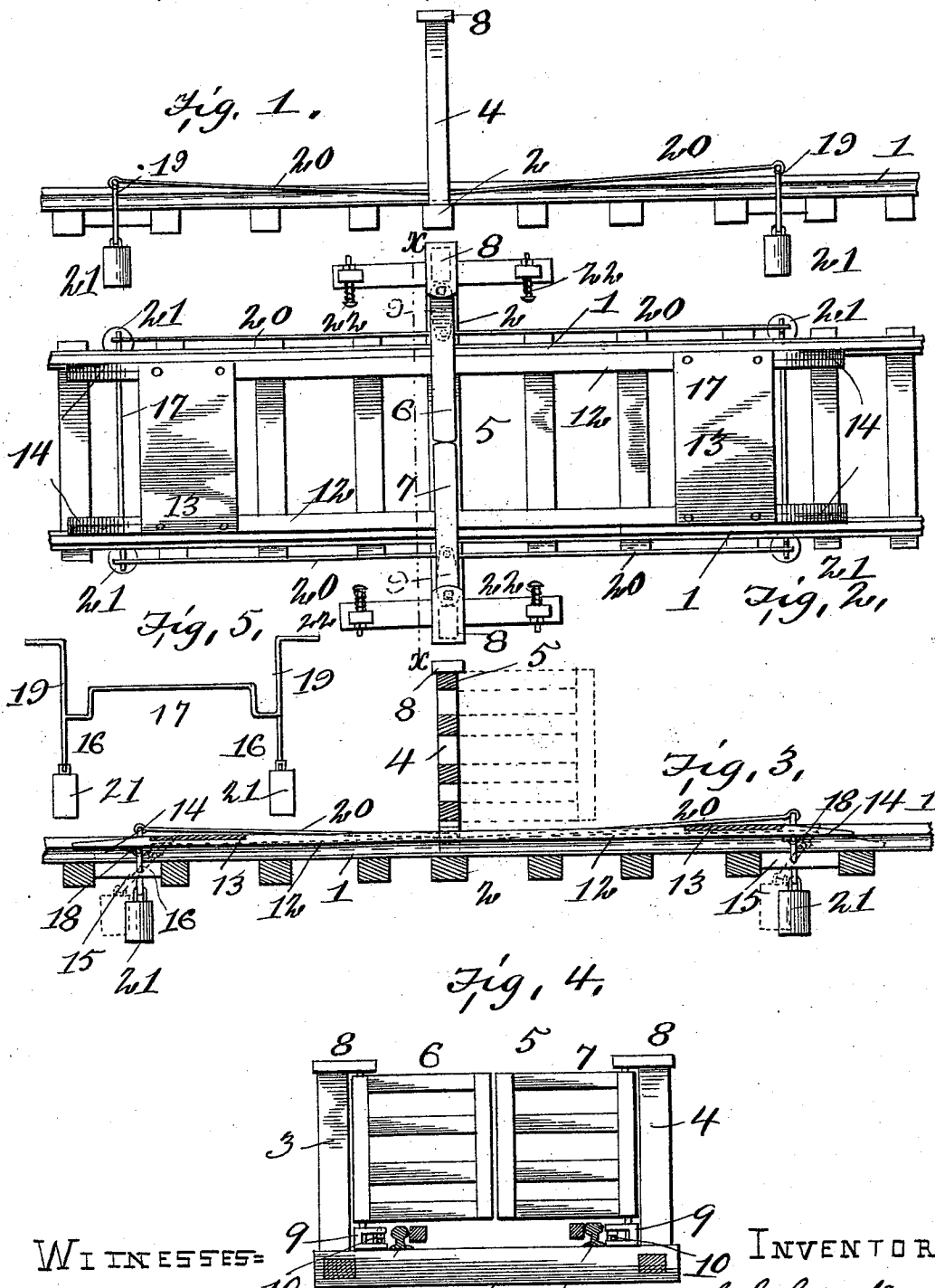


(No Model.)

S. S. SMALLWOOD.
RAILWAY GATE.

No. 536,320.

Patented Mar. 26, 1895.



UNITED STATES PATENT OFFICE.

SHIPLEY S. SMALLWOOD, OF RIDGEWAY, WEST VIRGINIA, ASSIGNOR TO
C. E. RIDGEWAY, OF SAME PLACE.

RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 536,320, dated March 26, 1895.

Application filed August 6, 1894. Serial No. 519,596. (No model.)

To all whom it may concern:

Be it known that I, SHIPLEY S. SMALLWOOD, a citizen of the United States, residing at Ridgeway, in the county of Berkeley and State of West Virginia, have invented certain new and useful Improvements in Railway-Gates; 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 certain improvements in automatic railway-gates for cattle-guards, and it consists in the combination and arrangement of the various parts, as will be hereinafter more fully described and specifically pointed out in the claims.

The invention has for its principal object to produce an automatic gate or guard mechanism, which shall be of simple and durable construction, highly efficient in service, and, at the same time, quickly and easily operated by a train moving in either direction, and it has for its further object to provide for the automatic closing of the gate or guard after the train has passed.

The objects are attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved railway-gate or guard; Fig. 2, a top plan view of the same; