

No. 831,285.

PATENTED SEPT. 18, 1906.

E. R. IVES.
TOY RAILROAD GATE.
APPLICATION FILED APR. 18, 1906.

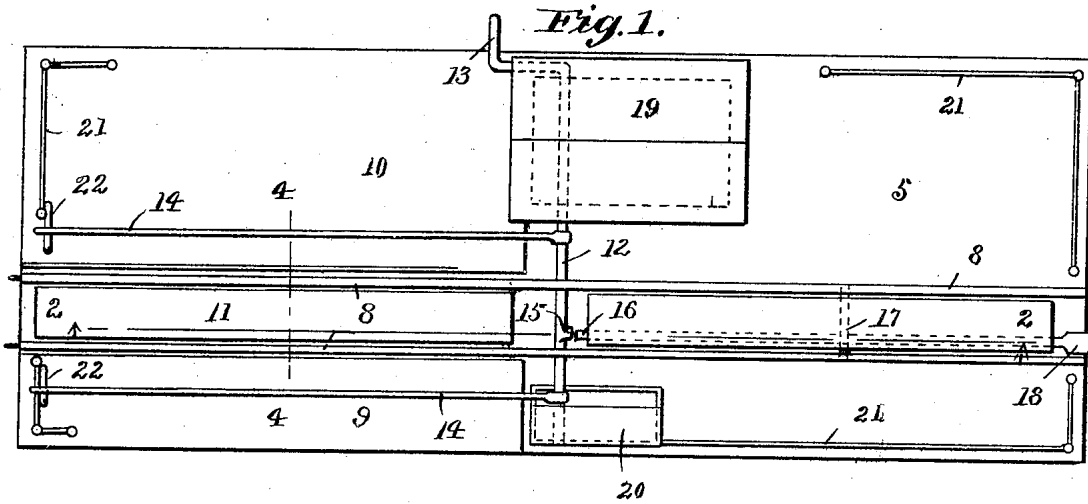


Fig. 4.

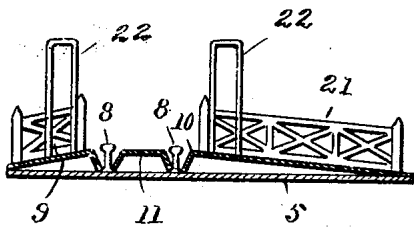


Fig. 3.

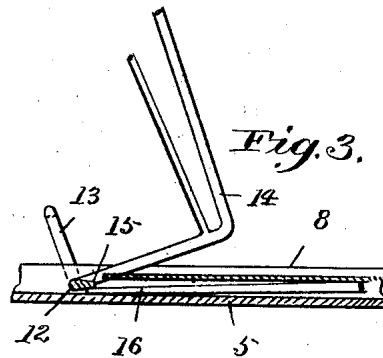
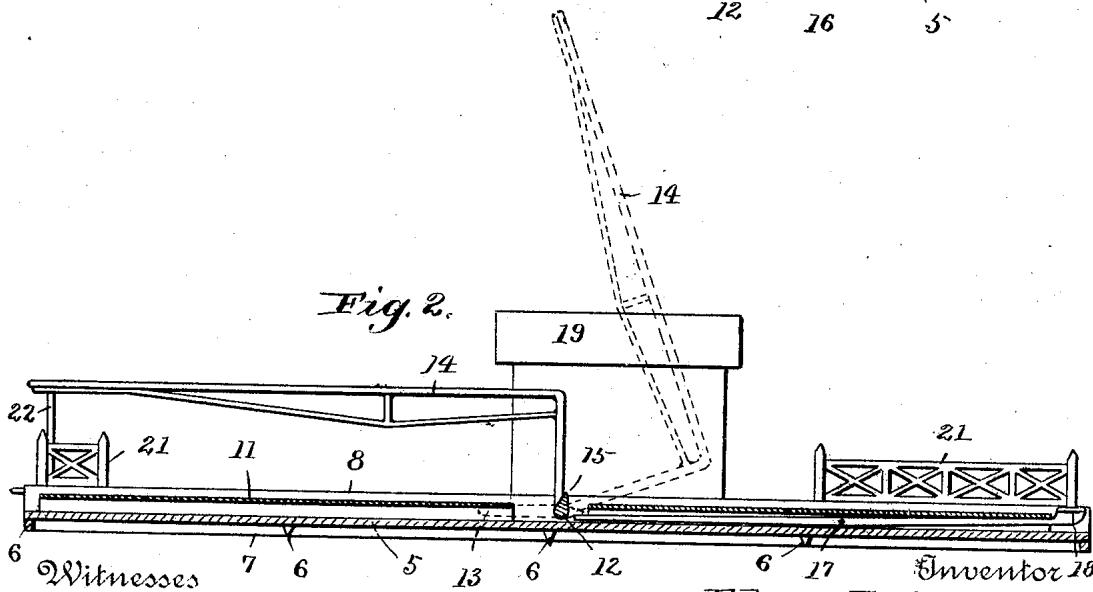


