No. 617,974. Patented Jan. 17, 1899.

P. VOGLE.

RAILROAD CROSSING.

(Application filed Apr. 3, 1897.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.

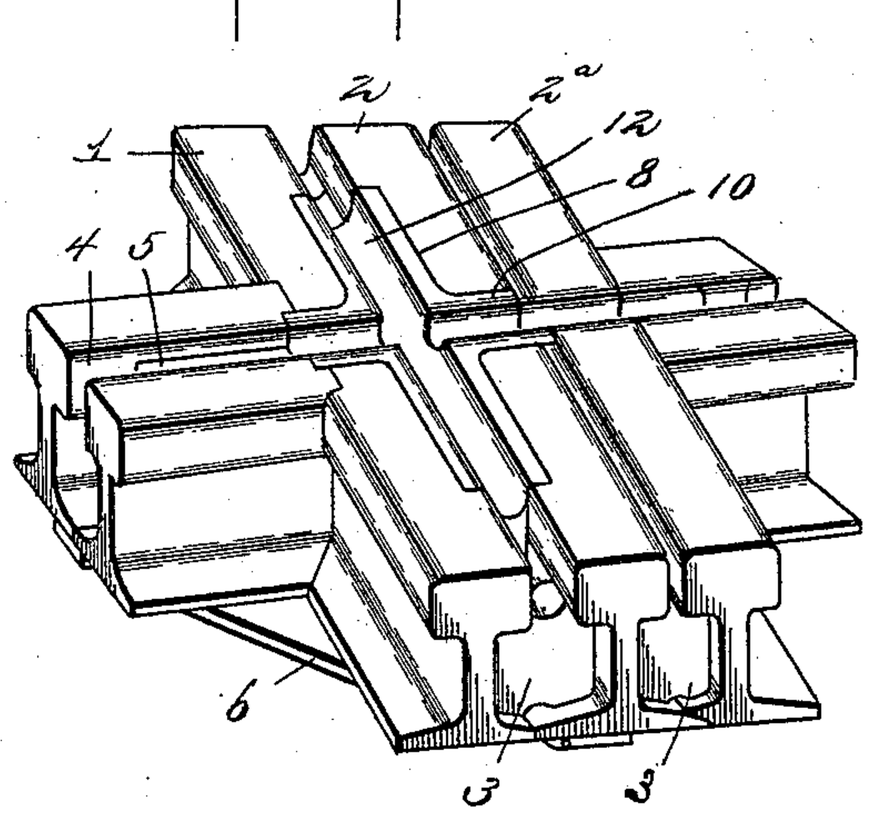


FIG. 2.

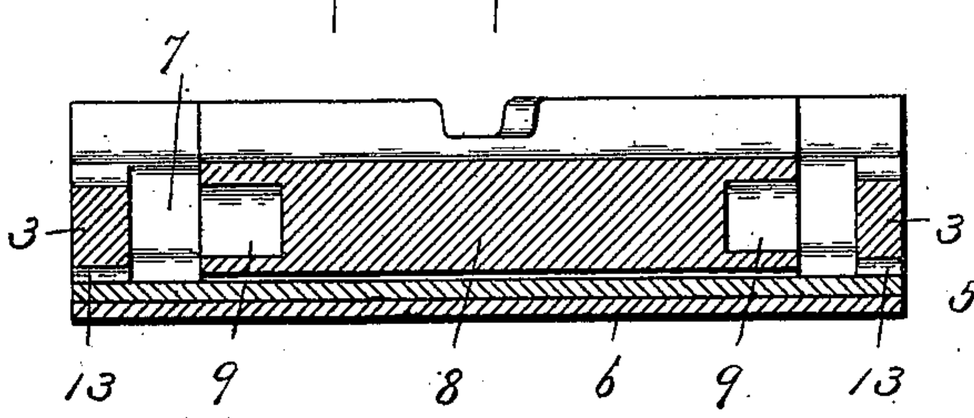
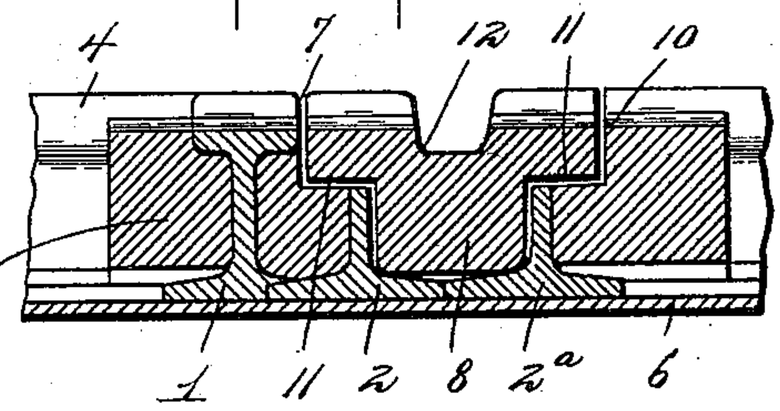


