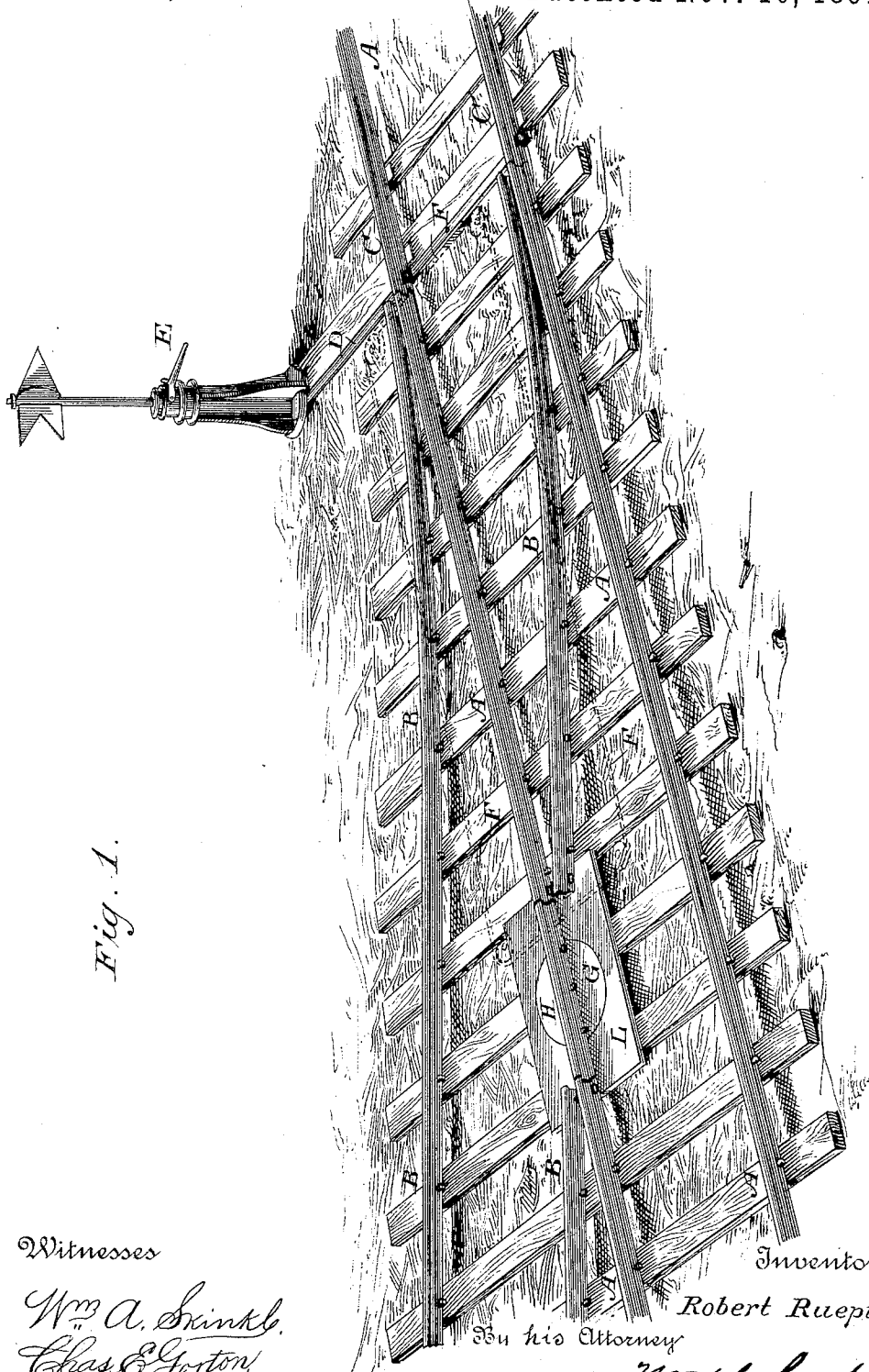


Fig. 1.

