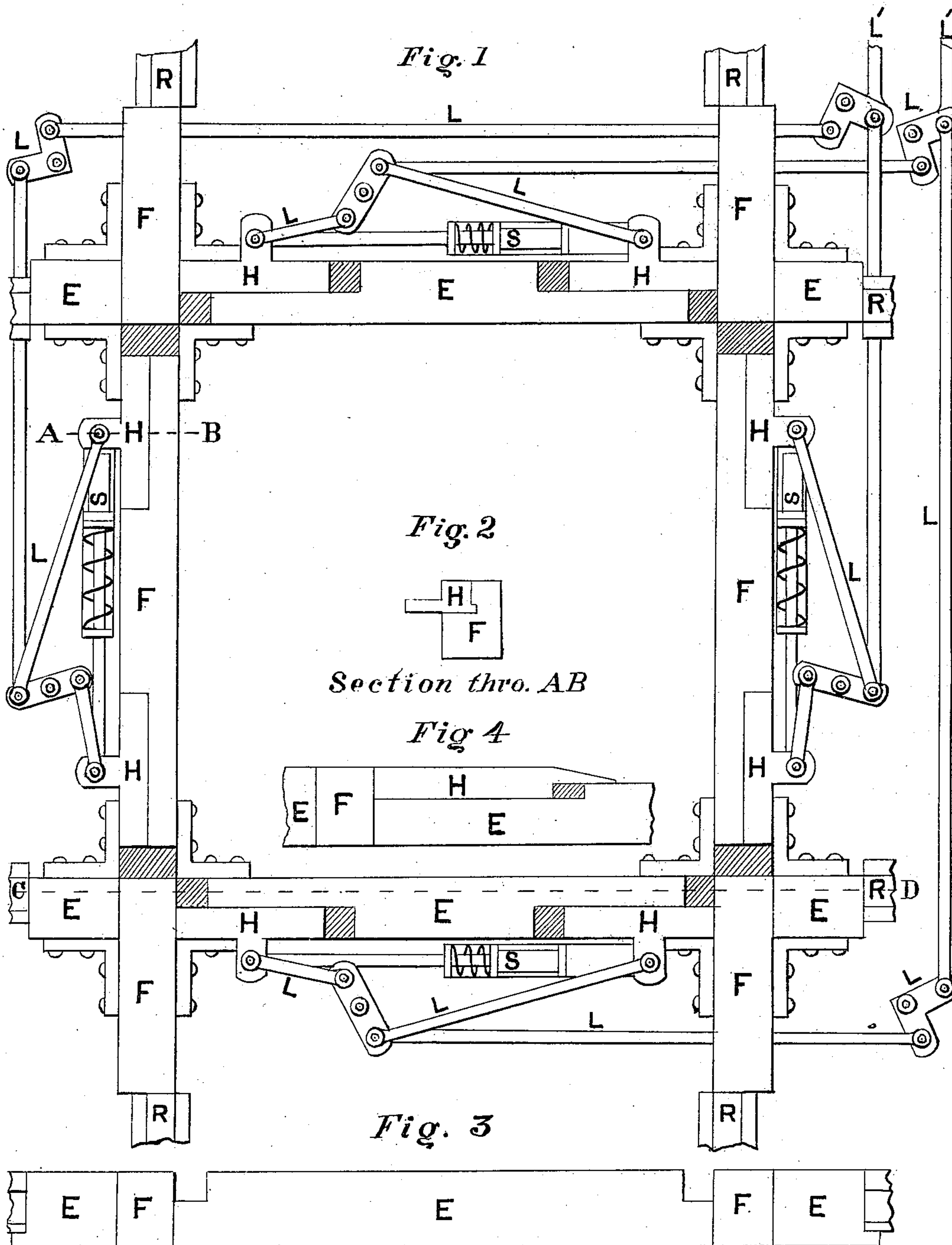


(No Model.)

G. LEHLBACH.  
RAILWAY CROSSING.

No. 333,236.

Patented Dec. 29, 1885.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

GUSTAV LEHLBACH, OF NEWARK, NEW JERSEY.

## RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 333,236, dated December 29, 1885.

Application filed October 5, 1885. Serial No. 178,990. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAV LEHLBACH, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in the Construction of Railway-Crossings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in the manner of constructing the tracks where one railway crosses another upon the same grade; and the objects of my improvements are, first, to furnish a continuous bearing for the treads of the wheels upon both tracks over the entire crossing; and, second, to improve the details of construction, so that a stronger and more durable crossing can be made than those now in use. I attain these objects by the design illustrated in the accompanying drawings, in which—

Figure 1 is a horizontal plan of the improvement. Fig. 2 is a vertical section through A B. Fig. 3 is a vertical section through C D; and Fig. 4 is a form of the movable filling-bar H which can be used in place of the simpler one shown in Figs. 1 and 2, if desired.

The two crossing-bars for one track (marked F upon the drawings) are each made of a solid rectangular bar of metal, about four by five inches by a sufficient length to extend over the entire crossing and from one to four feet beyond each side of the crossing, as may be suitable for a proper connection with the rails of the track upon each side of the crossing. These crossing-bars F have L-shaped grooves cut into them, which are in part shown by the shaded portions, also by the movable filling-bars H, which lie in these grooves, and are further shown in cross-section in Fig. 2, the portion occupied by H being cut out of the solid bar F. The two crossing-bars for the other track (marked E upon the drawings) are each made of three bars of metal of the same cross-section as F, and are riveted or bolted securely to F, substantially as shown upon the drawings. Similar to the bars F, these bars E have also L-shaped grooves cut into them,

as indicated upon the drawings. The filling-bars H, lying in the grooves of the bars E and F, have a horizontal sliding motion of about two inches, for the purpose of filling the space or throat of the crossing through which the wheel-flanges pass. Each set of four filling-bars H belonging to one track are so connected by the combination of levers, bell-cranks, and connecting-rods, (marked L,) as shown in the drawings, that they can be moved forward into position by the power applied to the one rod at L'. The springs S are connected in such manner with each pair of filling-bars H that when these bars are moved forward by the action of the rod at L' they will spring back into their normal positions as soon as the rod at L' is released.

R R are the rails of the tracks, suitably connected with the crossing-bars E and F.

On Fig. 1 the filling-bars H on the crossing-bars F are shown in their normal positions, and the filling-bars H on the crossing-bars E are shown in positions they will occupy when moved forward for the passage of a train over the track formed by these crossing-bars E, and it will be readily seen that with the filling-bars thus projected against F the treads of the wheels upon the track E E will have a continuous bearing over the entire crossing.

By the construction of the crossing-bars F out of a solid bar, to which the bars E are securely riveted or bolted, a stronger crossing can be made than by the various methods now employed—viz., casting four independent frogs, or toads, or making such crossings by riveting or bolting together pieces of rails, no piece of which runs clear through the crossing.

It will be observed from the drawings that my device for railway-crossings, entirely independent of the movable filling-bars H, or when these bars are left in their normal positions in the grooves, presents as clear a crossing for the passage of trains upon either track as is obtained by the present methods of constructing crossings, and, I claim, is much stronger. When this crossing is used without the filling-bars, the spaces in the crossing-bars E and F shown in the drawings cut out for the filling-bars H to lie in are not cut



out, but the crossing-bars E and F are left solid, except where they are shown cut out for the grooves through which the flanges of the wheels run. There is also a further advantage in a crossing thus constructed over all other crossings without filling-blocks, in this, that, having a bearing for nearly the entire widths of the treads of the wheels, the wheels of a train which are much worn will pound the back of the crossing-points less than if they ran over a rail of only the ordinary width of the top. The outside ends of the crossing-bars E and F can also be planed off to have a suitable incline, as shown in the filling-bar H in Fig. 4, so that the wheels which are much worn can mount these bars without a blow.

Fig. 4 shows another form of the filling-bars H, by which the possibility of anything dropping into the opening behind the bars when they are moved forward for the passage of a train is prevented. The filling-bars H can also be adapted to be used in connection with crossings as at present constructed.

Having thus described my invention, I claim—

1. The combination, with a railway-crossing, of movable filling-bars sliding in the plane of the crossing, as H, substantially as described, and means arranged to operate in connection therewith, for the purposes set forth. 25 30

2. The combination, with movable filling-bars, as H, as described, of crossing-bars, as E and F, levers, bell-cranks, and connecting-rods, as L, and springs, as S, or equivalent means, arranged and operating therewith, for the purposes set forth. 35

3. The combination, with crossing-bars, as E, formed in sections, of crossing-bars, as F, integral throughout their length, and to which bars E are secured, substantially as described, and arranged for the purposes set forth. 40

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