

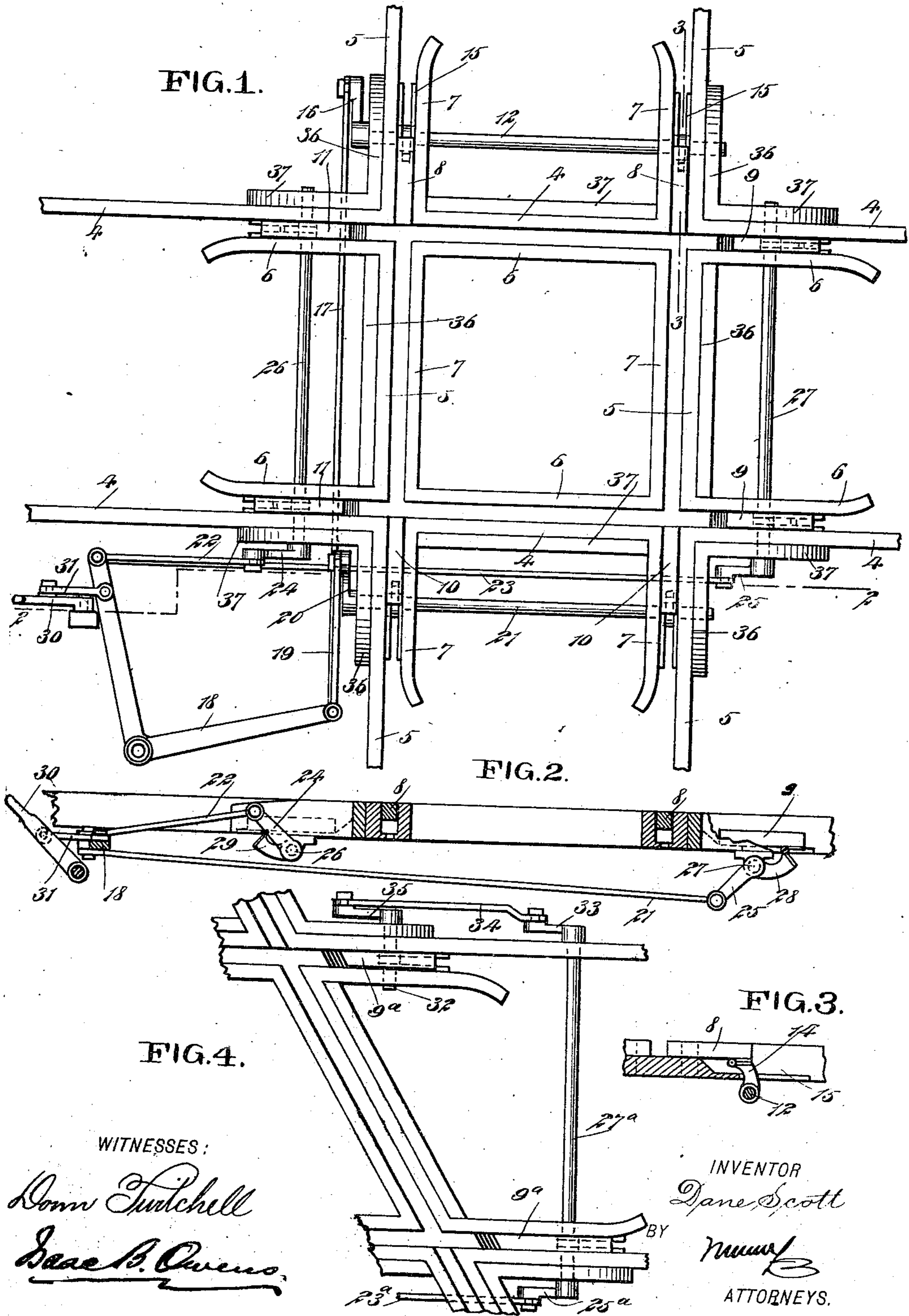
No. 630,748.

Patented Aug. 8, 1899.

D. SCOTT.
RAILROAD CROSSING.

(Application filed Feb. 28, 1899.)

(No Model.)



UNITED STATES PATENT OFFICE.

DANE SCOTT, OF DELPHOS, OHIO, ASSIGNOR OF ONE-HALF TO PAUL A. STIPPICH, OF SAME PLACE.

RAILROAD-CROSSING.

SPECIFICATION forming part of Letters Patent No. 630,748, dated August 8, 1899.

Application filed February 28, 1899. Serial No. 707,203. (No model.)

To all whom it may concern:

Be it known that I, DANE SCOTT, of Delphos, in the county of Allen and State of Ohio, have invented a new and Improved Railroad-Crossing, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide a railway-crossing in which the pounding of the car and engine wheels at the crossing will be avoided; and this end is attained by providing an additional or inside rail running with the main rails and forming guideways in which are situated sliding blocks mounted on mechanism to raise and lower the blocks, so that as the train passes the crossing the blocks may be raised to fill the spaces between the rails, and thus provide an additional bearing-surface over which the treads of the wheels may roll, whereby to avoid the dropping of the wheels into the spaces between the rails, as is common with the crossings as now constructed.

This specification is the disclosure of one form of the invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the invention. Fig. 2 is a sectional view on the line 2 2 of Fig. 1. Fig. 3 is a detail section taken, for example, on the line 3 3 of Fig. 1; and Fig. 4 is a fragmentary plan view of a slight modification of the invention.

