

(No Model.)

2 Sheets—Sheet 1.

W. T. SHANNON.
RAILWAY CROSSING.

No. 346,229.

Patented July 27, 1886.

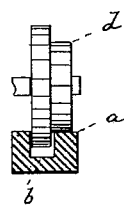
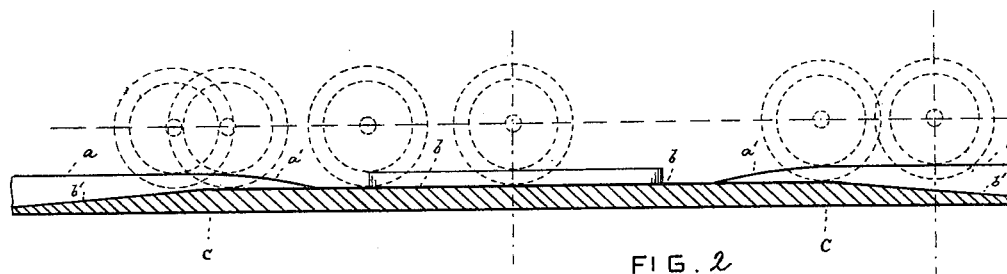
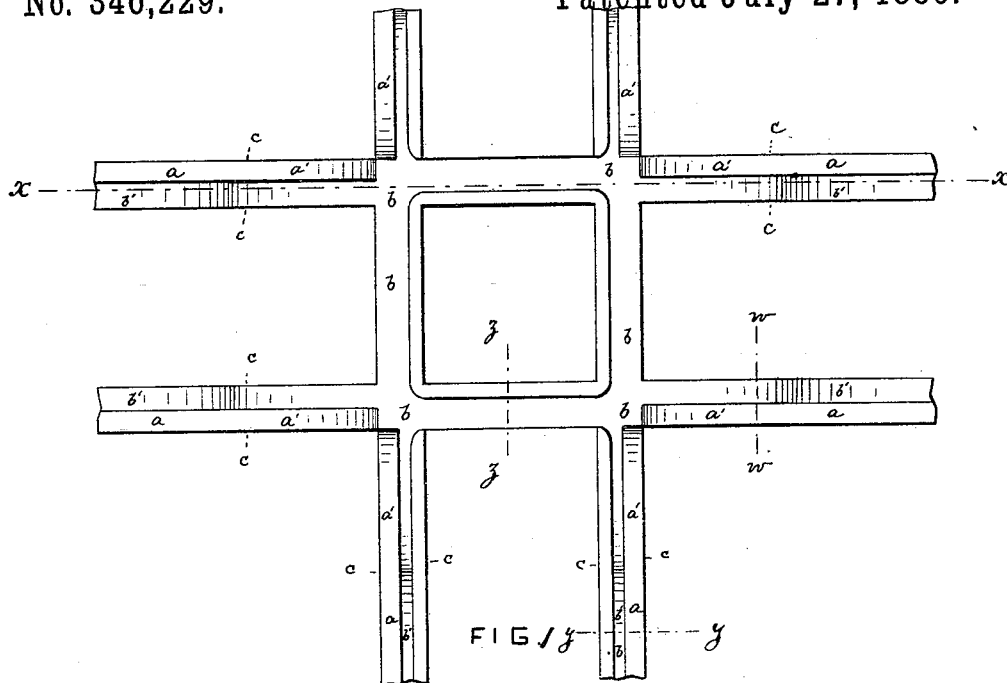


FIG. 3

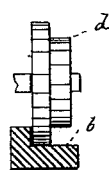


FIG. 4

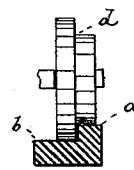


FIG. 5

WITNESSES

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J. Turner

INVENTOR

W. T. Shannon
by his attorneys
Roderick & Friesen.

(No Model.)

2 Sheets—Sheet 2.

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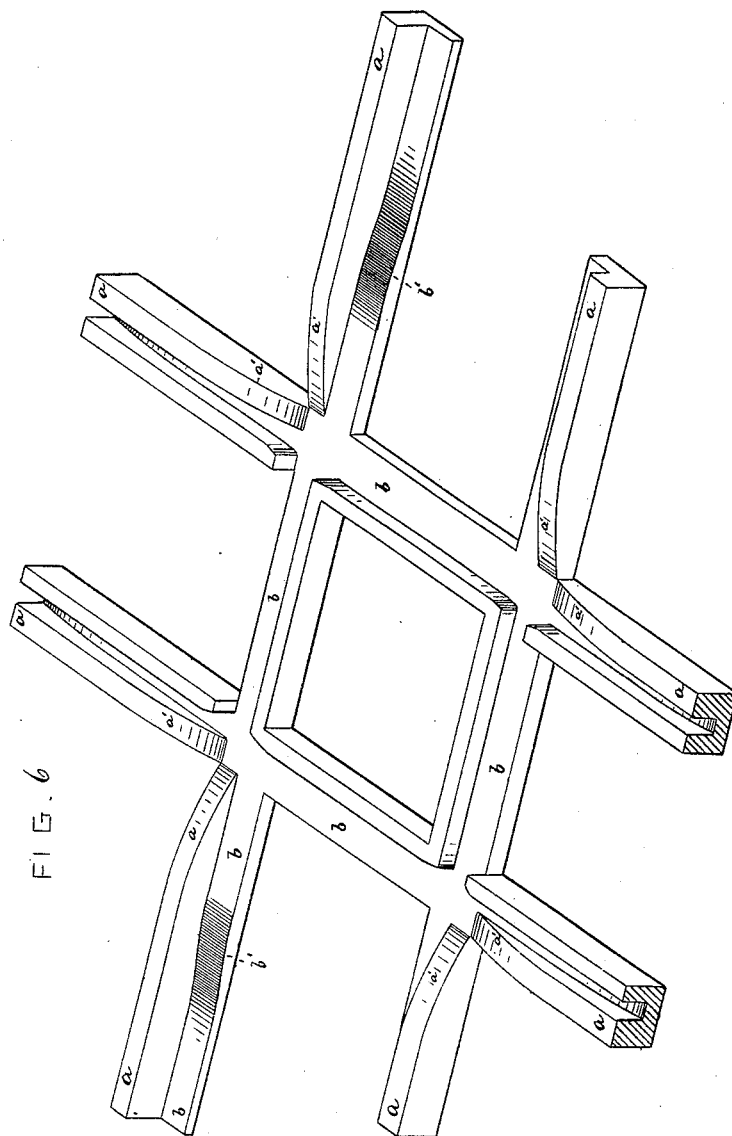


