

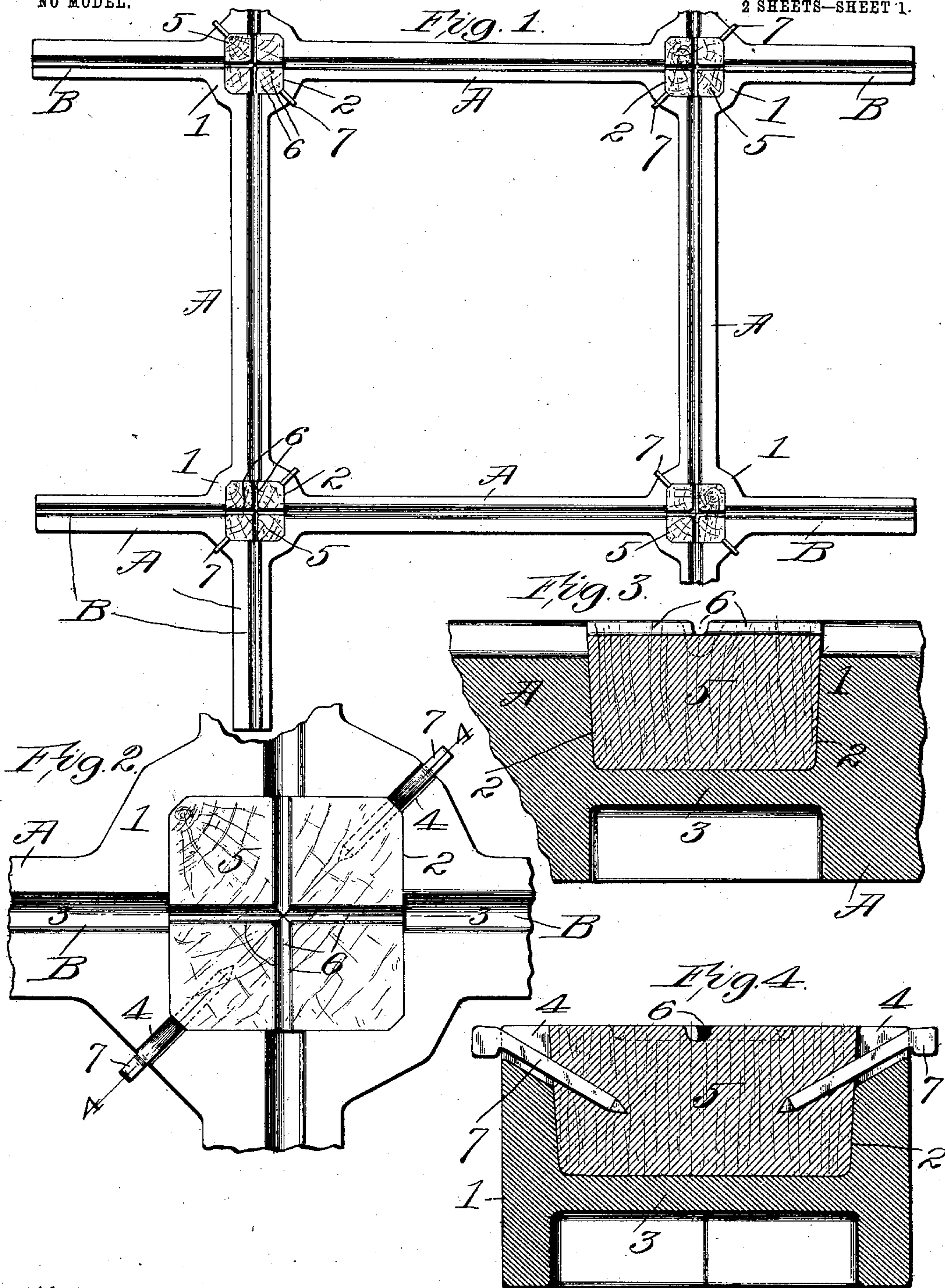
No. 721,129.

PATENTED FEB. 17, 1903.

