(No Model.) 2 Sheets—Sheet 1.

R. FULLER.

RAILWAY CROSSING.

No. 534,037. Patented Feb. 12, 1895.

Fig. 3.

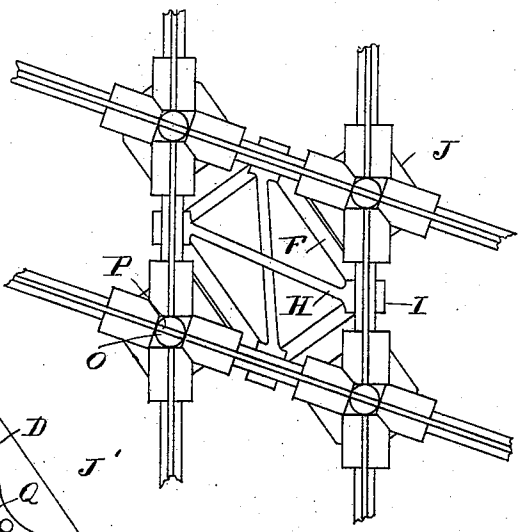
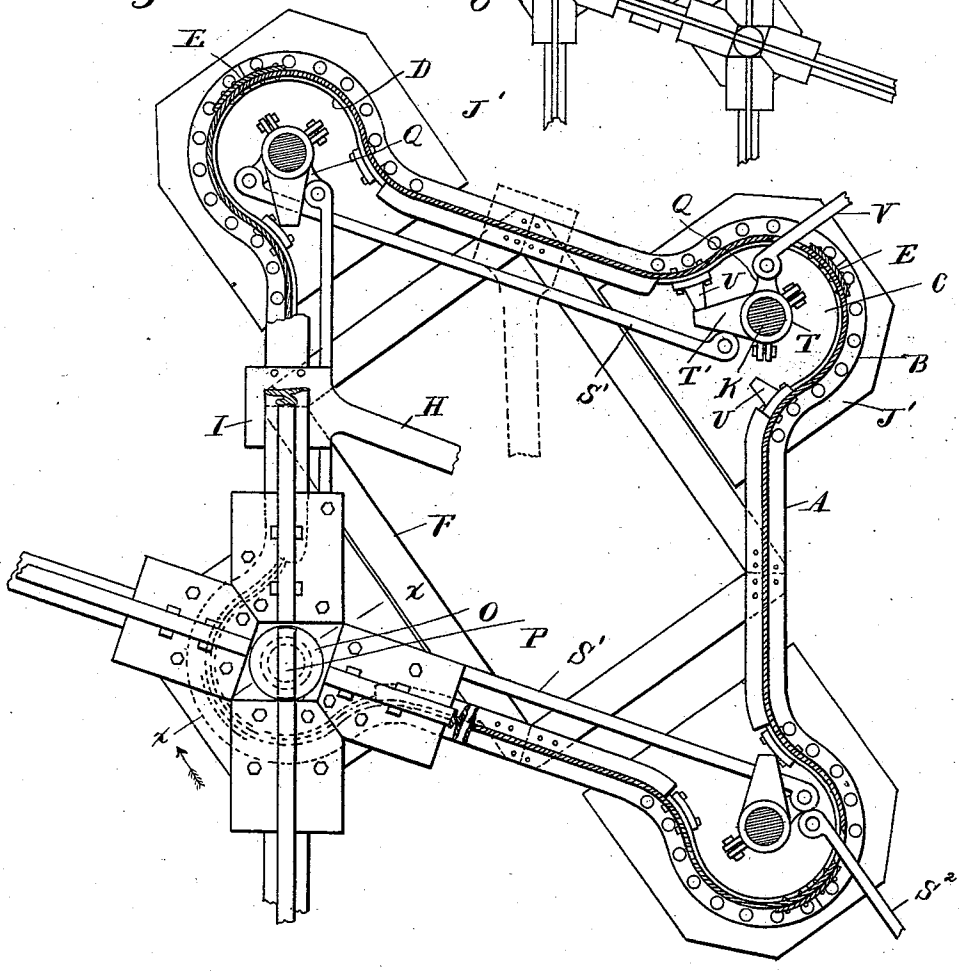


Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

R. FULLER.

RAILWAY CROSSING.

