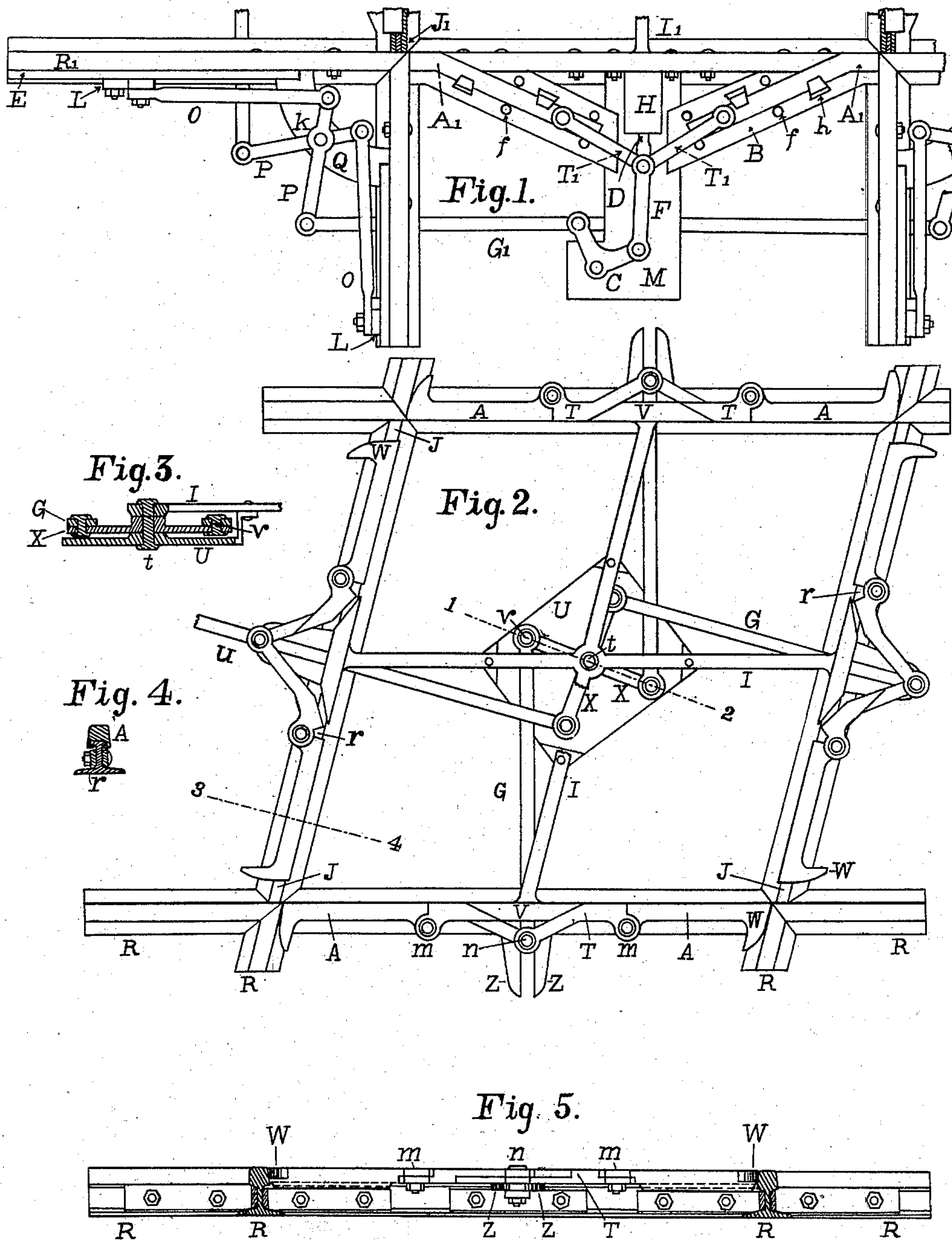


(No Model.)

W. V. WILSON.  
RAILWAY CROSSING.

No. 557,928.

Patented Apr. 7, 1896.



WITNESS:

John Current  
Leon Trapanier

INVENTOR

William Vernon Wilson



# UNITED STATES PATENT OFFICE.

WILLIAM VERNON WILSON, OF HASKINS, OHIO.

## RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 557,928, dated April 7, 1896.

Application filed November 7, 1895. Serial No. 568,178. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM VERNON WILSON, a citizen of the United States, residing at Haskins, in the county of Wood and State of Ohio, have invented a new and useful Railway-Crossing, of which the following is a specification.

