G. GUILBAULT.

NOISELESS RAILROAD CROSSING.

APPLICATION FILED OCT. 12, 1910.

1,002,679.

Patented Sept. 5, 1911.

2 SHEETS—SHEET 1.

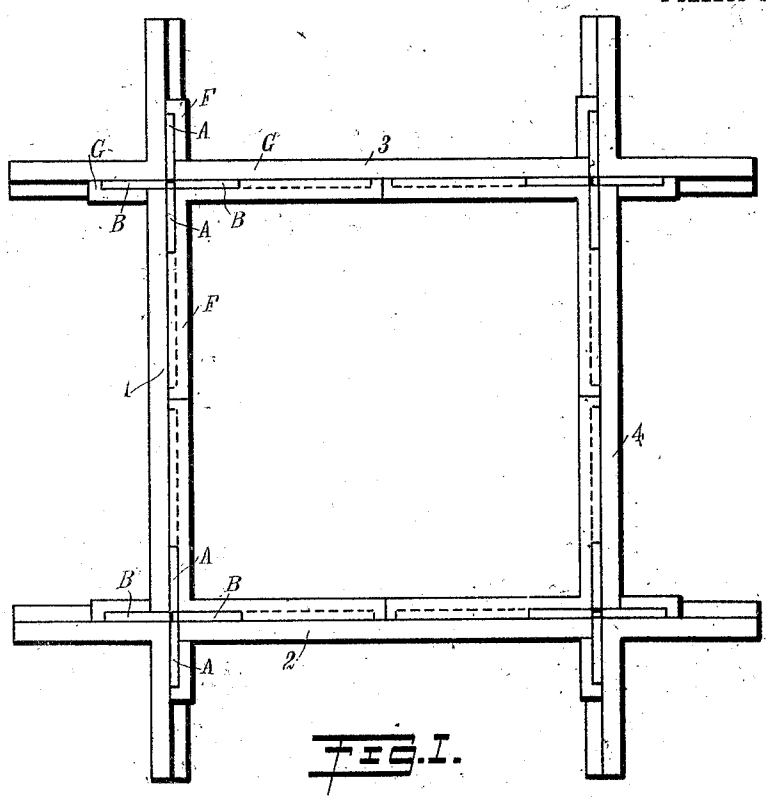

FIG. I.

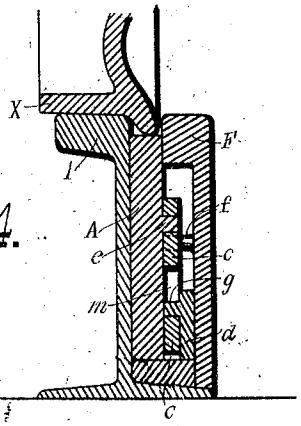

FIG. 4.