No. 534,037. Patented Feb. 12, 1895.

Fig. 2.

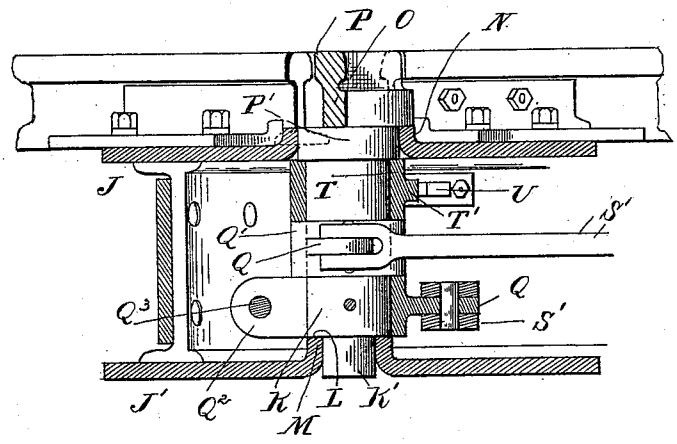


Fig. 5.

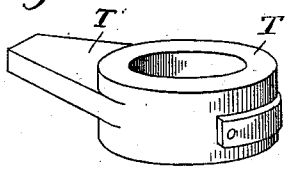


Fig. 4.

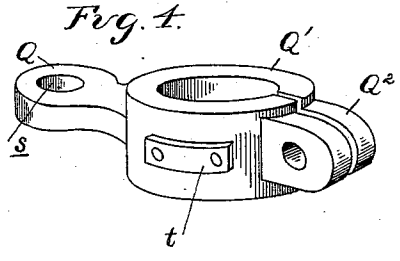
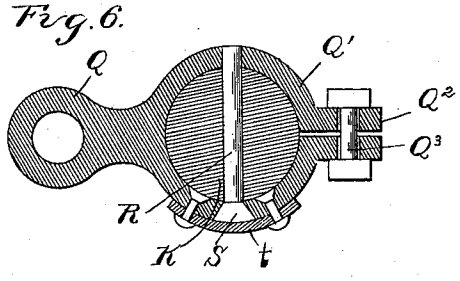


Fig. 6.



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UNITED STATES PATENT OFFICE.

RODOLPHUS FULLER, OF DETROIT, MICHIGAN.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 534,037, dated February 12, 1895.

Application filed March 19, 1894. Serial No. 504,160. (No model.)

To all whom it may concern:

Be it known that I, RODOLPHUS FULLER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Railway-Crossings, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction of the supporting frame or curb, supporting movable rail sections adapted to be registered with their track.

The invention further consists in the peculiar construction of the rotatable posts carrying the rail sections, and the actuating crank arms therefor, and further in the peculiar construction and arrangement of the various parts.

In the drawings, Figure 1 is a horizontal section, partly in plan of a railway crossing embodying my invention. Fig. 2 is a cross section partly in elevation on line *x x* of Fig. 1, showing the movable rail section and its post in elevation. Fig. 3 is a plan view of a crossing. Fig. 4 is a detached perspective view of one of the crank arms and its clamping collar. Fig. 5 is a detached perspective view of one of the stops and its collar. Fig. 6 is a horizontal section through the post illustrating the manner of securing the crank arms thereto.

My construction is especially designed as an improvement upon the type of crossing shown in Patent No. 355,156, of December 28, 1886, to simplify and strengthen the curb and to reduce to a minimum the friction in turning the rotatable posts.

The curbing I make of **I** beams having the straight portions A in the middle and the curved portions B at each end, four such **I** beams forming when arranged together with meeting ends a four-sided curb, with circular enlargements or wells C at each corner, extending outside the line of the straight portion A. In previous constructions of such curbing, channel beams have been employed, to which reinforcing strips of various kinds have been secured. By making the sections of **I** beams, I am enabled to get greater strength than is present in the channel beams and the reinforcing flanges and at the same time save the expense and time necessary to rivet such flanges.

