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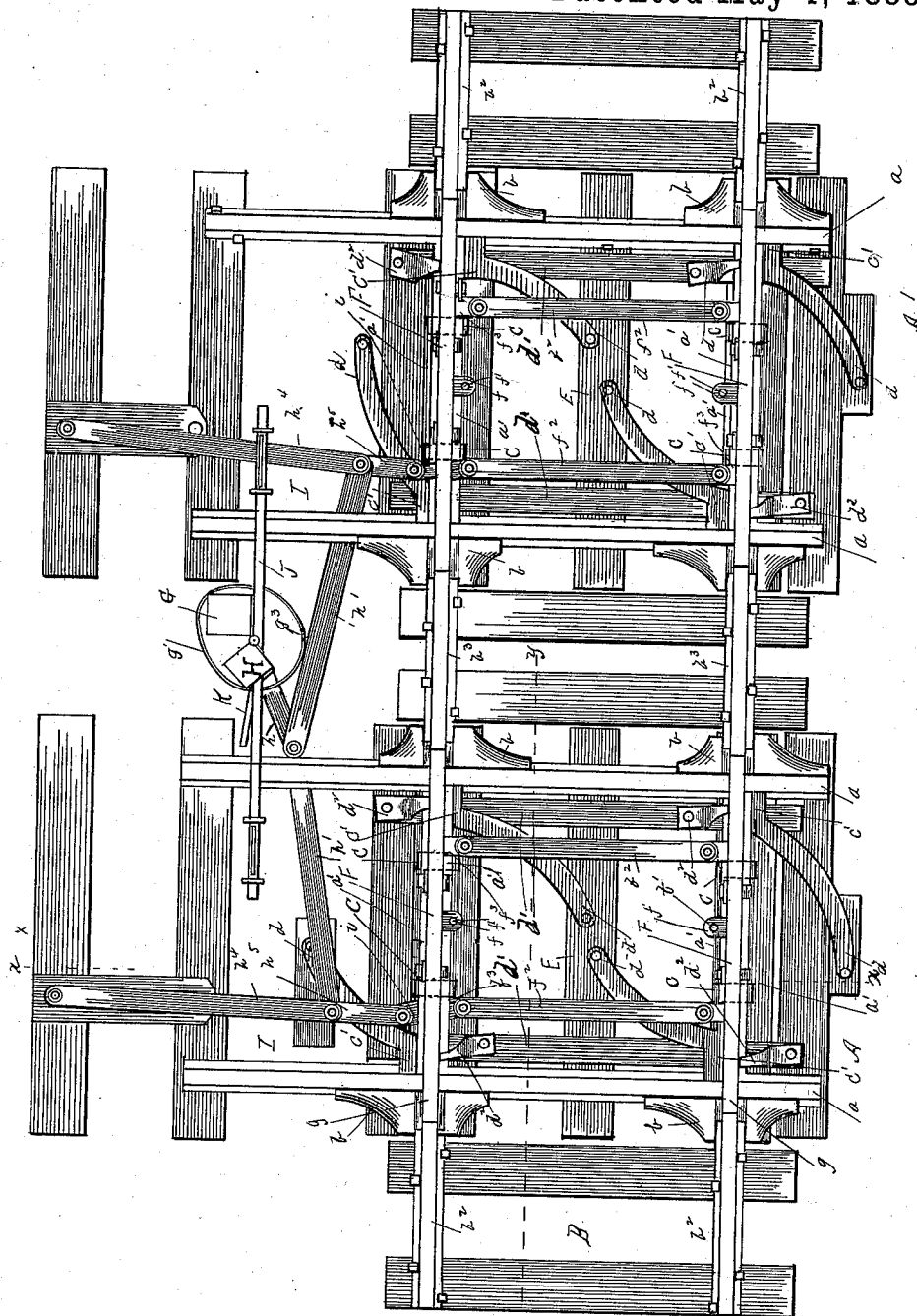
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J. T. MABBEY.
RAILROAD CROSSING.

No. 382,173.

Patented May 1, 1888.

Fig 1



WITNESSES.

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3 Sheets—Sheet 2.