C. A. MORENO.
RAILWAY CROSSING.
APPLICATION FILED NOV. 10, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

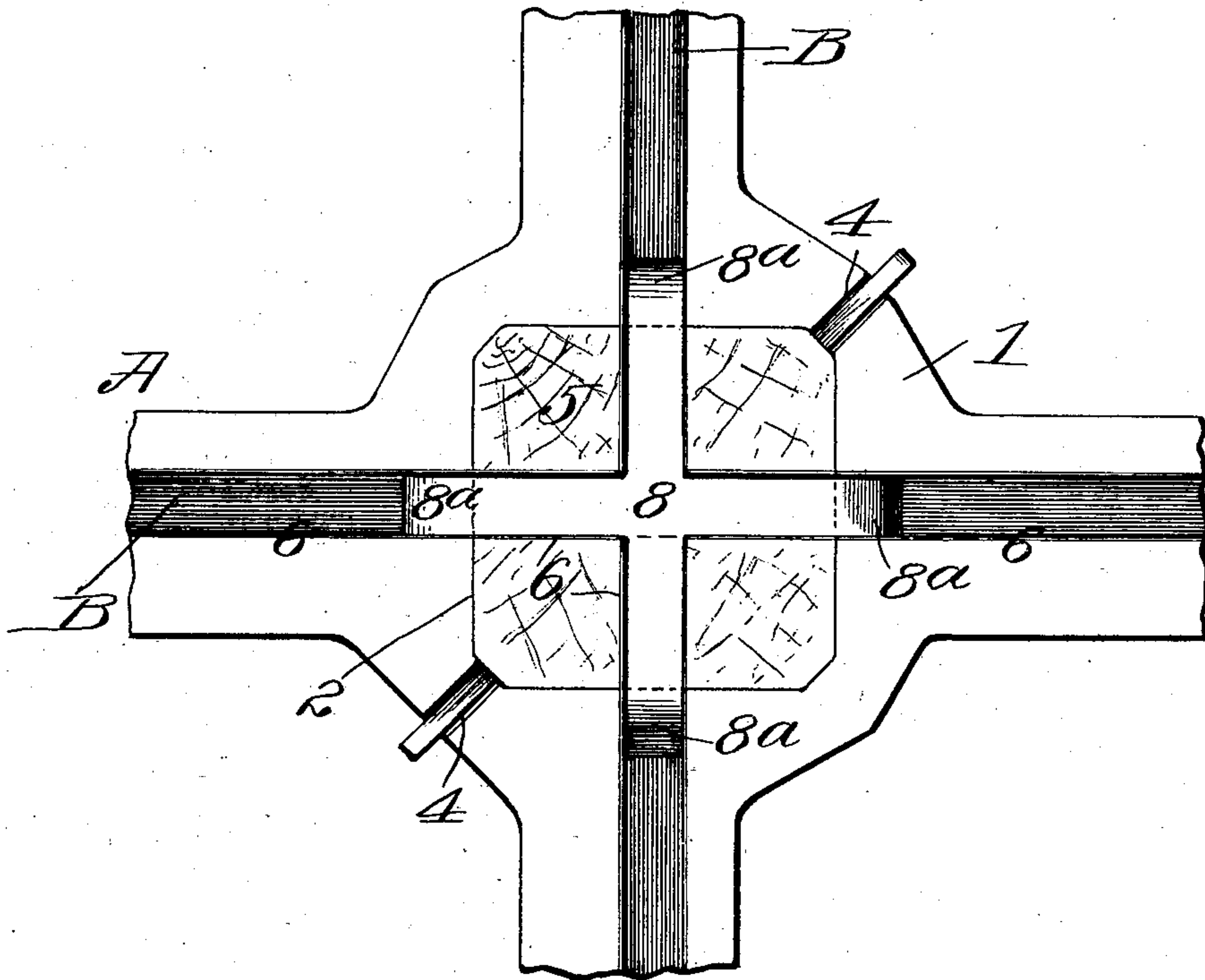
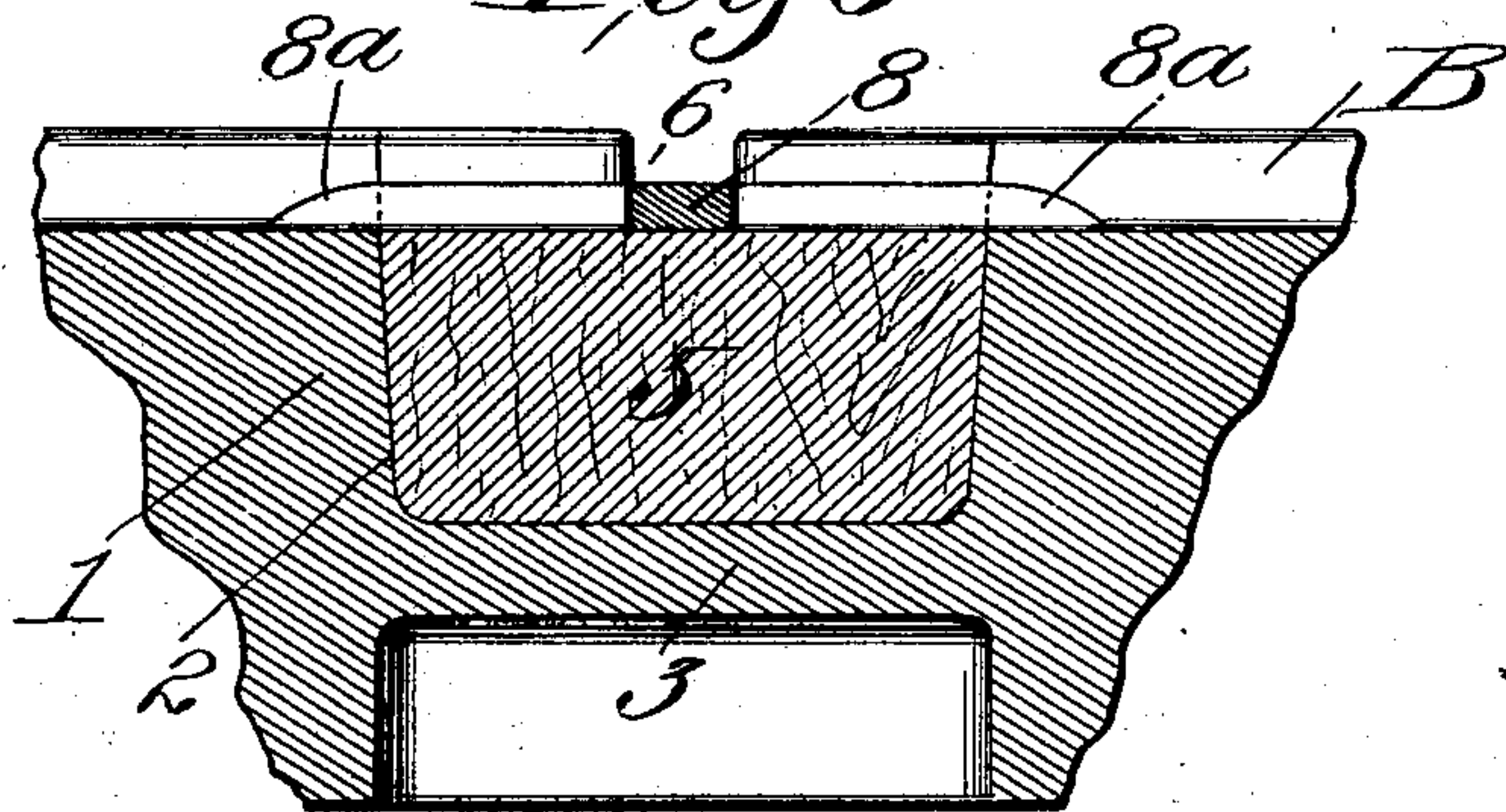