Fig. 2.



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TOY-RAILROAD GATE.

No. 831,285.

Specification of Letters Patent.

Patented Sept. 18, 1906.

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To all whom it may concern:

Be it known that I, EDWARD R. IVES, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Toy-Railroad Gates, of which the following is a specification.

This invention relates to toy-railway tracks upon which are operated miniature trains; and the invention relates more particularly to gates for crossings of said tracks, as in imitation of gates used in street-crossings for steam-roads; and the invention further resides in automatic means whereby the gates are operated by the approaching train.

It is the purpose of my invention to produce a crossing for toy railways in imitation of the steam-road street-crossing and to provide therefor gates at either side of the track adapted to be disposed horizontally or raised and held in an open position, and, further, to provide automatic means whereby they are lowered by the movement of a train over the track; to design said crossing with approaches and adjoining gate-houses and inclosing fences in close imitation to those of an up-to-date street-crossing, and to construct the device in a simple, durable, and comparatively inexpensive manner.

The class of toy-railway tracks for which this crossing is designed is manufactured in both straight and curved portable sections adapted to be set together to form various designs of track, and this gate-section is obviously designed to be used intermediate of any of said sections. In length it is preferably substantially that of two standard sections, or about twenty inches long.

Upon the accompanying drawings, forming a part of this specification, similar characters of reference denote like or corresponding parts throughout the several figures, of which—

Figure 1 shows a plan view of my miniature-railway street-crossing gate mechanism complete. Fig. 2 is a longitudinal vertical sectional view taken on line 2 2 of Fig. 1 and also indicating the raised position of the gates by dotted lines. Fig. 3 is a detail fragmentary longitudinal sectional view corresponding with Fig. 2 and designed to show

the gates in an open position. Fig. 4 is a detail cross-section through the rails and street-approaches therefor, taken on line 4 4 of Fig. 1.

Referring in detail to the characters of reference marked upon the drawings, 5 indicates a base-plate which may obviously be formed of sheet metal—such, for instance, as tin—and is provided with suitable transverse and longitudinal stiffening-ribs 6 and 7, respectively, to form a rigid portable structure upon which the several parts of my gate may be connectively supported.

To the top of the base and longitudinally thereof I attach the parallel rails 8 8, which may be of the usual or any preferred design. Upon the outer side of one end portion of these rails are situated inclined approaches 9 and 10 to bring the surface of the street substantially even with the top of the rails. These approaches are also preferably formed of sheet metal and in practice are decorated in imitation of street-paving. Intermediate of the rails and adjoining the said approaches I insert a bridge-section 11, which is of an inverted trough-like formation, secured to the base-plate intermediate of the rails to fill in the roadway even with the surface of the rails at the point of crossing. A rocker-shaft 12 is journaled in the before-mentioned rails and at a right angle with respect thereto and is provided upon its outer end with a crank 13, by means of which the shaft may be operated, as in the setting of the gates 14, attached to said shaft. These gates are preferably formed of wire and of substantially an L shape, with light brace-sections attached, the whole being so proportioned, designed, and set as to be disposed one upon each side of the track and parallel with the rails when closed and projected upward at an angle when open, as shown in dotted lines in Fig. 2.