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Fig 2

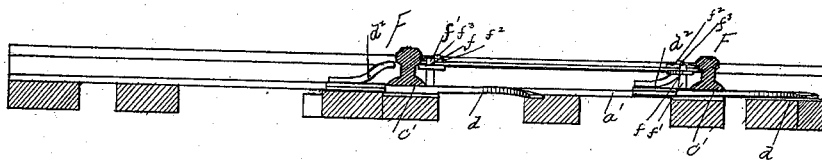


Fig 3

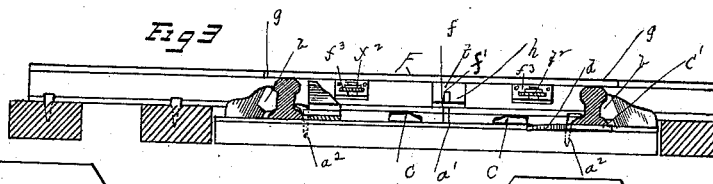
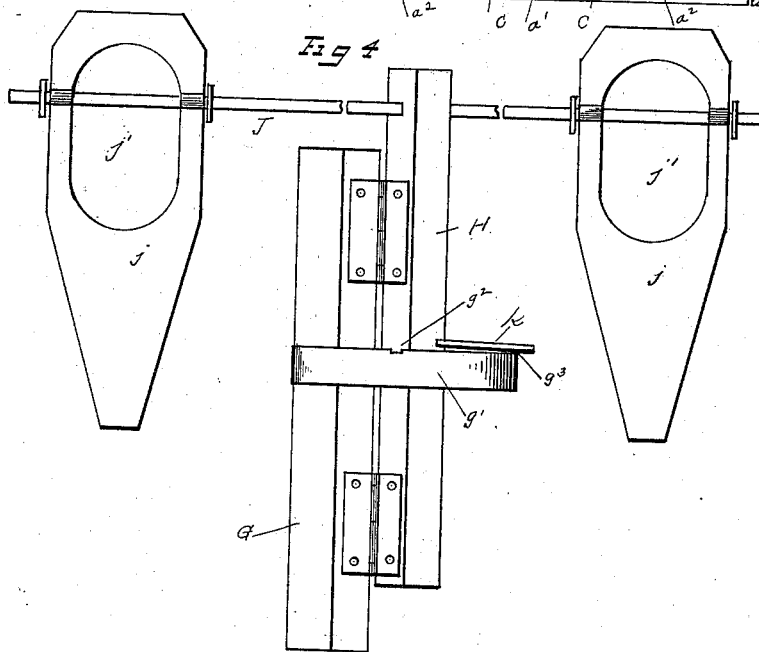


Fig 4



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3 Sheets—Sheet 3.

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Fig. 5.

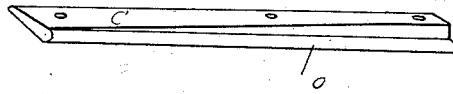


Fig. 6.

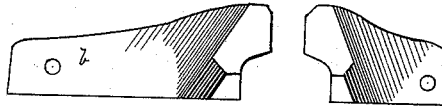


Fig. 7.

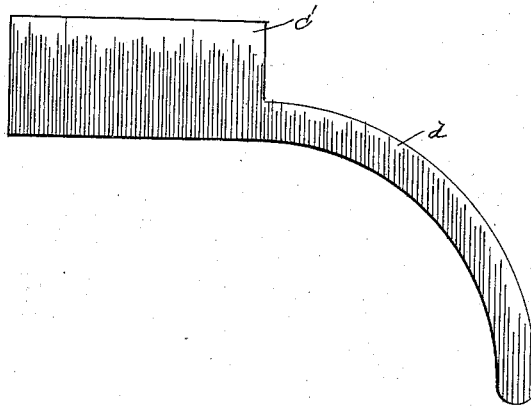


Fig. 8.

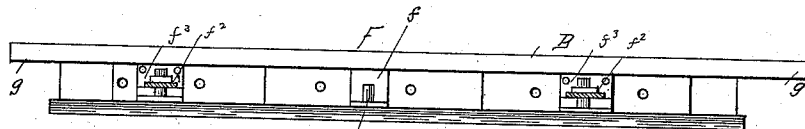
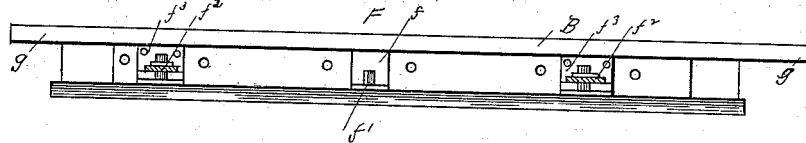


Fig. 9.



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UNITED STATES PATENT OFFICE.

JESSE T. MABBEY, OF FOREST, OHIO.

RAILROAD-CROSSING.