FIG. 3.



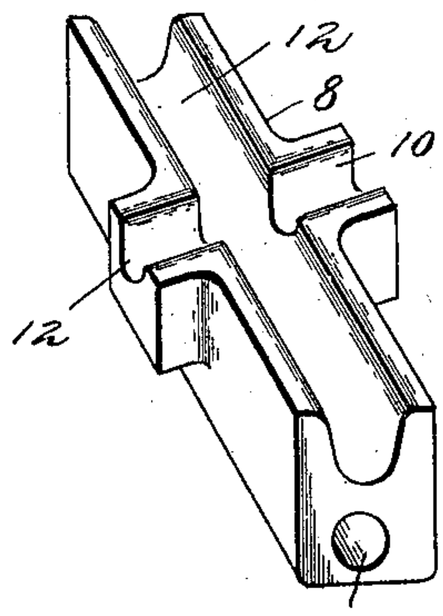


FIG. 4.

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FIG. 5.

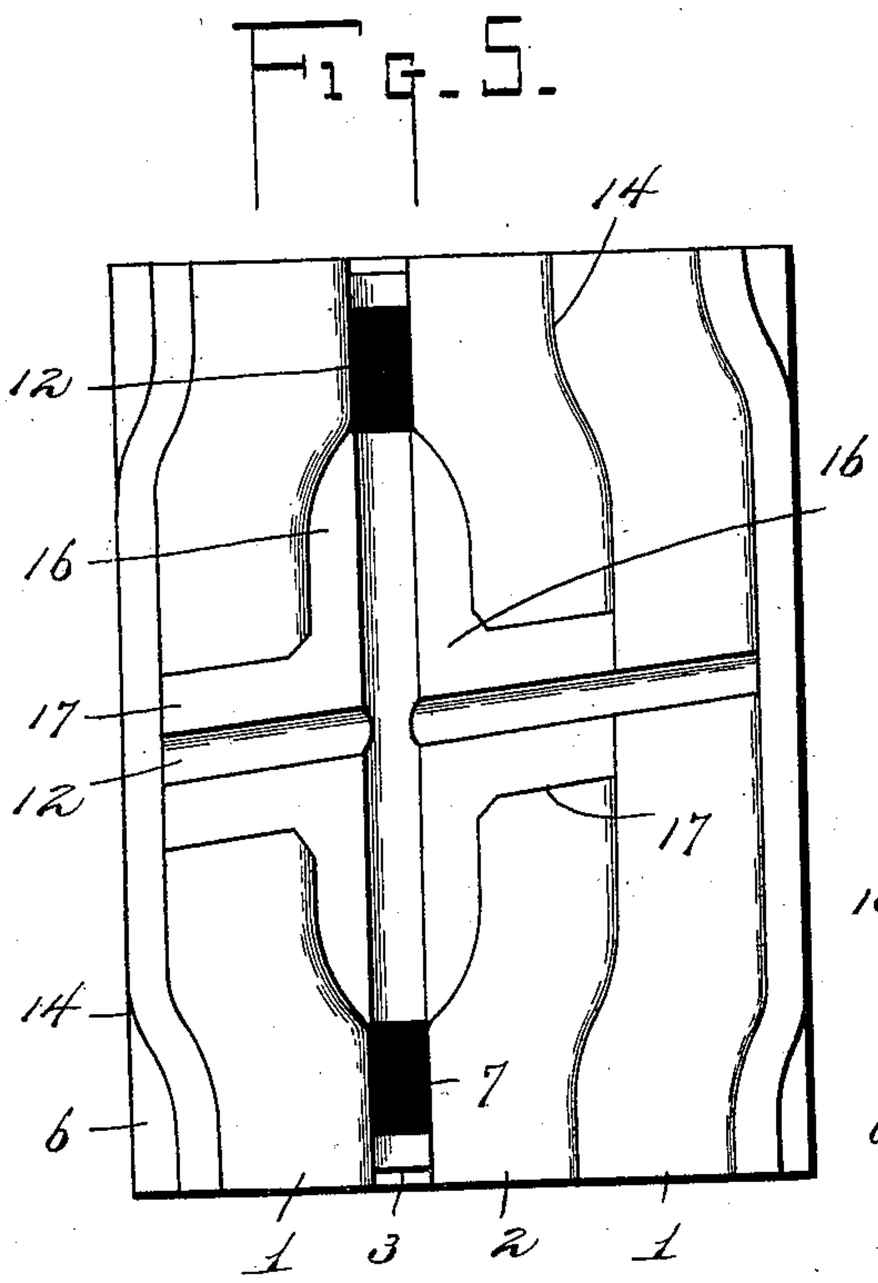


FIG. 6.

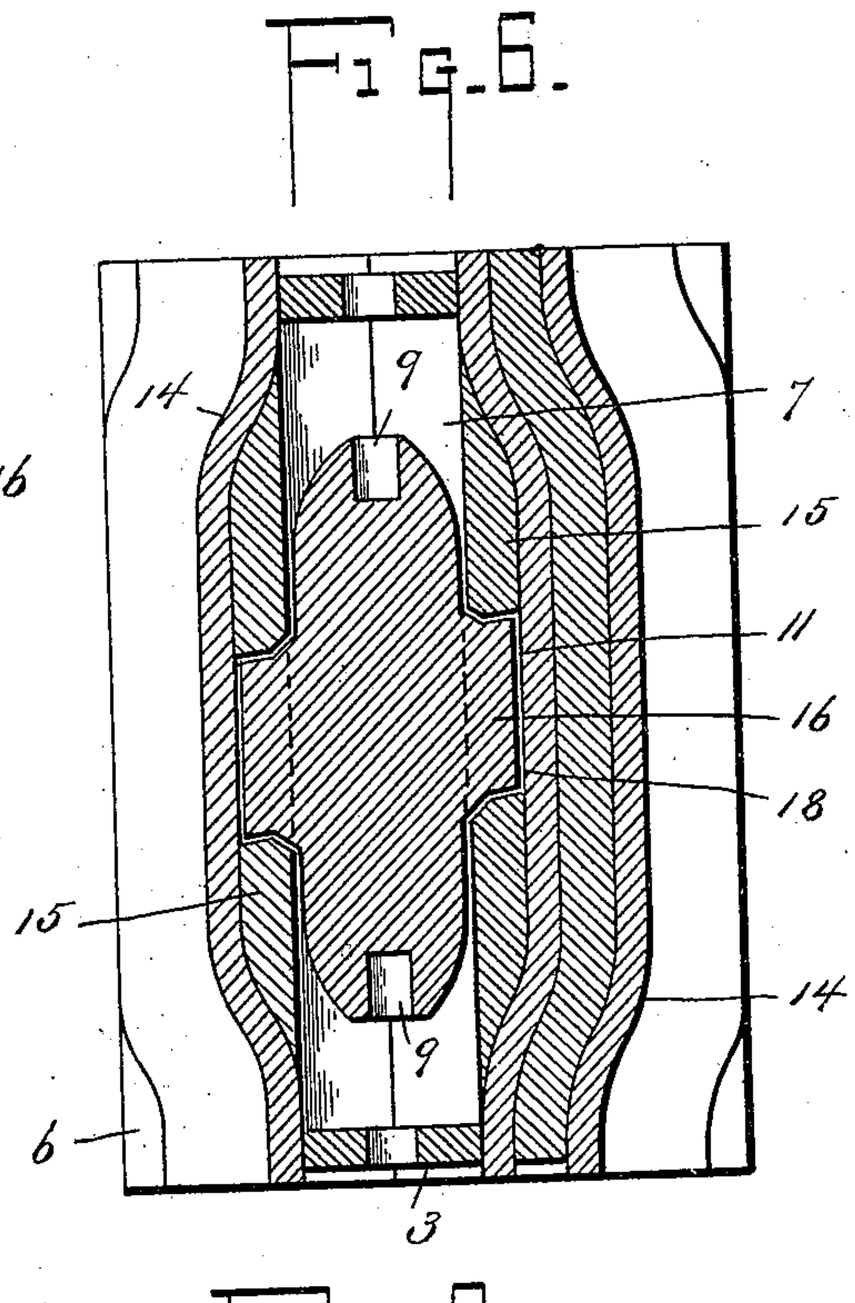


FIG. 7.