My invention relates to improvements in railway-crossings in which a part of the head of the rail is made to move in a forward direction upon the lower part of the rail in such a manner as to fill up the flange-grooves of said rail, making thereby a continuous rail for the track upon which the train is at the time passing; and the objects of my improvements are, first, to provide a continuous rail to prevent the objectionable jar and noise caused by the car-wheels dropping into the flange-grooves of an ordinary crossing; second, to reduce to a minimum the wear on the crossing and on the rolling-stock, and, third, to diminish the danger of derailment of a train at a railway-crossing. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top view of an improvement in railway-crossings on which Letters Patent have already been allowed to me. The application was filed March 28, 1895, and the serial number is 543,599. Fig. 2 is a top view of the present improvement, showing the flange-grooves of one track closed and those of the other track open. Fig. 3 is a vertical section on the line 1 2 of Fig. 2. Fig. 4 is a vertical section on the line 3 4 of Fig. 2 and shows the manner of attaching the movable head A to the lower part of the rail. Fig. 5 is a side elevation of the rail R R of Fig. 2 as viewed from the outside.

Similar letters refer to similar parts throughout the several views. Similar parts of Fig. 1 are distinguished also by a subfigure.

In Fig. 1 the rail R' of a railway-crossing has an elevated rail E' attached to its outer side by the links L L in such a manner that said elevated rail may be depressed by the tread of the wheels of a passing train, producing a horizontal motion of said elevated rail, which horizontal motion is transmitted through the link O, the crank P, the link or bar G', the crank C, and the link F to the

toggle-joint T' T', thus producing a horizontal motion of the bars A' A' sufficient to close the flange-grooves J' J' to make a continuous track.

H is a spring-housing containing an opposing spring to automatically open the flange-grooves and raise the elevated rail E after the train has passed the crossing.

The rail *r* is a T-rail, whose ball is made up of the following parts: the steel plates A A, a part of the toggle-joint T T, and the plate V. The plate V may be riveted to the top of the rail *r*, or otherwise fastened. The steel plates A A are grooved to fit over the top of the T-rail *r*, as shown in Fig. 4.

W is a wing by which the flange-grooves J J may be cleared by the flange of a car-wheel, and its purpose is to prevent accident, if for any cause the flange-grooves should be left closed when a train is approaching.

The toggle-joint T is connected to the plate A by the joint *m*. The pin *n* of the toggle-joint T passes between the guides Z Z and connects with the bar G. The bar G may work through the web of the rail *r*, as shown in the drawings, or it may pass beneath the base of the rail. The purpose of the guides Z Z is to produce an equal displacement of the plates A A. The guides are bolted to the web of the rail *r*, the same bolts also securing the stiffening-bars I I on the other side of the web.

The bars G G connect each of the toggle-joints with the four-way crank X X in the center of the crossing. The four-way crank is pivoted upon the pin *t* to the stiffening-bars I I and the plate U, as shown in Figs. 2 and 3.

The four-way crank X X may be made in one piece and the two tracks operated simultaneously through the bar *u*, which is connected with a lever in an interlocking system, in which case the flange-grooves of one track will be open while those of the other track are closed.

The four-way crank may be replaced by two separate two-way cranks pivoted upon the pin *t*, in which case each track will be operated by a separate lever, and there will be another bar *u* connecting with a toggle-joint of the other track. The length and shape of the arms of the crank will depend upon the angle which the two tracks make with each



other, as the movement of the bars G G should be as nearly parallel with the guides Z Z as possible.

What I claim as new in my invention, and  
5 desire to secure by Letters Patent, is—

1. In a railway-crossing, the T-rail *r*, having a head made up of the sliding bars A A, a part of the toggle-joint T T, and the plate V filling the space between the arms of the  
10 toggle-joint; the sliding bars grooved on the under side to fit the top of the rail *r*, and the pin *n* of the toggle-joint working between the guides Z Z, substantially as specified.

2. The combination, in a railway-crossing,  
15 of the rails *r r*, the sliding bars A A, the toggle-joints T T, and the plates V V; the toggle-joint of each rail being connected, through

the bars G G, with the four-way crank X X; and the entire combination being connected, through the bar *u*, with an interlocking sys- 20 tem, substantially as set forth.

3. The combination, in a railway-crossing, of the sliding bars A A, the toggle-joints T T, and the plates V V, upon the rails *r r*; the two toggle-joints of each track being con- 25 nected, through the bars G G to a two-way crank, and each pair of toggle-joints being connected with a separate lever in an interlocking system, substantially as specified.

WILLIAM VERNON WILSON.

Witnesses:

JOHN CURRENT,  
LEON TREPANIER.