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES A. MORENO, OF ST. LOUIS, MISSOURI.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 721,129, dated February 17, 1903.

Application filed November 10, 1902. Serial No. 130,705. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. MORENO, a citizen of the United States, residing in the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Railway-Crossings, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a crossing provided with my invention. Fig. 2 is an enlarged plan view of one of the corner-joints therefor. Fig. 3 is a sectional view of Fig. 2 on line 3 3. Fig. 4 is a sectional view on line 4 4. Fig. 5 is a plan view of a modified form of construction, and Fig. 6 is a vertical section of the same on line 6 6 of Fig. 5.

This invention relates to improvements in railway-crossings; and it consists in certain new and useful features of detail construction thereof, all as hereinafter more fully described, and specifically pointed out in the claims.

The object of the invention is to provide a substantially noiseless crossing which when worn may be easily removed and economically renewed without any of the inconvenience incident to the removal and renewal of the crossing sections or plates in general use, which plates are generally of hardened metal fitted in the crossing portion of intersecting rails or crossing-castings and there held by softer metal poured into the interstices to hold it more securely in position. To that end I substitute for such metal plate or filler-block a block of wood or fibrous material, either of natural wood or a manufactured block, adapted for ready insertion and removal, whose cost is but a fractional part of the costly members now employed and which will render the crossings where they are used substantially noiseless in practical use, said fibrous block being so formed that when it is in position the grain thereof will run vertically and present the substantially uncompressible ends thereof at the upper and lower faces thereof.

Referring to the drawings, A indicates the

rails, which in my improved crossing are formed, preferably, in one piece without joints and may intersect each other at any angle. Integral with the rail-sections A and at the points of intersection thereof are formed socket portions 1, having central openings 2, which openings are provided with bottom portions 3, extending entirely across the same. Formed in the side walls of the socket portions 1 are vertical channels 4, as shown, extending to the upper face of said socket members. The walls of the socket 2 are preferably vertical, and in the socket is placed a block 5, which rests upon the said bottom 3 and extends vertically either flush with or slightly above the tread of the rails A, though preferably flush with the tread. Formed in the upper face of the block 5 are channels 6, which channels are preferably slightly more shallow and narrower than the flange-channels B in the metallic rails A, so that as the wheel-flanges pass through said channels, riding on a metallic cross 8 therein, the fibers of the block 5 will become slightly compressed thereat, and thereby the better adapted to resist abrasion incident to use. In the channels 6, formed in the upper face of said block, is located said metallic cross 8, the arms of which are of sufficient length to project for a short distance beyond the edges of said filler-block, said protruding ends lying in the channel B, formed in the upper surface of the ordinary track-rails. The impact of the flange portion of car-wheels against the fibrous material through said filler-block will have more or less tendency to expand the block 5 laterally, thereby the more securely holding it in position within the socket 2 and securing it against removal. The metallic member 8 is secured in position on the filler-block in any suitable manner, as by spikes which pass through the same into the filler-block. To permit removal of the blocks 5 when worn sufficiently to make renewal advisable, the spikes 7 are driven into said blocks; said spikes resting in the channels 4 and projecting beyond the metal shell 1 sufficiently far to permit grasping the same for the purpose of lifting out said blocks. I do not wish to limit myself to a wood block 5, as it will be evident that any sufficiently-

compact block of fibrous material will answer the same purpose—such, for instance, as papier-mâché—but I consider it advisable to have the fibers or grain of the wood extend substantially in a vertical direction where wood is used. Within said channels 6 rests the said metallic cross 8, which is designed as a wear-plate, whereby the abrasive action of the flanges of wheels passing over the same will be partially removed from the fibrous block and affect chiefly said metallic member, which may be renewed without disturbing the block beneath the same when desired. It will be apparent that where the member 8 is formed as shown the projecting ends thereof which lap over the rails should be provided with substantially flat lower faces and the upper face provide an incline 8° , so that the flange of the wheel will ride gradually up said incline until it mounts the highest portion thereof, which is centrally over the filler-block, where the natural resiliency of the metal of said metallic cross will permit slight depression thereof against the block or into the channel thereof if it is worn slightly, which block at this point bears the whole burden of the load thrown thereon, whereby the combined sustaining power of the cross and the said block will be most effective and the car will ride over the slight depression, if any, remaining unfilled in the rail-surface without any of the jarring or jolting incident to track-crossings as now formed, and the action of the fibers of said block will be the same where the cross is provided as where it is not used, except that thereby the block will be better protected against abrasion, and in addition to its sustaining power the strength of the metallic member will be added thereto, whereby an easy spring-like sustaining means will be afforded without any of the disadvantages incident to the use of a spring-sustained filler-block, and when the metal of said wear-plate 8 is worn sufficiently to permit the tread portion of the wheel to contact with the filler-block such contact will be found to be practically noiseless because of the character of said block, which takes the place of the hardened metallic crossing-blocks in common use, which are very objectionable because of the amount of noise resulting from cars crossing thereover.