Witnesses

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By his Attorney

W. H. Chadsey

(No Model.)

3 Sheets—Sheet 2.

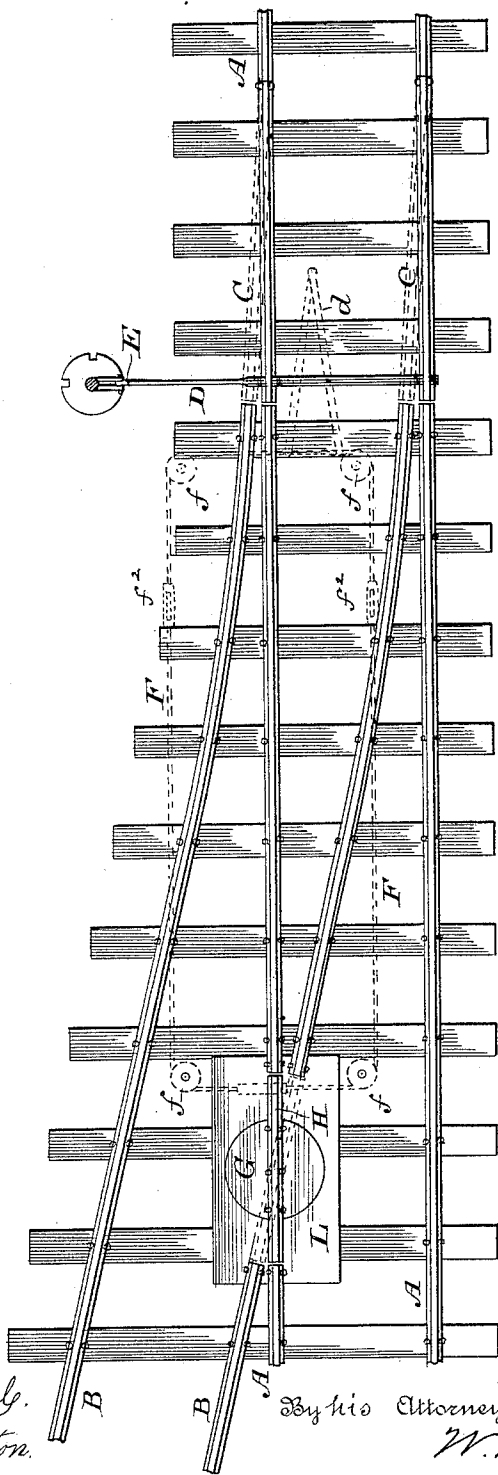
R. RUEPING.

COMBINED RAILWAY SWITCH AND CROSSING.

No. 462,852.

Patented Nov. 10, 1891.

Fig. 2.



Witnesses

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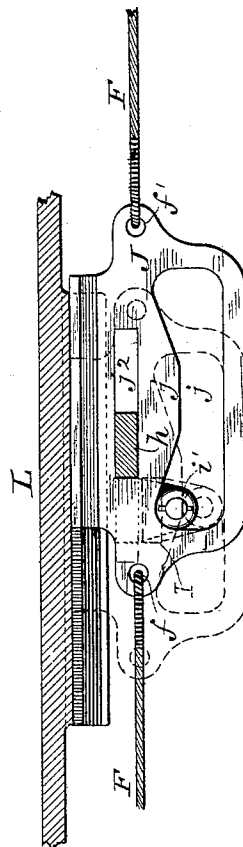


Fig. 6.

3 Sheets—Sheet 3.

No. 462,852.

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Fig. 3.