To that section of the rocker-shaft lying intermediate of the rails is attached a projecting short arm 15, which is designed to engage the inner end of the lever 16, pivoted to rod 17, and to support the gates in their open or raised positions, as indicated in Figs. 2 and 3. By this means the gates are also operated when a wheel of the locomotive or car strikes the opposite or outer end 18 of said lever, forcing it down and forcing the inner end in a way to throw the gates over

and down to be caught and supported by the rests 22, secured to the fence-sections 21, as indicated in Figs. 1 and 2. The outer sections of the rocker-shaft are also journaled in the side walls of the gate-house 19 and the box 20 on opposite sides of the track, the latter serving to inclose the inner end of the near gate. Both said house and box, as well as the fences 21, are designed in imitation of the surroundings commonly found at street-crossings of steam-railways.

From the foregoing it will be obviously apparent that the gates can be readily hoisted from the horizontal position shown in Fig. 2 to the dotted position shown in the same figure by manipulating the crank 13 and that said gates will remain thus disposed as by their own weight when supported by the engagement of the arm 15 with the lever 16. When in such position the weight of the gates is very accurately balanced, and it requires but little power to throw them, which is obviously obtained from the moving train by the engagement of a wheel with the outer end of the trip-lever 16, which forces up the inner end and trips the gates, leaving the streetway closed until again set by the attendant.

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

1. In a toy-railway gate, the combination of a portable base-plate, rails attached to the plate, a rocker-shaft, gates secured thereon, an arm extended from the shaft to support the gates in a vertical position, and a lever to engage said arm and adapted to be operated by a passing train.

2. In a toy-railway gate, the combination of a portable base-plate, rails attached to the plate, a pair of connected hinged gates adapted to be raised and lowered together, an arm for supporting the gates in a raised position, and a lever to engage said arm and extended in the path of travel of the wheels of a train to operate the gates.

3. In a portable toy-railway gate, the combination with a portable base-plate, rails attached to the plate, a rocker-shaft, a pair of gates attached to said shaft, an arm to support the gates in a lowered position, a lever to engage the shaft to support the gates in line with the travel of the wheels of a train and adapted to operate the gates.

4. In a portable toy-railway-gate section, the combination of a portable base-plate, rails attached to the plate, a pair of hinged gates on the outside of the rails, means for supporting the gates in a lowered position, and a lever pivoted intermediate of the rails adapted to support the gates in a raised position and be engaged by a wheel of the train

and to throw the gates from a raised to a horizontal position.

5. The combination with a portable toy-railway section, of a rocker-shaft journaled transversely in the rails, gates connected to the rocker-shaft on the outside of the rails, arms for supporting the gates in both a raised and lowered position, and a lever to engage one of said arms when the gates are raised and adapted to be operated by a wheel of the train to drop the gates.

6. The combination in a portable toy railway, of a rocker-shaft journaled transversely in the rails, an arm upon one end of said shaft, a second arm intermediate the rails, a pair of gates rigidly secured to said shaft and disposed at each side of the track adapted to be raised and lowered thereby, and means for engaging the intermediate arm of the shaft and operating the same to lower the gates by a passing train.

7. In a portable toy-railway section the combination of a portable plate, rails secured to the plate to form a track-section, a rocker-shaft, a pair of gates attached to the shaft and situated at each side of the track adapted to be raised and lowered, an arm for supporting said gates in both a raised and lowered position, a lever for lowering the gates by the movement of a train over the track, and raised sheet-metal approaches upon each side of the rails adjacent to the gates.

8. In a portable toy-railway gate, the combination with a portable base-plate, of rails secured thereto, sheet-metal inclined approaches attached to the plate at the outer side of the rails, and an intermediate sheet-metal bridge-piece between the rails adjoining said approaches, a pair of gates pivotally connected to said rails adapted to be raised and lowered, arms for supporting them in each of said positions, and connections for throwing said gates from such raised to lowered positions.

9. In a toy-railway gate the combination with a base-plate, of rails attached thereto, a housing situated upon the plate on one side of the track, a box upon the other side, a rocker-shaft journaled in said rails, housing and box, gates attached to said rocker-shaft disposed on each side of the track, an arm attached to the shaft, and means to engage the arm to operate the gates.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 16th day of April, A. D. 1906.

EDWARD R. IVES.

Witnesses:

M. S. PLATT,
C. M. NEWMAN.