I am aware that minor changes in the construction, arrangement, and combination of the several parts of my crossing may be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. In a railway-crossing or the like, a filler-block of fibrous material, the grain of which extends substantially vertically; substantially as described.

2. In a railway-crossing or the like, a filler-

block of fibrous material, the grain of which extends substantially vertically and having flange-channels formed in its upper face; substantially as described.

3. In a railway-crossing or the like, a filler-block of fibrous material, the grain of which extends substantially vertically and having flange-channels formed in its upper face smaller than the flange-channels of the metal rails in conjunction with which it is to be used; substantially as described.

4. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, and filler-blocks in said sockets formed of fibrous material; substantially as described.

5. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, and filler-blocks in said sockets formed of fibrous material, the grain of which extends substantially vertically; substantially as described.

6. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, and filler-blocks in said sockets formed of fibrous material, the grain of which extends substantially vertically and having flange-channels formed in their upper faces; substantially as described.

7. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, and filler-blocks in said sockets formed of fibrous material, the grain of which extends substantially vertically and having flange-channels formed in their upper faces smaller than the flange-channels of the metal rails in conjunction with which they are to be used; substantially as described.

8. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, channels in the walls thereof, a bottom integral with said walls, a fibrous block in said socket, the grain of which block extends in a vertical direction, and spikes extending into said block with head portions projecting beyond the wall of said socket, whereby they may be engaged to facilitate the removal of said block; substantially as described.

9. In a railway-crossing or the like, a filler-block of fibrous material having flange-channels formed in its upper face and having plane faces at its sides and bottom; substantially as described.

10. In a railway-crossing or the like, a filler-block of fibrous material having flange-channels formed in its upper face smaller than the channels formed in the metal rails in conjunction with which it is to be used and having plane faces at its sides and bottom; substantially as described.

11. In a railway-crossing or the like, a filler-block of fibrous material, the grain of which extends substantially vertically and having flange-channels formed in its upper face, and a metallic filling member in said channel; substantially as described.

12. In a railway-crossing or the like, a filler-

block of fibrous material, the grain of which extends substantially vertically and having flange-channels formed in its upper face, and a metallic filling member in said channel, said filling member overlapping the contiguous rail-sections; substantially as described.

13. In a railway-crossing or the like, a filler-block of fibrous material, the grain of which extends substantially vertically and having flange-channels formed in its upper face, and a metallic member in said channel, said filling member overlapping the contiguous rail-sections, thereby forming a substantially spring wearing-plate coöperating with said block and rail sections to sustain a load; substantially as described.

14. In a railway-crossing or the like, a filler-block of non-metallic material with channels formed in its upper face, and a metallic wear-plate therein, which plate is provided with inclined end portions overlapping the contiguous rail-sections; substantially as described.

15. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, filler-blocks in said sockets formed of fibrous material, and wear-plates resting in channels formed in said blocks, with the outer ends of said wear-plates overlapping the contiguous rail-sections; substantially as described.

16. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, filler-blocks in said sockets formed of fibrous material, and wear-plates resting in channels

formed in said blocks with the outer ends of said wear-plates overlapping the contiguous rail-sections and having inclined outer ends; substantially as described.

17. In a railway-crossing or the like, a casting provided with a plurality of sockets therein, filler-blocks resting in said sockets, and overlapping wear-plates supported upon said blocks and upon the contiguous ends of the track-rails; substantially as described.

18. In a railway-crossing or the like, a casting formed with a plurality of sockets therein, fillers therein composed of wood and metal so arranged that the metal forms a bearing-surface for the flange of car-wheels and the wood serves as a bearing for the tread of the wheels; substantially as described.

19. In a railway-crossing or the like, a casting formed with a socket therein, fillers in said socket composed of metal and non-metallic substance, the metal serving as a support for the flange of wheels passing thereover, and the non-metallic substance serving as a support for the tread portion of such wheels; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 7th day of November, 1902.

CHARLES A. MORENO.

Witnesses:

WM. H. SCOTT,
FREDERICK H. GIBBS.