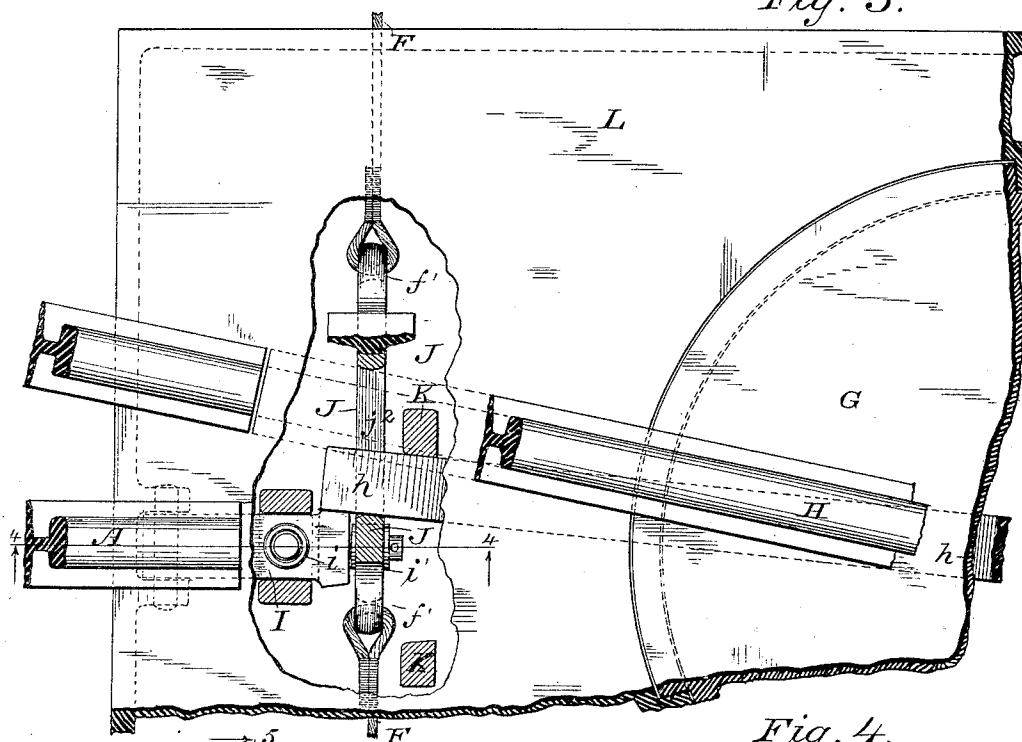


Fig. 4.

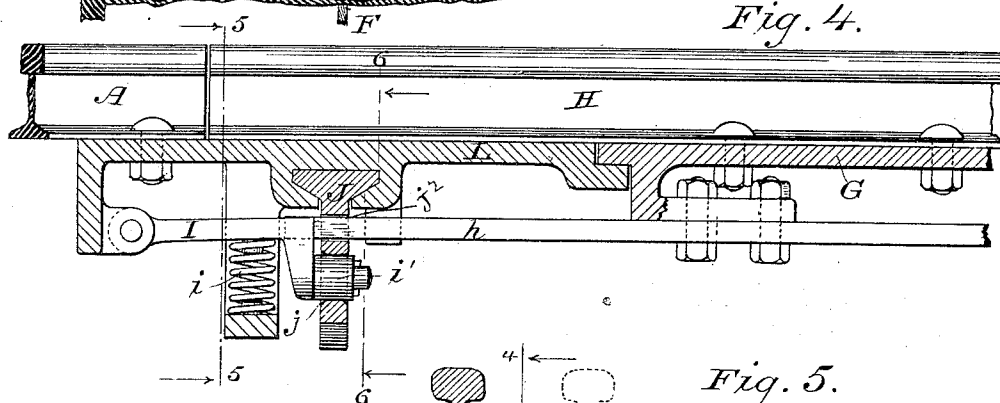
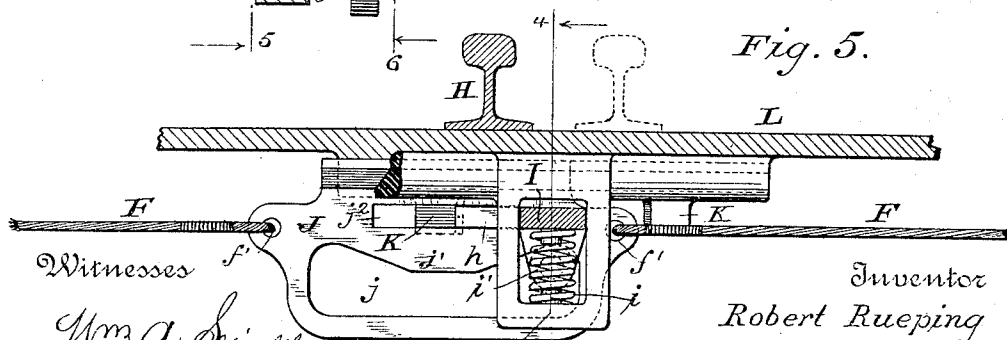