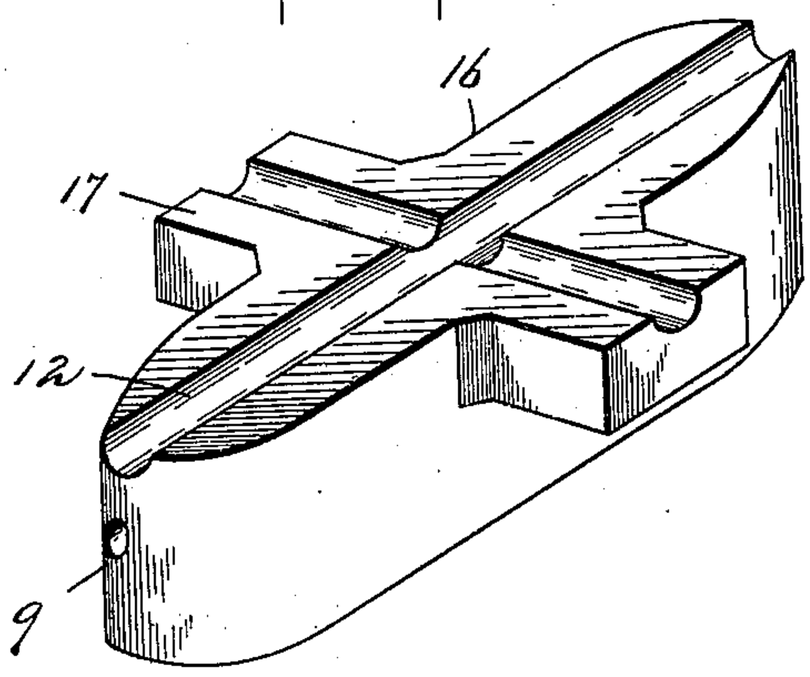
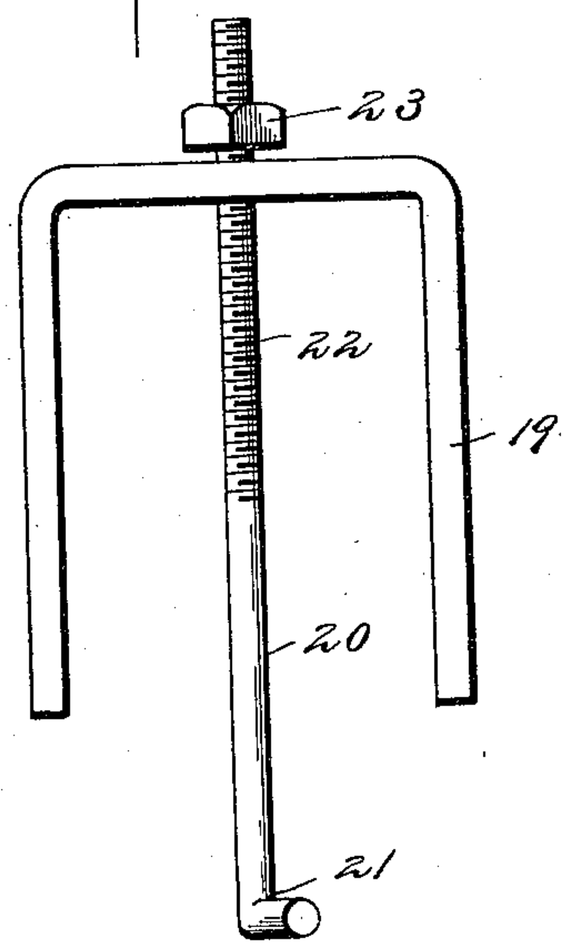


FIG. 8.



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UNITED STATES PATENT OFFICE.