SPECIFICATION forming part of Letters Patent No. 382,173, dated May 1, 1888.

Application filed January 30, 1888. Serial No. 262,453. (No model.)

To all whom it may concern:

Be it known that I, JESSE T. MABBEY, a citizen of the United States of America, residing at Forest, in the county of Hardin and State of Ohio, have invented certain new and useful Improvements in Railroad-Crossings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in railroad-crossings, having for its object, primarily, the provision of simple and efficient means for moving sections of a cross-track of a railroad to permit of the passage of a train or trains on the main tracks, and also to provide means whereby a train on the cross-track will cross the main tracks without injury to the rails of the latter track and without jolting of the train.

A further object of the invention is to provide means whereby the pivoted sections of the cross-rails will be lowered when displaced and to occupy the proper position on a line with the other parts of the rail when set for the passage of a train on the cross-track; and my invention also comprises means for operating the sections for a double track, and the same are also applicable to a single track or to two double tracks.

A further object of the invention is to provide means for preventing the lateral displacement of the rails of the main track and to hold the same always parallel to each other.

With these objects in view my invention comprises the detail construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my invention. Fig. 2 is a cross-sectional view on the line *x x*, Fig. 1. Fig. 3 is a cross-sectional view on the line *y y*, Fig. 1. Figs. 3, 4, 5, 6, 7, and 8 are detail views; and Fig. 9 is a view of a modification.

Referring to the drawings, A A' designate the main track; or the latter may be used as a side track and the former as the main track.

B indicates the cross-track, the rails of which at the point of crossing are slightly above and are designed to project over the rails of the main track. The rails *a a* of each main track are additionally secured or held in position to their ordinary retaining ties by means of trans-

verse securing plates *a' a'*, which extend under the rails, and are secured in position on the inner sides of said rails by means of the spikes *a²*, driven therethrough and bearing against recesses in the flanges of the rails. These plates are designed to prevent the lateral displacement of the rails of the main tracks with relation to each other, and thereby said rails are always held parallel. Upon their outer sides these rails are braced or supported by means of chairs *b b*, which are secured against the outer sides of the rails and have grooved outer sides, into which grooves project the ends of the adjoining rails *b² b²* of the cross-line B, the tread of each of said rails of the cross line being extended onto the upper surface of said chairs, as shown.

C C are supporting plates, rigidly secured two to each of the transverse plates *a' a'*, and said plates have their upper surfaces curved or inclined in opposite directions, as at *c² c²*.

C' C' are flat plates having outwardly-projecting inclined bent arms *d d*, said plates being secured at their widened flattened portions on the upper sides of longitudinal cross-bars *d' d'*, running parallel with the rails of the main line. Two of these plates having inclined bent arms are placed adjoining the inner side of each rail, so that their curved arms will project inwardly toward the center of the track, and said arms are secured at their outer lower ends to the upper sides of the ties or sleepers E.

Upon the upper surfaces of the longitudinal bars *d'* are secured retaining-plates *d² d²*, having upwardly-projecting portions, as shown. Two of these securing-plates are placed upon each of said longitudinal bars and extend each in the same direction, but opposite to those of the adjoining parallel bars *d'*, as shown.

F F are pivoted rail-sections, designed to have an inner and outer upward and downward movement, the object of which is to permit of their being lowered below or on a line with the surface of the rails of the main track. These pivoted rail-sections are provided with apertured ears or lugs *f f*, through which short projecting posts *f' f'* of the transverse plates *a' a'* are projected, forming a pivotal point for said sections. The opposite sections are connected together by means of pivoted arms *f² f²*, pivotally secured at their ends to apertured

ears or lugs $f^3 f^3$. These apertured ears or lugs $f' f^3$ have vertical portions, which are secured against the inner opposite sides of the webs of the rails by means of bolts passed therethrough; or, if desired, said apertured lugs can be secured to one continuous plate, as shown in Fig. 9, which plate is likewise secured to the sides of the web of the rail. These rail-sections are designed to rest upon the flat plates $C' C'$ when in their normal positions, and to slide or move upon the curved or bent arms $d d$ when thrown out of position, whereby they will raise or lower on their pivotal posts, and each of these rail-sections has its tread projecting at its ends, as at $g g$, some distance beyond the main or body portion of the rails, as shown, whereby when in position said projecting portions of the treads will extend over the treads of the rails of the main track and fit snugly against the adjoining ends of the rails of the cross-track and bear upon the upper surfaces of the chairs $b b$.