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT RUEPING, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-FOURTH TO
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COMBINED RAILWAY SWITCH AND CROSSING.

SPECIFICATION forming part of Letters Patent No. 462,852, dated November 10, 1891.

Application filed April 16, 1888. Serial No. 270,830. (No model.)

To all whom it may concern:

Be it known that I, ROBERT RUEPING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combined Railway Switch and Crossing; and I do hereby 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.

My invention relates to railway crossings and switches.

It has for its object to dispense with the wedge-shaped frog commonly used in connection with the switch at diagonal or divergent crossings, and to supply instead a separate section of rail that may be moved and automatically locked and securely held in position to form alternately a portion of the inner rail of each of two tracks, thus providing a substantially continuous rail at this point and obviating the destructive jars attending the employment of wedge-shaped and oblique openings at the rail ends.

It consists in a construction of parts connecting with the regular switch-lever and embracing a vibratory platform or turn-table carrying a section of a railway-rail and including an automatic device for locking the turn-table in either of its two extreme positions, the whole being operated by the movement of the switch-lever.

The ordinary solid plate having aligning points necessarily occasions jarring to the cars of a rapidly-moving train, the wheels of which jump from point to point, thus pounding down and rapidly wearing away the points, besides damaging the rolling-stock itself. This is obviated by my invention, no gaps and points being presented, a substantially-supported section of a rail on a turn-table taking the place of the wedge-shaped frog commonly used, the same being automatically and very securely locked in either of its two positions.

Figure 1 is a perspective view of a railway-switch and switch-lever and two diverging railway-tracks and a bed-plate with a circular vibratory platform or turn-table supporting a section of a railway-rail. Fig. 2 is a plan view

of the same, showing in dotted lines pulleys and a cable passing around said pulleys and arranged for connecting with the vibratory platform and also with the switch-lever. Fig. 3 is a broken away and partly sectional plan view of the circular vibratory platform or turn-table carrying the section of rail and the locking and unlocking mechanism of said vibratory part. Fig. 4 is a view taken on line 4 4 of Fig. 3, only the plate L and slide-bar being shown in section. Fig. 5 is an elevation in section taken on line 5 5 of Fig. 4. Fig. 6 is an elevation in section taken on line 6 6 of Fig. 4.

Similar letters of reference refer to similar parts throughout.

A A represent the main line of a railway.

B B represent the divergent siding.

C C represent the movable switch-rails.

D is a switch-bar.

E is a switch-lever.

F is a cable connected with the switch-bar D and passing around the pulleys.

G is a turn-table with which the cable is connected.

H is a section of a rail carried on the turn-table.

h is a lever bolted fast to the under side of the turn-table for operating the same.

I is a hinged lever for locking the lever h in position, a spring i urging upward the end furthestmost from its hinge when it is not forcibly depressed by a slide-bar operating upon a roller i' at its extreme end. The hinged lever I operates within a stirrup I', which prevents its lateral movement, said stirrup being an integral pendent part of the bed-plate or being a separately-constructed part and attached thereto. It also affords a seat for the spring i, that presses upward the locking end of the lever I.

J is a slide-bar, at each end of which the cable F is fastened in holes f' f'. The slide-bar is provided with a slot j, affording a lug j', downwardly projecting and having inclines adapted to rest upon the roller i' and press it downward against the action of its spring i when the slide-bar is moved one direction or the other, according to its position relatively thereto. The slide-bar is provided with a horizontal slot j², in which the extreme

end of lever *h* rests, the parts at the ends of said slot serving to abut against the end of said lever and move it in one direction or the other, according to the direction the slide-bar J is moved by the cable.