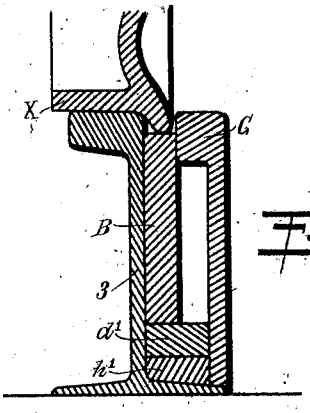

FIG. 5.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

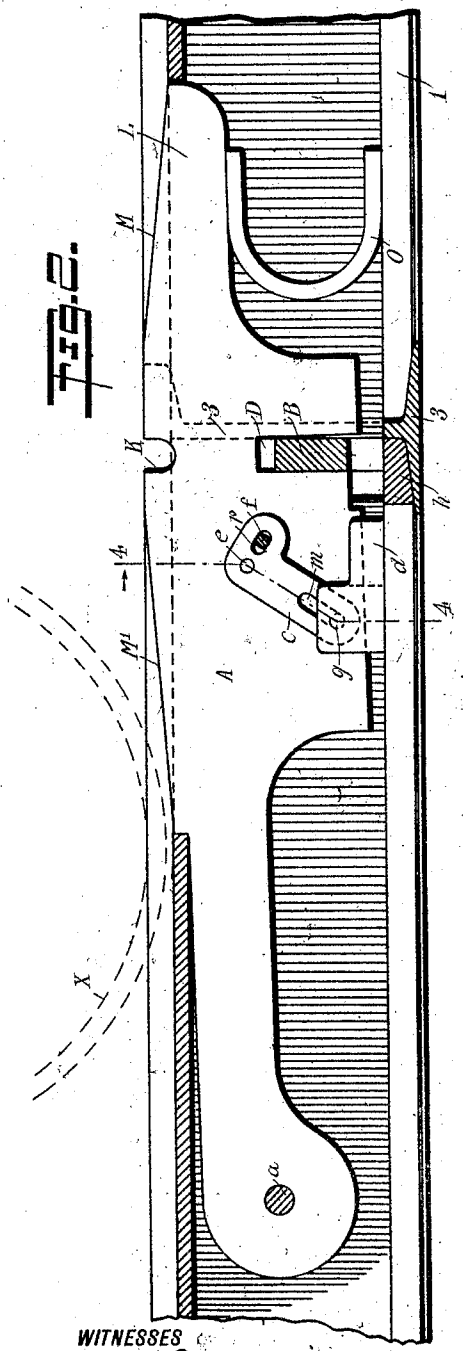
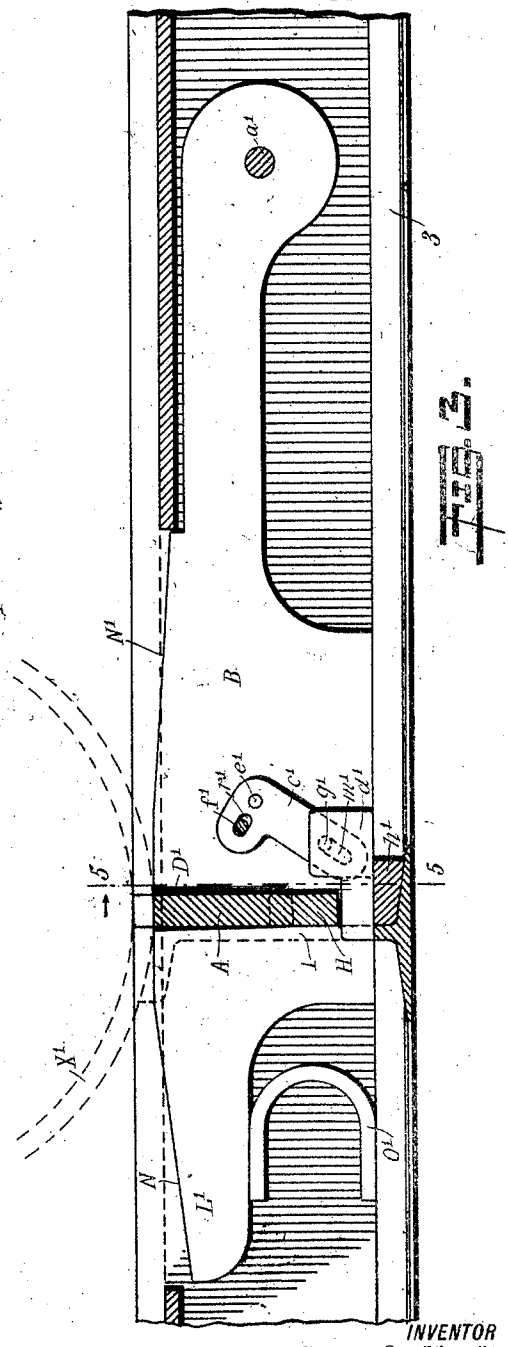


Fig. 3.



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GEORGE GUILBAULT, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-THIRD TO ALFRED D. DANZIGER, OF NEW ORLEANS, LOUISIANA.

NOISELESS RAILROAD-CROSSING.

1,002,679. Specification of Letters Patent. Patented Sept. 5, 1911.

Application filed October 12, 1910. Serial No. 586,625.

To all whom it may concern:

Be it known that I, GEORGE GUILBAULT, a citizen of the United States, and a resident of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Noiseless Railroad-Crossing, of which the following is a full, clear, and exact description.

The object and purpose of the invention is to provide a railroad crossing, in which the vibration and noise due to passing trains shall be eliminated, and the destruction of the parts due to the pounding of the wheels shall be materially lessened; thereby providing a crossing which shall cause little annoyance to the neighborhood and in which the parts need not be frequently replaced.

Where two railroad tracks cross each other it is necessary to channel the upper bearing portions of the rails in order to permit the car wheel flanges to pass over. As the succession of wheels pass over the rails considerable noise is caused and there is a series of shocks or blows on all the parts which loosens the connections. My invention overcomes these objections by providing each rail adjacent the point of intersection with a pivoted lever, there being a pair of intersecting levers at the intersection of two rails. A bell-crank lever is pivoted to each first-mentioned lever and is in operative relation with a sliding block which is adapted to be brought into engagement with the other intersecting lever whereby the car wheels pass over the top of this lever and do not engage the channels in the rails.