PETER VOGLE, OF JOHNSTOWN, PENNSYLVANIA.

RAILROAD-CROSSING.

SPECIFICATION forming part of Letters Patent No. 617,974, dated January 17, 1899.

Application filed April 3, 1897. Serial No. 630,605. (No model.)

To all whom it may concern:

Be it known that I, PETER VOGLE, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-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.

This invention relates to improvements in railway-crossings.

The object of the invention is to provide a crossing the construction of which shall be such that the life of the same shall be greatly prolonged, so that the necessity for dispensing with the crossing after the intersecting points have become so worn as to be useless is entirely overcome.

The invention further aims to provide in the construction of a railway-crossing a removable wear-block which is adapted to be reversed, whereby when a portion thereof has become worn the block may be so positioned as to present an entirely new wear-surface, and thus in addition to prolonging the life of the crossing also prolonging the life of the block.

With these objects in view the invention consists, substantially, in the novel constructions, combinations, and arrangements of parts, as will be hereinafter fully illustrated, described, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a crossing embodying the herein-described invention. Fig. 2 is a central vertical sectional view through the wear-block. Fig. 3 is a similar view taken at right angles to Fig. 2. Fig. 4 is a detail perspective view of the wear-block. Fig. 5 is a top plan view of a crossing having a differently-constructed form of the herein-described invention applied thereto. Fig. 6 is a sectional plan view thereof. Fig. 7 is a detail perspective view of the wear-block employed with the form illustrated in Figs. 5 and 6. Fig. 8 is a side elevation of a device employed for removing the wear-blocks from the crossings.

Similar numerals of reference designate corresponding parts throughout the figures of the drawings.

In the drawings, 1 is the main rail of a crossing, and 2 is the guard-rail. These rails are arranged in pairs and spaced from each other. Positioned outside one of the rails is an auxiliary bar or rail 2^a to strengthen the structure at the intersection, spacing-blocks 3 3 being provided between the main rails and guard-rails and between the guard-rails and strengthening bar or rail 2^a. By reason of the introduction of these blocks 3 all of the rails are held in relative position with relation to each other, as shown in the drawings.

4 designates the intersecting rails, and in order that the said rails may be retained in their proper relative positions spacing-blocks 5 are employed, similar to the spacing-blocks 3.

The construction thus far described refers, essentially, to the crossing, and the parts are mounted upon a base-plate 6 and secured thereto in any suitable manner.

Between one of the main rails 1 and the guard-rail 2 is a chamber 7, extending longitudinally of said rails and adapted to receive a wear-block 8, and it will be observed that the chamber 7 is of somewhat greater length than the block 8 for a purpose to be presently stated. The heads of the rails 1 and 2, between which the chamber 7 is formed, are cut away and form an entrance-passage of a width substantially the same as the width of the block 8, and it will be noted that the length of this entrance-passage is substantially the same as the block 8 and less than the chamber 7, and by reason of this when the wear-block 8 is inserted into the chamber 7 a space is formed at each end of said block and between the spacing-blocks 3, designed to permit of the free insertion of a pry or other suitable implement for raising the block 8 out of the chamber 7 when so desired, each end of the block 8 being provided with an opening 9, in which the end of the pry or other implement may be inserted.

Formed on the sides of the wear-block 8 at opposite points is a series of projections 10, said projections being of less thickness than the thickness of the wear-block 8, and the webs of the main rail 1 and guard-rail 2, which form the chamber 7, are provided with oppo-

sitely-disposed recesses. When the projections 10 are placed in the recesses 11, the latter form supports for the projections 10, so that the wear-block 8 is held in a rigid position within the chamber 7. The end of the spacing-block 5 adjacent to one of the recesses 11 is rabbeted to lengthen said recess, so that the latter may accommodate one of the projections 10.

The upper surface of the block 8 is provided with grooves 12, running at suitable angles with each other, which grooves, when the block 8 is in the chamber 7, are in alinement with the spaces formed between the rails 1 and 2 and the intersecting rails 4 and allow the flanges of the wheels to pass through said grooves. The spacing-blocks 3 and 5 are also grooved to correspond with the grooves in the wear-block 8, and, if desired, one of the grooves 12 of said wear-block may be of less depth than the other, as when an ordinary street-railway crosses a steam-railway. If, however, the crossing is to be employed entirely upon steam-railways, the grooves 12 must be of such depth as to accommodate the flanges of the wheels of a train, and likewise upon ordinary street-railways.

