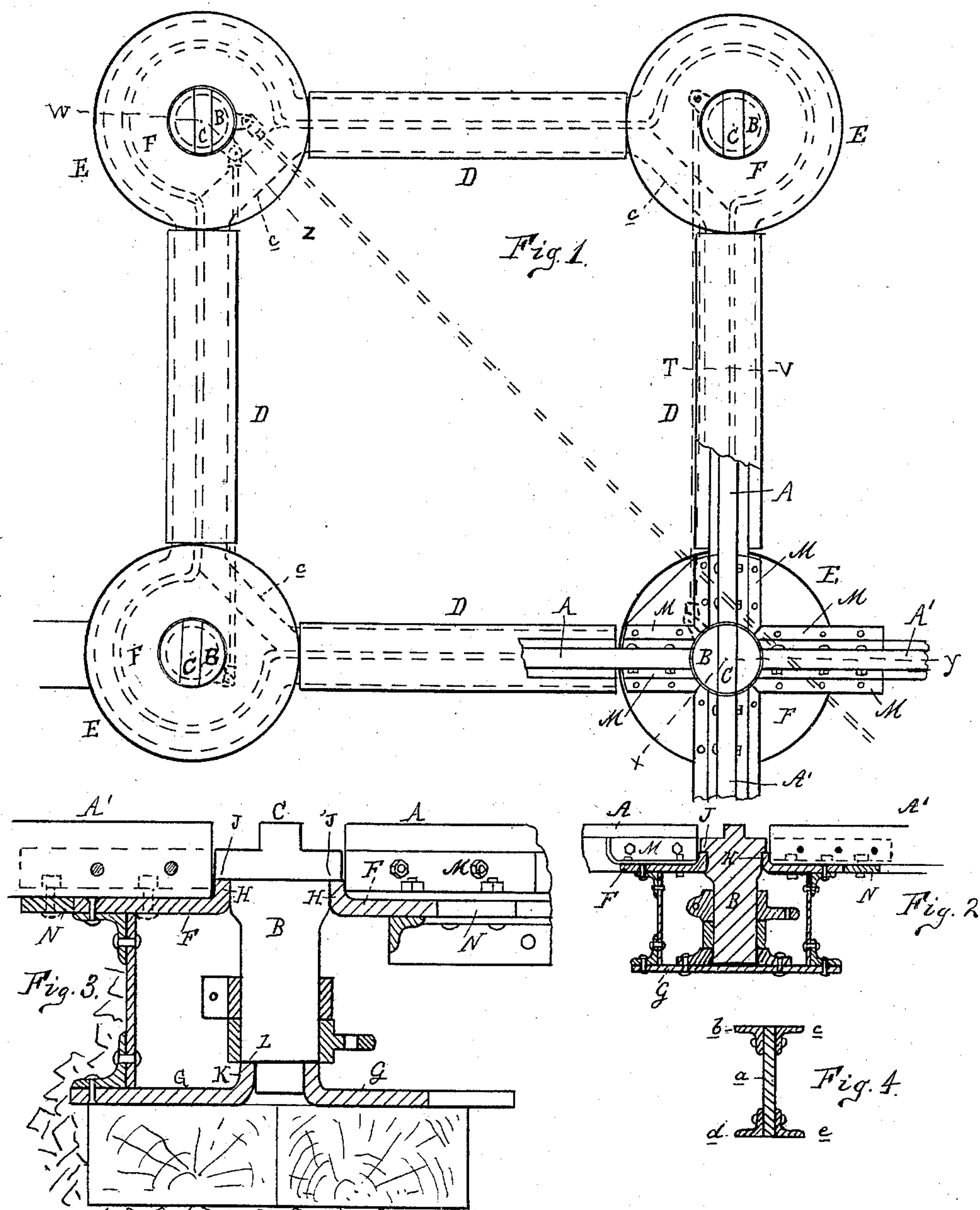


(No Model.)

E. FONTAINE.
RAILROAD CROSSING.

No. 370,462.

Patented Sept. 27, 1887.



Attest:
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UNITED STATES PATENT OFFICE.

EUGENE FONTAINE, OF WAGON WORKS, OHIO.

RAILROAD-CROSSING.

SPECIFICATION forming part of Letters Patent No. 370,462, dated September 27, 1887.

Application filed December 23, 1886. Serial No. 222,407. (No model.)

To all whom it may concern:

Be it known that I, EUGENE FONTAINE, of Wagon Works, in the county of Lucas and State of Ohio, have invented new and useful
5 Improvements in Railroad-Crossings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to certain new and useful improvements in the construction of railway-crossings, as hereinafter described.

My improved railway-crossing belongs to that class in which short rail-sections are pivotally placed at the intersections of the rails
15 and provided with operating mechanism for turning them simultaneously to form continuous rails for either one of the tracks.

In a previous application for a patent for a
20 crossing of this kind I have described an improved continuous rail-support for the crossing; and the principal objects of the present invention are to further improve the mechanical construction of such rail-support with a
25 view to facilitate its manufacture, and, further, to provide more effectual means for protecting the rotatable posts which carry the movable rail-sections, all as hereinafter more fully described.

30 In the drawings which accompany this specification, Figure 1 is a plan of my improved crossing with the rails partly removed. Figs. 2, 3, and 4 are vertical cross-sections on lines *x y*, *W Z*, and *T V*, respectively.

35 *A* are the rail-sections of the crossing, and *A'* are the connecting-rails.