In the accompanying sheets of drawings, which form part of this specification, and wherein is set forth the preferred form of my invention, Figure 1 is a plan view of a railroad crossing provided with my invention; Fig. 2 is a side view of one rail equipped with the pivoted lever, the parts being shown in the position just before a car wheel passes over; Fig. 3 is a side view of the rail (which intersects with that one set forth in Fig. 2) provided with the pivoted lever, the parts being shown in the position when a car wheel is passing; Fig. 4 is a sectional view on the line 4—4 of Fig. 2 looking in the direction of the arrow; and Fig. 5 is a sectional view on the line 5—5 of Fig. 3 looking in the direction of the arrow.

Referring especially to the upper left intersecting rails 1 and 3 of Fig. 1, the intersecting pivoted levers are denoted A and B. The upper surface of each of these levers is normally flush with the rail to which it is attached, and the levers are inclosed and held in position by the casings F and G.

In Fig. 2 the lever A is shown pivoted to the rail 1 by any suitable means *a*. A short distance from its free end this lever is provided with the recess D through which passes the portion H of the lever B (shown in Fig. 3) and directly thereabove it is provided on its upper surface with the channel K to accommodate the flange of a car wheel traveling at right angles to the rail 1. The free end of this lever is provided with an extending portion L having a tapered surface M; on the opposite side of the channel K also the top surface is tapered, as at M′. The base portion of the rail is provided with a suitable leaf spring O or any other appliance bearing against the free end of the lever in order to maintain its central upper surface flush with the upper surface of the rail.

The lever A is provided at about its central portion, with a bell-crank *c* pivoted thereto at *e* by means of a pin and having at its opposite end a slot *m* in engagement with a pin *g* carried by a sliding block *d*; the block *d* bears on the bottom flange of the rail, is movable therealong and in operative position rests on the plate *h* carried by the intersecting rail 3, and under the lever B thereby preventing this lever from moving downwardly about its pivot *a*′.

The lever B, shown in Fig. 3, is substantially similar to lever A, being provided with a recess D′ whereby the lever A may pass through; it is also provided with the bell-crank *c*′ in engagement with the sliding block *d*′ which is adapted to be moved under the lever A (as shown in Fig. 3) thereby preventing this lever from turning as shown in Fig. 3.

As shown particularly in Figs. 4 and 5 each of these levers A and B is held in position against the respective rails by means of a protecting casing F or G. Each of these casings is provided with a pin *f* and *f*′ extending transversely thereof and into the slot *r* and *r*′ in each of the bell-cranks, the plane of the slot *r* in each bell-crank be-

ing substantially normal to the plane of the slot *m* therein.

The operation of my device can be most easily understood from Figs. 2 and 3 of the drawings. As hereinbefore stated the top portion of each of the intersecting levers A and B normally lies flush with the top surface of the rail; as a car wheel (denoted X in Fig. 2) approaches the crossing from the left the flange thereof comes into contact with the tapered portion M′ of the lever A and the lever turns downwardly about its pivot *a;* in moving down the lower end of the bell-crank *c*, carried thereby will swing to the right and in doing so will move the sliding block *d* to the right until it comes to rest on the plate *h* under and in contact with the intersecting lever B. This movement of the block *d* to the right results because of the fixed pin *f* carried by the casing F; the parts are so proportioned that the block is in its final position on the plate *h* when the surface of the wheel is about to cross over the intersecting rail 3. When the block is in this position the intersecting lever B cannot swing downwardly on its pivot because the block is directly under this lever and will prevent such movement; this lever is, therefore, held flush with the intersecting rail 3 and the channel in this rail is closed; the car wheel will pass over without noise or shock. It is immaterial what the diameter of the car wheel or the depth of the flange may be in the operation of the device.

In Fig. 3 I have shown the position of the parts when a car wheel is passing over the crossing in a direction at right angles to the rail shown in Fig. 2 which has just been described. The operation of the parts in this figure is substantially the same and the car wheel is shown in the act of passing over the intersecting rails. The sliding block is in its final position on the plate and the lever A is held against downward movement. After the car wheel (or train) has passed, the lever A or B (depending on which rail the train has passed over) will return to its normal upper position because of the spring O or O′ or any other appliance bearing against its free end. In coming back to the normal position the sliding block *d* or *d′* will move along the base of the rail into the position shown in Fig. 2 when the crossing is in position to be again operated by a train passing over either track.

