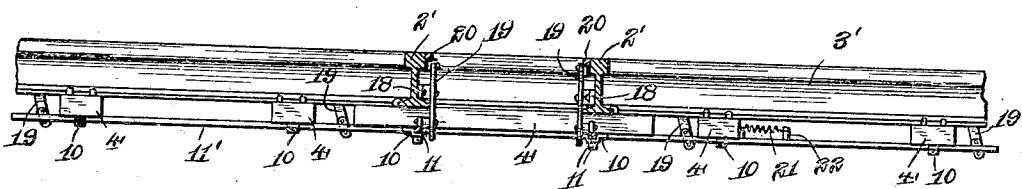
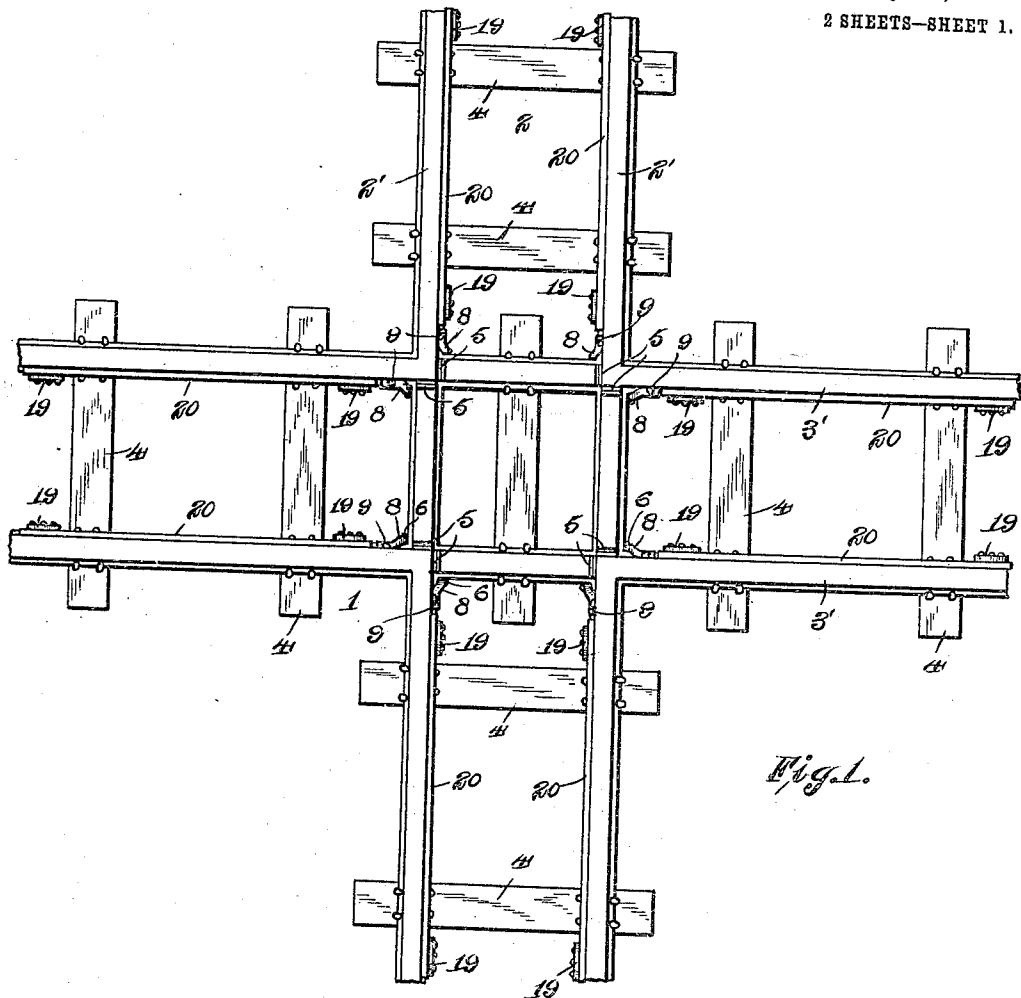


P. P. LEWIS.
RAILWAY CROSSING.
APPLICATION FILED SEPT. 11, 1909.

957,225.

Patented May 10, 1910.
2 SHEETS—SHEET 1.



Witnesses:
A. A. Olson
B. G. Richards

Inventor:
Philip P. Lewis
by Joshua R. Horn
his Attorney

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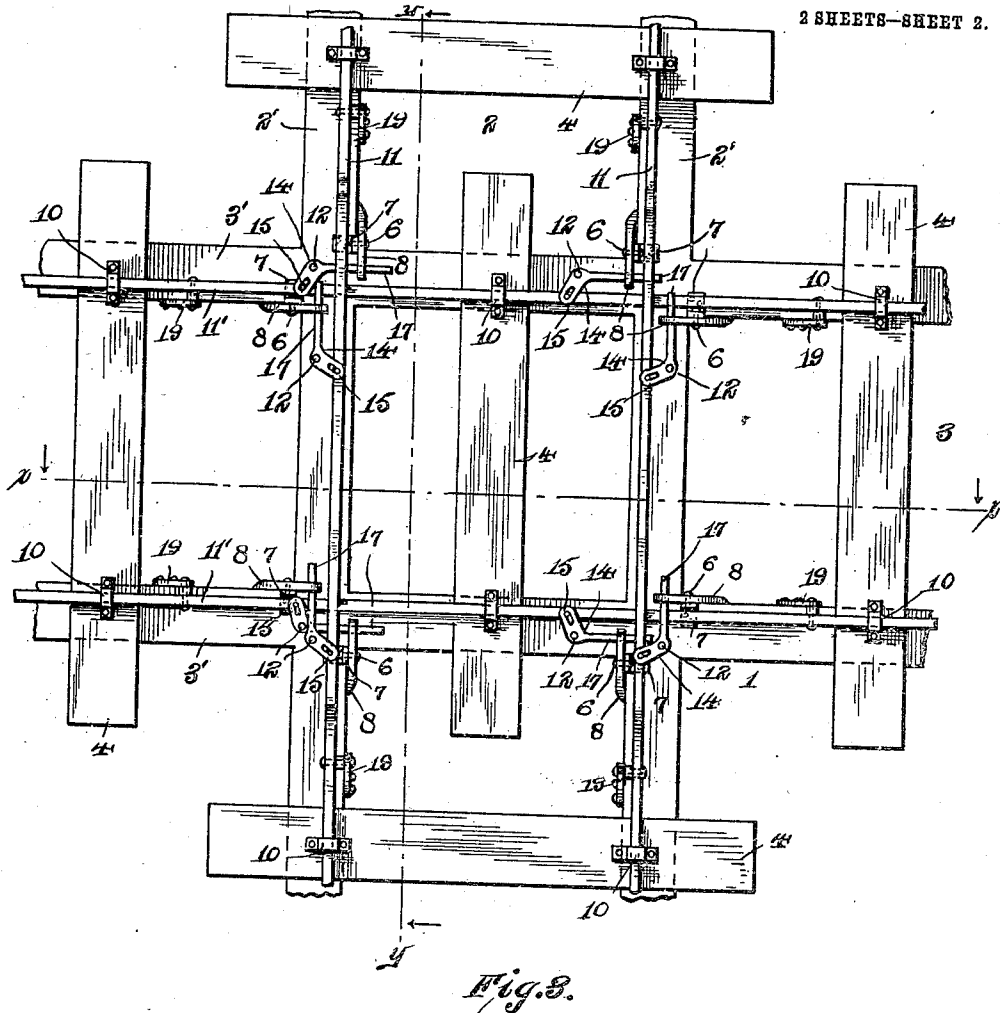
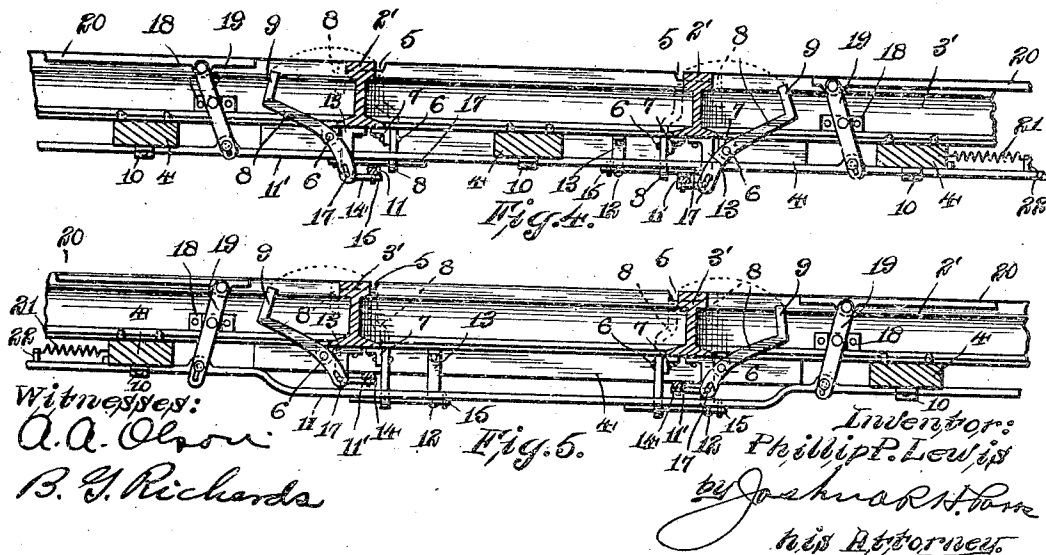


Fig. 3.