K K are lugs that serve to limit the vibratory movements of the lever *h*, and also serve for it to rest against under strain exerted by the cable F on the slide-bar J while the hinged lever I is raised to its highest position, and by reason thereof locking against the opposite edge of said lever *h*.

L is a fixed bed-plate surrounding the turn-table G and affording a circular opening in which the latter rests and in which the said turn-table may be vibrated to change the position of the section of rail H. The lugs K K are integral with the bed-plate, being pendant projections of sufficient length to be within the travel of the end lever *h* and limit its movements and stay the lever when solidly borne against one or the other. The bed-plate is provided with a dovetail recess on its under side, in which the upper portion of the slide-bar J is held and afforded range of end-wise movement, while at the same time being held thereby in vertical position. The bed-plate serves also to afford a hinging-point for the lever I and supports the ends of the rails A and B bolted thereto, as well as affording a frictional bearing and support to the ends of the section of rail H.

The switch-bar D may be directly connected to the cable F, so as to move together, or it may be connected to a pivoted lever *d* (shown in dotted lines in Fig. 2) and the latter have its extreme movable end securely attached to the cable for moving the latter.

The switch-lever and its bar and connections may be of any of the ordinary constructions, it only being essential to so connect the switch-bar with the cable as to give the requisite movement thereto to insure sufficient movement of the turn-table on moving the switch-rails to bring the rail-section, supported on the turn-table and securely bolted thereto, into proper position for forming a practically continuous rail at the crossing either for the main line or the siding.

The cable F is of the order known as "endless cables," the ends being joined in any suitable manner, as by the turn-buckles *f*². (Shown in dotted lines, Fig. 2.) Two or more of said turn-buckles may be used at suitable points in the cable to facilitate taking up slack or lengthening the cable, as may be desired.

A suitable conduit for the cable is to be provided beneath the tracks and ties, said conduit being made with the usual openings for convenience of access for adjusting, repairing, cleaning, &c., and with proper means for removing any water that perchance may get therein, as by inclining its bottom so as

to drain to a certain point and providing an exit there.

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

1. A main railway-track and siding and a turn-table carrying a section of rail, mechanism connecting with the turn-table for partly rotating it in one direction or the other in switching operations, and a locking and unlocking mechanism located at or near the turn-table, the turn-table-operating mechanism being connected with the locking and unlocking mechanism for operating the latter in both its capacities as well as the turn-table in both its movements, substantially as and for the purpose described.

2. A railway-switch having a main track and siding provided with a turn-table carrying a section of rail, in combination with locking and unlocking mechanism located at and operating upon the turn-table and connected with the ordinary switch-operating mechanism, substantially as and for the purpose described.

3. The combination of a railway-switch with main track and siding, a turn-table provided with a section of a rail, and a cable passing around pulleys in a plane beneath the rails and ties of the tracks and connecting the switch-operating mechanism and the turn-table, substantially as and for the purpose described.

4. The combination of a railway-switch with main track and siding, a turn-table carrying a section of rail, a cable passing from the switch-operating mechanism to the turn-table and connecting therewith, and with a locking and unlocking mechanism, substantially as and for the purpose described.

5. A turn-table G, a lever *h*, and a lock-lever I, in combination with a slide-bar J, and mechanism for operating the latter and through it the turn-table, substantially as and for the purpose described.

6. A turn-table G, a bed-plate L, having lugs K K, a lever *h*, and a lock-lever I, in combination with a slide-bar J, and mechanism for operating the latter and thereby the turn-table, substantially as and for the purpose described.

7. A turn-table G, carrying a rail-section H and provided with a lever *h*, lugs K K, and a lock-lever provided with a spring *i* and a roller *i'*, in combination with a slide-bar J and cable F, substantially as and for the purpose described.

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

ROBERT RUEPING.

Witnesses:

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WILLIAM H. CHADSEY.