In order to permit me to bend the **I** beams into the end sections B, I cut away the inner flanges D of the **I** beam in such curved sections, which enables me to readily bend the ends thus cut. The meeting ends of the sections are connected together in any suitable manner, such for instance as by the straps E overlapping the joint and riveted to the meeting ends of the webs between the top and bottom flanges.

The straight sections A are arranged in such relation to the crossing tracks or rails as to be directly beneath the same, and the use of **I** beams in such sections gives me support for both sides of the foot of the rail, the web of the rail and the web of the **I** beam being arranged in vertical line, as plainly illustrated in Fig. 1.

F are diagonal braces having beveled meeting ends G connecting together centrally the sections A of the curbing the mitered ends abutting and riveted to the bottom flange of the **I** beams.

H are tie plates extending centrally between the opposite sections and provided with heads I resting on said sections and riveted to the top flanges thereof. This construction gives me a rigid outer frame or curb tied together and braced so as to make an absolutely firm and rigid structure for the support of the rails and rail sections. The corner wells are covered by the top plate J and at the bottom by the bottom plate J′, riveted or otherwise secured to the flanges of the **I** beams.

K are corner posts arranged in the corner wells with their centers in line with the straight portions A of the **I** beams. These posts are provided at their lower ends with a pin K′ and between the pin and the post is formed a shoulder L, which rests upon a flange M struck up from the bottom plate J′, the pin K′ being guided in its rotation within such flange.

The curb plate or cover of the well is provided with an aperture for the post and with a flange N struck up around the edges thereof upon which the under face of a collar O engages. The top of the post is provided with a rail section P adapted to fit between the ends of the track rails.

P′ is a bearing collar adapted to fit within the flange N of the upper plate. These posts are provided with actuating crank arms Q, preferably of the construction shown in Fig. 4, in which the crank arms are shown, provided with suitable crank pin bearings and having formed integral therewith the split collar Q′ having lugs Q^2 through which a clamping bolt Q^3 is adapted to pass to clamp the collar tightly upon the post. The post is apertured to receive a key or pin R which passes through corresponding apertures in the collar and is provided with a tapering or enlarged head S adapted to fit a corresponding aperture in the collar and is secured in position by means of a cap plate *t* riveted to the collar across the end of the pin, as plainly shown in Fig. 6. Each post is provided with two of these crank arms arranged one upon the other at an angle to each other, and the crank arms are connected together in series by means of the connecting rods S′. One of the posts is provided with an actuating connecting rod S^2 which extends from the interlocking towers and by means of which the posts are rotated. Above the crank arms on the posts are secured the collars T, which are provided with arms T′ adapted to strike against corresponding arms or lugs U on the inner faces of the wells, acting as stops to limit the rotary movement of the posts.

V is a connecting rod extending from the last post of the series to the interlocking mechanism, the posts thus being connected in series between the actuating bar and the interlocking bar.

I preferably arrange the collars T and Q′ to fill the entire space in the lower edge of the collar P′ of the post and the upper edge of the flange M on the bottom plate of the well.

What I claim as my invention is—

1. In a railway crossing, the combination of the movable rail sections at the rail intersections, of a curbing to support the same consisting of **I** beams having the central straight sections the end curved sections, having the inner flanges removed, and straps E connecting the adjoining curved sections together, substantially as described.

2. In a railway crossing, the combination of the movable rail sections at the rail intersections, of a curbing to support the same consisting of **I** beams having straight central sections, the end curved sections having their inner flanges removed, straps E connecting the adjoining curved sections and the diagonal braces F, and the tie plates I secured centrally to the bottom flanges of the **I** beams, substantially as described.

3. In a railway crossing, the combination with the curbing having corner wells and top and bottom plates for the wells, of posts journaled in the top and bottom plates, rail sections secured thereon, crank arms on the posts, collars on the posts, arms on the collars, lugs on the inner face of the wells adapted to engage the arms on the collars, and means for actuating the crank arms, substantially as described.

4. In a railway crossing, substantially as described, the posts carrying the rail sections, the clamping sleeves embracing such posts, headed pins passing through the post and sleeve, the plates T over the head of such pins, and the bolts for securing such plates over the head of the pins, substantially as described.

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

RODOLPHUS FULLER.

Witnesses:
M. B. O'DOGHERTY,
O. F. BARTHEL.