Witnesses:
A. A. Olson
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Fig. 5.

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UNITED STATES PATENT OFFICE.

PHILLIP P. LEWIS, OF CHICAGO, ILLINOIS.

RAILWAY-CROSSING.

957,225.

Specification of Letters Patent. Patented May 10, 1910.

Application filed September 11, 1909. Serial No. 517,267.

To all whom it may concern:

Be it known that I, PHILLIP P. LEWIS, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Railway-Crossings, of which the following is a specification.

My invention relates to railway crossings or intersections and the object of my invention is the provision of a crossing of such character so designed that cars in passing thereover will be subjected to the least possible jarring, it being my object to provide automatically operable means cooperating with the comprising rails of the crossing whereby a continuous unbroken tread will be formed over the rails at the crossing upon the approach of a car to the latter and the passage thereof thereover.

Another object is the provision of means for a purpose last stated adapted to be actuated by the wheels of the approaching car so as to be swung to operative position and adapted upon the departure of the car wheels therefrom to automatically return to inoperative position.

A still further object is the provision of means of the nature stated adapted for cooperation with the crossing rails which will be positive in operation and effective in use.

Other objects will appear hereinafter.

With these objects in view my invention consists in a railway crossing provided with means characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a top plan view of a railway crossing provided with my device in its preferred form, Fig. 2 is a sectional side elevation thereof, Fig. 3 is an enlarged bottom plan, and Figs. 4 and 5 are sections taken respectively on lines $x-x$ and $y-y$ of Fig. 3.

Referring now to the drawings, 1 indicates an ordinary railway crossing comprised of the intersecting rail tracks 2 and 3 mounted at intervals as usual upon the ties 4. As is ordinary and as shown, the comprising rails 2' and 3' of the tracks 2 and 3 are formed integral with each other. In order to accommodate the flange of the car wheel

in the passage of the latter over the crossing, the rails of each track adjacent the inner edges of those of the other, as is known, are recessed as at 5; the dropping of the wheels of the car into such recesses, upon their passage over the crossing, being the cause of the jarring of the car. My invention, therefore, lies wholly in providing means adapted to span or fill said recesses and any means for actuating said means in a manner above stated. With this in view the following provisions are made:

Positioned adjacent each of the recesses 5, the same being rockingly mounted as at 6 close to its lower end upon an angular bracket 7 secured to and depending from the under side of the adjacent track rail, for rotation in a plane in longitudinal alinement with the former, is an angular lever 8. The levers 8 are so formed and the same are so mounted that, upon proper rotation, the end portions 9 thereof will be swung into a position in the recesses 5, said ends being so formed and of such dimensions that when positioned in said recesses as stated, the same will entirely occupy or span the latter to form a continuous unbroken tread for the car wheels passing thereover.

Longitudinally extending beneath the rails 2' and 3', the same being slidably mounted in loops 10 secured to the under sides of the rail ties are elongated rods 11 and 11' respectively, the former being downwardly offset at their central portions, as clearly shown in Fig. 5, to permit of the crossing or passage of the latter. Positioned adjacent each of the levers 8, the same being pivotally mounted as at 12 upon the lower extremities of brackets 13 secured to and depending from the under sides of the track rails, are horizontally disposed bell crank levers 14 the end 15 of each of which is in operative slot and pin connection, as clearly shown in Fig. 3, with the rod 11 or 11' adjacent thereto. The opposite end 7 of each of the levers 14 is elongate rod like in form, the same engaging an elongate slot formed in the lower end of each of the levers 8 which are disposed at substantially right angles to said lever end portions. With such arrangement, it will be observed that, upon movement in one direction of the rods 11 or 11', the levers 8 will be rocked to throw the ends 9 thereof into engagement with the recesses 5 as before stated, and that upon movement of said rods in the other direction, said le-

vers will be rocked to displace said ends thereof. Further it will be observed, the arrangement is such that the sliding movement of the rods 11 causes actuation of the levers 8 which coast with the rails 2' and that actuation of the rods 11' causes the actuation of the levers 8 which coast with the rails 3'. Pivotally mounted at substantially their central portions upon brackets 18 secured to the inner surface of each of the track rails 2' and 3' are obliquely disposed connecting rods 19 the lower slotted ends thereof being in slot and pin connection, as clearly shown in Figs. 4 and 5, with the rods 11 or 11', the upper ends thereof supporting and being pivotally secured to bars 20 one of which extends adjacent the inner side of the ball of each of said rails at either side of the track intersection. As seen, each of the bars 20 is supported by two connecting rods 19, one being arranged at either extremity thereof, the latter being of such length and so arranged that, when the levers 8 are in inoperative position, the upper edge surfaces of the bars 20 will be in horizontal alinement with the tread of the track rails, and that, when said bars are engaged and depressed by the flange of a car wheel, said levers will be rocked to operative position. Tension springs 21 interposed between lugs 22 formed upon the rods 11 and 11' and suitable stationary supports, preferably as shown certain of the rail ties, are adapted to normally hold said levers in inoperative position and hence said bars 20 in horizontal alinement with the treads of the rails.