To permit of the removal of an accumulation of water or the like which may enter the chamber 7, the spacing-blocks 3 at the ends thereof are provided at their under edges with drainage-openings 13.

In Figs. 5, 6, and 7 is illustrated a differently-constructed form of the invention, and by referring thereto it will be observed that the main rail 1 and the guard-rail 2, in which the chamber 7 is formed, are provided with offsets 14. By reason of forming the rails 1 and 2 with the offsets 14 it will be seen that the necessity for cutting away the heads of the rails, as in Figs. 1 to 4, is entirely obviated. The remaining portions of the crossing are similar to that shown in Figs. 1 to 4, with the exception that brace-plates 15 are arranged at each side of the recesses 11 at the inner sides of the webs of the rails 1 and 2, and the purpose of these plates is to strengthen the webs. 16 designates the wear-block, which corresponds to the wear-block 8, with the exception that the ends thereof are somewhat rounded, so as to fit the rounded ends of the chamber 7, and it will also be noted that the projections 17, carried by the block 16, have depending from their lower sides abutments 18, which abutments are formed integral with the body of the block 16 and are adapted to fit between the ends of the brace-plates 15. For the purpose of further strengthening the webs of the rails the abutments 18 may be entirely dispensed with and the plates 15 upon each of the rails 1 and 2 formed of a continuous piece extending from one end of the chamber 7 to the other end thereof, and by this construction it is apparent that the sides of the plates 15 and the webs of the rails may be strengthened to a greater degree than as shown in the drawings. This construction is not essential, however; but I reserve to myself the right to employ the same, if necessary.

In Fig. 8 is shown a device which I preferably employ for removing the wear-blocks from the chamber 7, and it will be noted that the same comprises an inverted-**U**-shaped yoke member 19, the lower ends of which are adapted to rest upon the rails when removing the blocks, and passing through the upper end of the member 19 is a hook member 20, the lower end of which is bent to form a hook 21 and the upper end provided with a series of screw-threads 22, upon which is mounted an adjusting-nut 23. When the yoke member 19 has been placed upon the rails, the hook 21 is inserted into the opening 9 of the wear-block, and by manipulating the adjusting-nut 23 it is apparent that the hook member 20 will move upwardly, and hence elevate the wear-block from the chamber. While this is shown as the preferred form of means for removing the wear-block, yet it is apparent that any other desired form of pry may be employed.

The method of applying the wear-block 8 to the crossing will be readily seen from the preceding description, and it will be observed that all that is necessary is to place the projections 10 in such position in relation to the recesses 11 that said projections may readily enter into the latter when the block 8 is inserted into the chamber 7.

It will be noted that the block 8 is reversible, and from this fact it will be seen that when the gage side becomes unfit for use the position of the block can be changed so that the guard side may become the gage side, and thus prolong the life of the block and, as is obvious, also the life of the crossing. The blocks may be formed of rolled, forged, or cast steel, harveyized metal, or other suitable material, and when one block has become entirely worn the same may be replaced by another, and this continued from time to time until the rails in the crossing become unfit for further use.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A railway-crossing involving the combination of an unbroken main rail, an unbroken guard-rail adjacent thereto, a chamber between said rails an intersecting rail, spacing-blocks between the main rail and guard-rails, and a reversible and removable wear-block arranged within the chamber provided with projections to fit the chamber and recesses in the rails, substantially as described.

2. A railway-crossing involving the combination of an unbroken main rail, an unbroken guard-rail adjacent thereto, a chamber between said rails, and a bearing-block provided

with sockets or recesses in opposite ends, the wear-block being shorter than the chamber between the rails, substantially as described.

3. A railway-crossing involving the combination of an unbroken main rail, an unbroken guard-rail, a chamber between said rails an unbroken auxiliary strengthening rail or bar adjacent the guard-rail, intersecting rails and guard-rails, spacing-blocks between the main and guard rails, and between the intersecting, main and guard rails, and a removable and reversible wear-block, substantially as described.

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

PETER VOGLE.

Witnesses:
G. W. GEIGER,
JOHN H. DAVIS.