B are four rotatable posts placed at the intersections of the rails, and supporting the movable rail-sections *C*, preferably formed integral with the posts.
40

A four-sided curb, *D*, provided with enlarged corners *E*, forms a continuous rail-support, the sides of the curb supporting the rails of the crossing, and the enlarged corners forming, in connection with the top and bottom plates, *F G*, supports for the rotatable posts and for the ends of the connecting-rails. This curb I make of wrought-iron in the manner of a compound I-girder—*a* being the web, and *b*
45 *c d e* four angle-irons riveted thereto. The corners *E* are formed by bending the parts to

the desired shape previously to riveting them together; but the angle-iron *e*, which forms the inner upper flange of the girder, instead of following the enlargements at the corners, is
55 bent to form a short connection or tie between the ends of the straight sides of the curb. The angle-iron *e* may be arranged in the same way, or may be entirely omitted at the corners. This improved construction of curb presents
60 much less difficulty in its manufacture and in its ready adaptation to crossings of different angles. It is also more continuous than my previous construction, wherein the curb was mainly composed of four sections differing for
65 each angle of crossing. On the top plates, *F*, I form a raised flange, *H*, around the aperture for the post, and in connection with this flange I form a shoulder, *J*, on the post, all for the purpose of protecting the bearing of the post
70 against sand or other obstructions becoming lodged therein, and for the further purpose of preventing the post from getting wedged in tight between the ends of the rails, which are now estopped from crowding it by the raised
75 flange *H*.

The post may be provided with a step secured to the lower corner-plate, as shown in Fig. 2, or preferably as shown in Fig. 3. An aperture is punched into the lower plate and
80 provided with a raised flange, *K*, around it, and a shoulder, *L*, is formed on the lower end of the post to form, in connection with the flange *K*, a step for the post.

The ends of the rails of the crossing and the
85 ends of the connecting-rails are secured to the corner top plates by means of suitable clips, *M*, which abut against the raised flanges *J* on the top plates, and are mitered in the corners between the rails. The clips which connect
90 the ends of the connecting-rails with the corner top plates I make of a length to project beyond the edge of the top plate, and underneath these projecting ends I secure, by additional bolts, a plate, *N*, which abuts against
95 the edge of the top plate. By these means I distribute the end-pressure of the rails caused by the motion of the train in passing over. A main connecting-rod from the switch-lever passes diagonally through the crossing and has
100 crank-connections with two of the posts, and these posts are in like manner connected with

the remaining two posts, so that all four posts may be rotated simultaneously to register the movable rail-sections with either one of the tracks.

5 It will be noticed in Figs. 2 and 3 that the raised flanges H of the corner-plates F project above the foot of the clips M. This is done to permit the sand which may be thrown onto the rails to slide off in the corners of the
10 intersecting rails without any liability of lodging in the joints underneath the posts.

The advantage of providing the rotatable posts with the shoulders I L and supporting them on the raised flanges H K of the top and
15 bottom plates, F G, is that I thereby obtain a certain amount of cushioning of the posts under the vertical pressure of the passing train, which greatly reduces the wear on the posts under the severe strain to which they are sub-
20 jected, and also reduces the disagreeable pounding noise which generally is produced in passing crossings.

What I claim as my invention is—

1. In a railway-crossing wherein rotatable
25 posts carrying rail-sections are placed at the intersections of the rails, the combination, with a continuous rail-support in the form of a four-sided curb provided with enlargements at the corners, of corner-plates supporting the ends
30 of the rails thereon, and having central apertures for the rotatable posts, and raised flanges around such apertures, substantially as described.

2. In a railway-crossing wherein rotatable
35 parts carrying rail-sections are placed at the intersections of the rails, the combination of a continuous rail-support in the form of a four-sided curb provided with enlargements at the corners, of corner-plates supporting the ends
40 of the rails thereon, and having central apertures for the rotatable posts, of raised flanges formed around such apertures, and of overhanging shoulders formed on the rotatable posts in connection with such flanges, sub-
45 stantially as described.

3. In a railway-crossing wherein rotatable posts carrying rail-sections are placed at the

intersections of the rails, the combination of a continuous rail-support in the form of a four-
50 sided curb, with enlargements at the corners, of top and bottom corner-plates secured thereto, of a step formed on each bottom plate and a corresponding aperture in each top
55 plate to support the rotatable posts, of a raised flange around the apertures in the top plates, and of clips for securing the rails independently of each other to the top corner-plates, with the clips and rails abutting against the raised flanges thereon, substantially as de-
60 scribed.

4. In a railway-crossing, a continuous wrought-iron rail-support, consisting of a central web and angle-irons riveted thereto to form top and bottom bearings, said rail-sup-
65 port being constructed in the form of a four-sided curb with enlargements at the corners, said enlargements having top and bottom plates riveted thereto to support the ends of the rails, and the rotatable posts forming the intersections of the rails, substantially as de-
70 scribed.

5. In a railway-crossing, the continuous rail-support D, made in the form of a four-
75 sided curb, having enlargements E at the corners, and consisting of the central web, *a*, and the angle-irons *b c d e*, with the angle-iron *c* forming a tie across the corners of the web, substantially as described.

6. In a railway-crossing, the combination of the continuous rail-support D, having en-
80 largements E at the corners, the top and bottom corner-plates, F G, the rotatable posts B, the rails A A', the clips M, and the plates N, all arranged substantially as described.

7. The combination of the rotatable posts
85 B at the intersections of the crossing, the shoulders J L, formed on said posts, and the top and bottom plates, F and G, having the raised flanges H K, all substantially as described.

EUGENE FONTAINE.

Witnesses:

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