With the provision, at a railway intersection, of an apparatus of a construction as shown and described, and upon the approach of a car to the crossing sufficiently close for the forward wheels thereof to engage the bars 20 arranged at the approached side of the crossing, the levers 8 coasting with the track upon which the car is traveling will evidently be swung to operative position to span the recesses formed therein, said levers remaining in such position until the rear car wheels have left the bars 20 arranged upon said track rails at the side of the crossing from which the train is departing, whereupon the springs 21 will return said levers to inoperative position and said bars 20 to initial or elevated position. It is clear that in whatever direction a train is traveling upon either of the intersecting tracks, a continuous unbroken tread will be formed for the same at the crossing upon the approach thereof thereto.

While I have shown what I deem to be the preferable form of my apparatus I do not wish to be limited thereto as there might be various changes made in the details of construction and the arrangement of parts without departing from the spirit of the inven-

tion comprehended within the scope of the appended claims.

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

1. The combination with a railway crossing, the rails of each of the comprising tracks of which adjacent the inner edges of those of the other being formed with recesses for the reception of a car wheel flange, of rockable means cooperating with the comprising rails of each of the intersecting tracks adapted when actuated to span said recesses, and depressible means for actuating said spanning means, said depressible means comprising elongate bars positioned adjacent the inner sides of the ball of each of the track rails at either approach thereof to the track intersection, and an operative connection between said bars and said spanning means, said depressible means being adapted to be depressed to actuation by the flanges of the wheels of an approaching car, substantially as described.

2. The combination with a railway crossing, the rails of each of the comprising tracks of which adjacent the inner edges of those of the other being formed with recesses for the reception of the car wheel flange, of rockable means cooperating with the comprising rails of each of the intersecting tracks adapted when actuated to span said recesses, and depressible means for actuating said spanning means, said depressible means comprising depressible elongate bars positioned adjacent the inner edge of the ball of each of the track rails at either approach thereof to the track intersection, an operative connection between said bars and said spanning means whereby the depression of the before named depressible bars arranged adjacent the rails of one track will effect the rocking actuation of the before named spanning means cooperating with the recesses in the rails of that track, said depressible means being positioned for actuation by the wheels of an approaching car, substantially as described.

3. The combination with a railway crossing, the rails of each of the comprising tracks of which adjacent the inner edges of those of the other being formed with recesses for the reception of a car wheel flange, of rockable levers cooperating with the comprising rails of each of the intersecting tracks, the upper end portions of said levers being formed for reception in said recesses to span the same, and depressible means for actuating said levers, said means comprising depressible elongate bars positioned adjacent the inner side of and in horizontal alinement with the ball of each of the track rails at either approach thereof to the track intersection, and operative connection between said bars and the lower edges of said

levers whereby the depression of the before
named depressible bars arranged adjacent
the rails of each track will effect the rocking
actuation of the levers cooperating with the
5 recesses in the rails of that track, substan-
tially as described.

4. The combination with a railway cross-
ing, the rails of each of the comprising
tracks of which adjacent the inner edges
10 of those of the other being formed with re-
cesses for the reception of a car wheel flange,
of rockable angular levers cooperating with
the comprising rails of each of the inter-
secting tracks, the upper end portions of
15 said levers being formed for reception in
said recesses to span the same, depressible
means for actuating said levers, said means
comprising depressible elongate bars posi-
tioned adjacent the inner side of and nor-
20 mally in horizontal alinement with the ball
of each of the track rails at either approach
thereof to the track intersection, elongate
bars slidably mounted and horizontally ex-
tending beneath each of the track rails, an

operative connection between each of said 25
rods and depression bars arranged adjacent
the respective rail beneath which each rod
is arranged, whereby depression of said de-
pression bars causes the sliding actuation of
said rods, bell crank levers connecting said 30
rods and the lower ends of said spanning
levers, whereby the sliding actuation of said
rods causes the rocking actuation of said
levers, said levers being so arranged that
when said depression bars are in elevated 35
position said levers will be in inoperative
position, and when said bars are in de-
pressed position said levers will be in oper-
ative position, and means for normally hold-
ing said levers in inoperative position, sub- 40
stantially as described.

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

PHILLIP P. LEWIS.

Witnesses:

HELEN F. LILLIS,
JOSHUA R. H. POTTS.