It is obvious from Fig. 1 that each crossing of single tracks will have four pairs of intersecting levers. The crossing may be at a right angle or may be at any angle, as far as the operation of my device is concerned it being applicable to crossings of any number of tracks and at any angle to each other.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a noiseless railroad crossing, two intersecting rails, a pivoted lever carried by each rail and means carried by each lever adapted for engagement with the other when the said lever is moved by a wheel passing over one rail, whereby the lever carried by the other rail is locked in position thereby closing the channel in the rail over which the wheel is passing.

2. In a noiseless railroad crossing, a plurality of intersecting rails, a movable lever carried by each rail adjacent the point of intersection, slidable means connected to each lever and adapted to come into engagement with the other lever when a wheel comes into engagement with either lever whereby the channel in the rail over which the wheel is passing is closed.

3. In a noiseless railroad crossing, a plurality of intersecting rails, pivoted levers carried by each of the rails, the levers intersecting each other, and sliding means carried by each lever and adapted to come into contact with the other lever and prevent movement thereof when engaged by a car wheel thereby closing the channel in the rail over which the wheel is passing.

4. In a noiseless railroad crossing, two intersecting rails, members carried by each rail adjacent the point of intersection, the said members being movably mounted thereon, means carried by each rail and operable by the movement of each member and movable into engagement with the other member when the first member is in engagement with a car wheel, whereby the second member is prevented from moving.

5. In a noiseless railroad crossing, two intersecting rails, movable members carried by each of the rails and also in intersecting relation, the upper surfaces of said movable members being normally flush with the upper surfaces of the rails, movable blocks carried on the base portion of each rail and means connecting each movable member with one of the blocks whereby either of the movable blocks may be brought into engagement with one of the movable members by a car wheel, whereby movement of that member is prevented and the channel in the rail over which the car wheel passes is closed.

6. A noiseless railroad crossing comprising intersecting rails, levers carried by each of the rails at the point of intersection, the said levers normally closing the channel in each rail at the point of intersection, and means carried by each rail and coöperating means connecting each of the said means and each lever operable by a passing car-wheel whereby one of the levers may be held in normal position thereby closing the

channel in the rail over which the car wheel is passing.

7. A noiseless railroad crossing comprising intersecting rails, movable members carried by each of the rails adjacent the point of intersection, and means whereby the members may be held in position thereby closing the channels in the intersecting rails, means carried by each of the rails and a cooperating means between each of the said means and each movable member and operable by a passing car wheel whereby the other movable member is held in position to close the channel in which it lies.

8. A noiseless railroad crossing comprising intersecting rails, a pivoted lever carried by each rail adjacent the point of intersection, the pivoted lever being flush with the rails whereby the channel in each of the rails is closed, a sliding block carried by each rail and means of connection between each sliding block and each pivoted lever, whereby when a car wheel comes into engagement with one of the levers the block will be moved into engagement with the other lever thereby holding the other lever in position whereby the channel in the rail is closed.

9. A noiseless railroad crossing comprising intersecting rails, a pivoted lever carried by each rail adjacent the point of intersection, means engaging each of the levers whereby the upper surfaces thereof are held flush with the surfaces of the rails, a casing adjacent each of the rails, the pivoted lever being held between the casings and the rails thereby closing the channels in the rails, means carried by each lever and adapted to be moved into engagement with the other lever by a passing car wheel whereby the other lever is held in position thereby closing the channel in the rail over which the wheel is passing.

10. A noiseless railroad crossing comprising intersecting rails, a movable member carried by each rail adjacent the point of intersection, a casing adjacent each rail inclosing the movable members and means carried by each movable member and coöperating with sliding blocks adapted to be brought into engagement with the other movable member by a passing car wheel, pins on each casing coöperating with each of these means whereby the other movable member is held in position thereby closing the channel in the rail over which the car wheel is passing.

11. A noiseless railroad crossing comprising intersecting rails, and pivoted levers carried thereby and normally closing the channels in the intersecting rails, and a sliding means in coöperative relation with each lever operable by a passing car wheel whereby the channel in the rail at an angle to the rail over which the car wheel is passing may be held closed while the car wheel is passing thereover.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE GUILBAULT.

Witnesses:
I. DANZIGER,
F. B. TWOMEY.