G is a stationary post secured, preferably, between the tracks of the main line, and has secured thereto a hoop or band, g' , provided in its upper edges with two notches, $g^2 g^3$. To this post is hinged or otherwise pivotally secured a second movable post, H , to which is secured one end of a right-angular arm, h , and to the outer end of this are pivotally secured the inner ends of two similar arms or pitmen, $h' h'$, to the outer ends of which are likewise pivotally secured the meeting ends of the long and short arms $h^4 h^5$ of jointed levers I . The outer ends of the long arms h^4 of these double levers I are each pivotally secured to a tie of the main track, and the outer ends of the short arms h^5 of said levers I are likewise pivotally secured to apertured ears or lugs $i i$, secured to the outer sides of the webs of the adjoining rail-sections, as shown.

J is a long horizontal rod projecting through an aperture in the upper portion of the hinged post H , and at its outer ends it carries signals $j j$, in which are formed openings $j' j'$, so that lanterns can be hung therein for giving signals at night, as is obvious.

K is an arm or lever rigidly secured at one end in the hinged post H , and is designed to rest upon the upper edge of the hoop or band g' , and to be secured in either one of the notches or recesses $g^2 g^3$.

From the foregoing description it will be seen that, supposing the cross-track to be in position for the passage of the train thereover and it is desired to provide for the passage of the train or trains of one or both of the tracks of the main line, the operator, by removing the arm or lever K from the notch g^2 and forcing the same around to the notch g^3 , will effect through the agency of the pivoted arms h' and jointed levers I the displacement of the pivoted sections of the rails of the cross-line, said pivoted sections being lowered beneath or on a line with the upper surfaces of the treads of the rails of the main line by reason of their movement on the curved in-

clined arms d . When in this position, the signal-bar is on a line parallel with the main tracks, and consequently projects over the cross-line, so as to give a signal to an approaching train on that line of the disjointed connections.

When it is desired to provide for the passage of a train on the cross-line, the operator replaces the arm or lever K in the groove g^2 , thereby moving the hinged post and through the agency of the pivoted arms and joint-levers effects the replacement of the pivoted rail-sections, which in this movement are elevated above the main track, and when in their proper positions said rail-sections are supported by supporting-plates $C' C'$, and are held by means of the curved projecting plates $d^2 d^2$ against the under sides of the upwardly-projecting portions of which bear the flanges of the rail-sections. The rails of the cross-line are now in the position for the passage of a train thereover, and when the parts are in this position the signal-rod is parallel with the cross-line and the signals overhang the main tracks for giving signal to any approaching trains.

The advantages of my invention will be apparent to those skilled in the art to which it appertains, and the same comprises advantages in points of simplicity, durability, general efficiency, and inexpensiveness, and by means thereof the connecting rail-sections of a cross-track can at one time be removed from the double tracks of the main line, and said rail-sections are lowered beneath or on a line with the treads of the rails of said main lines, so as to permit of the unobstructed passage of trains thereover.

It will be understood that without departing from the spirit of my invention changes in the construction and arrangement thereof can be made, and it will also be understood that if the cross-line is composed of a double track similar to that illustrated on the main line the parts herein described and shown in the accompanying drawings can be duplicated, so as to operate the rail-sections of the other track simultaneously with those described.

I claim as my invention—

1. As an improvement in railroad-crossings, the rail-sections pivoted at their centers and the bent inclined arms over which said rail-sections move, substantially as shown and described.

2. As an improvement in railroad-crossings, the rail-sections pivotally secured at their centers, the arms f^2 , pivotally connected to said rail sections, the bent inclined arms C' , and the supporting-plates C , having inclined upper surfaces, substantially as shown and described.

3. As an improvement in railroad-crossings, the pivoted rail-sections having the connecting-arms, the bent inclined arms over which said rail-sections move, the hinged post, the pivoted arms connected thereto, and the jointed levers, substantially as shown and described.

4. The combination, with the stationary

post, of the hinged post secured thereto and having a right-angular arm or bracket, the grooved hoop or band, the arm or lever, the pivoted rail-sections, the jointed levers and
5 the connecting-arms secured to said right-angular arm or bracket, and the signal rod or bar, substantially as shown and described.

10 5. As an improvement in railroad-crossings, the transverse plates *a'*, secured to the rails by means of spikes, and the chairs secured on

the outer sides of said rails, substantially as shown and described, whereby said rails are held as against lateral displacement with relation to each other, as stated.

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

JESSE T. MABBEY.

Witnesses:

CHARLES H. RODGERS,
JAS. C. TOWERS.