Referring to the first three figures of the drawings, the main rails 4 of one track crossing the main rails 5 of the other track are provided with the extra inside rails 6, fastened thereto, and the main rails 5 are provided with inside rails 7, fastened thereto and similar to the rails 6, the several rails 4, 5, 6, and 7 being so arranged as to permit the flanges of the wheels to pass along in either direction without obstruction. I also provide additional outside rails 36, lying alongside the rails 5, and additional outside rails 37, lying alongside the rails 4. These rails 36 and 37 are fastened to the main rails and serve to strengthen the structure and also to

provide a smooth bearing-surface for old worn wheels that would otherwise pass the crossing with a serious pounding. The crossing thus arranged presents to the wheels passing, for example, along the rails 4 open spaces, which occur between the rails 5 and 7 at their points of intersection with the rails 4 and 6. The same is true of the rails 5, which are interrupted by open spaces occurring between the rails 4 and 6 at their points of intersection with the rails 5 and 7. To fill these spaces and provide a smooth bearing-surface for the wheels, I provide four pairs of elongated steel blocks 8, 9, 10, and 11. The blocks 8 are mounted on a rock-shaft 12 by means of crank-arms 14, which are one for each block 8 and which are hinged to the blocks. When the rock-shaft 12 is thrown in one direction, as shown in Fig. 1, the blocks 8 are advanced so that their inner ends are in line with the adjacent rails 4, and consequently the wheel passing over the rail 4 will travel along an unbroken surface. When the rock-shaft 12 is thrown in the other direction, the blocks 8 move outwardly and downwardly and settle into cavities 15, formed between the rails 5 and 7 at points directly above the shaft 12, as shown in Figs. 1 and 3. The shaft 12 is provided with a crank-arm 16, to which is connected a link 17, passing to an elbow-lever 18, fulcrumed adjacent to the crossing. The elbow-lever 18 is also provided with a link 19, connected with the crank-arm 20 of a shaft 21, mounted diametrically opposite the shaft 12 and having the blocks 10 connected therewith by means of crank-arms (not shown) similar to the crank-arms 14. The arrangement of these parts 21 and 10 is the same as the arrangement of the parts 12 and 8, and by reason of the links 17 and 19 and the cranks 16 and 20 the blocks 8 and 10 act in unison with each other, so that the two sets of wheels of the car passing over the rails 4 will be provided with the bearing-surfaces, as explained. The other end of the elbow-lever 18 is connected with two links 22 and 23. The link 22 is pivoted to a crank-arm 24, and the link 23 is pivoted to a crank-arm 25. The crank-arm 24 is fast to a rock-shaft 26, and the crank-arm 25 is fast to a rock-shaft 27, which shafts

26 and 27 are similar to the shafts 12 and 21. The blocks 11 are connected with the shaft 26 by cranks 29, similar to the cranks 14, and the blocks 9 are connected with the shaft 27 by cranks 28, similar to the cranks 14, all of which is shown in Fig. 2. The elbow-lever 18 is adapted to be thrown by a hand-lever 30, connected with the elbow-lever by a link 31. The arrangement of the several links 17, 19, 22, and 23 and the cranks 16, 20, 24, and 25 is such that as the blocks 8 and 10 are advanced to the operative position shown in Fig. 2 the blocks 11 and 9 are retracted and as the blocks 8 and 10 are thrown back the blocks 9 and 11 are advanced. In other words, the blocks 8 and 10 and the blocks 9 and 11 act in sets which advance and retract alternately. The elbow-lever 18 may be thrown by an attendant so as to adjust the crossing for trains passing on either track 4 or 5.

The form of the invention shown in Fig. 4 differs from the other form of the invention only in that it shows the adaptation of the apparatus to diagonal or angled crossings. In this arrangement the blocks 9^a are actuated by two rock-shafts 27^a and 32, the former having a crank-arm 25^a, connected with a link 23^a, by which to rock the shaft 27^a. One of the blocks 9^a is connected with the shaft 27^a by a crank-arm similar to the crank-arm 28. The other end of the shaft 27^a is provided with a crank 33, to which a link 34 is pivoted. This link 34 is pivoted to a crank-arm 35 on the shaft 32, to which shaft 32 the other block 9^a is connected by a crank-arm similar to the crank-arm 28. In this form of the invention the operation is the same as that previously described.

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

1. A railroad-crossing, having cavities formed between the rails thereof, the cavities being juxtaposed to and leading up to the spaces between the rails, sliding blocks mounted to move into said cavities and to move upward between the spaces between the rails, the blocks being arranged in sets, and the sets moving alternately to place one in position when the other is out, four crank-shafts extending parallel with the respective rails, the opposite crank-shafts being connected to move in unison, arms attached to the shafts and respectively pivoted to the sliding blocks, and means connected with the pairs of shafts for rocking them in unison.

2. In a railroad-crossing, the combination with the crossing rails, of the frog having cavities therein, the cavities being juxtaposed to the spaces between the crossing rails, blocks mounted to slide in the cavities and movable relatively into the said spaces between the crossing rails, crank-shafts having arms pivoted to the blocks to move the same, a bell-crank lever, and two sets of links respectively connected with the arms of the bell-crank lever and respectively extending to the cranks of the crank-shafts so that upon a movement of the bell-crank lever the crank-shafts are operated in sets or gangs to throw the blocks into and out of operative position.

DANE SCOTT.

Witnesses:

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HERMAN GOETTE.