FIG. 6

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM T. SHANNON, OF BROOKLYN, NEW YORK.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 346,229, dated July 27, 1886.

Application filed March 19, 1886. Serial No. 195,810. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. SHANNON, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improved Railway-Crossing, of which the following specification is a full, clear, and exact description.

This invention relates to a railroad-crossing so constructed that no jar is experienced as the cars on one track pass across the other track. The crossing is of the kind in which the treads or rims of the car-wheels are made to leave the tread of the rails, and to travel with their flange on the stringer or lower rail-flange.

The object of the invention is to so construct the crossing that the car is always on a level, and that, should either the wheel flange or rim wear to some extent, the wheel will smoothly pass from the rail-tread to the stringer.

The invention consists in the elements of improvement hereinafter more fully pointed out.

In the accompanying drawings, Figure 1 is a top view of my improved railway-crossing. Fig. 2 is a vertical section on the line xx , Fig. 1; Fig. 3, a vertical section on line yy , Fig. 1; Fig. 4, a vertical section on line zz , Fig. 1, and Fig. 5, a vertical section on line ww , Fig. 1. Fig. 6 is a perspective view of the crossing.

The letters $aaaa$ represent eight rails meeting at right or other angles to form the crossing of two tracks. The rails a may be ordinary T-rails, or L-rails, or they may be of other form.

b are the stringers that support rails a , such stringers being made of wood or metal. Each rail a terminates at a point where it meets the intersecting rail, as shown. The end portion, a' , of each rail a is curved downward, as more clearly shown at Fig. 2, thus meeting the stringer on a gradual incline. The stringers b are extended beyond the ends of inclines a' and intersect each other on the same plane, so as to form a continuous flat square. At a short distance beyond the square the stringers b are curved downward, as at b' , Fig. 2, so that the square is placed on a higher level than the main lengths of the stringers. The point where the stringer b reaches its maximum

height should be in line vertically with the point where the rail a begins to slope down; or, in other words, the incline b' terminates opposite to the point where the incline a' begins. This point is marked c in Figs. 1 and 2, and from it the inclines a' b' slope down in opposite directions, as shown.

The operation of the device is as follows: The tread or rim of car-wheel d travels on the tread of rail a , as usual, until it reaches the incline a' , the flange of the wheel in the meantime clearing the stringer, Fig. 3. As soon as the wheel has reached the point c , the stringer b having reached its maximum height, and the rail a being still at its maximum height, both the tread and flange of the wheel are supported, Fig. 5, the former on the rail and the latter on the stringer. A further motion of the wheel causes the wheel-tread to leave the rail (as the latter curves downward) and to travel with its flange upon the stringer, Fig. 4, over the crossing and up to the point c on the opposite side, when the wheel-tread again engages the rail while the wheel-flange leaves the stringer, Fig. 3. Thus the car passes the crossing without leaving its level, and therefore the horses will not have to pull the car up hill for any distance.

Another advantage of this construction is that there will be no jar, as the bearing-surface of the wheel is transferred from the tread to the flange, even should the flange or the tread have become somewhat worn. Thus, if the flange is worn the wheel will, on approaching the crossing, continue to travel on the tread to a short distance beyond the point c and along the incline a' until the height of the worn flange is equal to the distance between incline a' and stringer b , when the flange will engage the stringer. On the other hand, should the tread of the wheel have become worn, its flange will engage the incline b' before the point c is reached, and thus again the transfer is made without a shock.

I have termed the parts b b' in this specification a stringer, but the same result may be obtained by shaping a lower rail-flange in the same way as the stringer has been described to be shaped. This is particularly applicable to L-rails, and also to U-rails and T-rails having a flat or channeled lower flange.

I am aware of Patent No. 238,517, granted to C. H. Morgan, March 8, 1881, and of Patent No. 87,293, granted to J. E. Ridgway, February 23, 1869, and do not claim the construction therein described; but

I do claim—

1. The combination of rails *a*, having inclines *a'*, with the stringers *b*, having inclines *b'*, the inclines *a'* and *b'* descending from a common point to the opposite sides, substantially as specified.

2. The combination of rails *a a*, that form a crossing and terminate in inclined portions *a'*, with the stringers *b*, having inclined portions *b'*, and forming an elevated continuous square beyond the ends of the rails *a*, substantially as specified.

WILLIAM T. SHANNON.

Witnesses:

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F. V. BRIESEN.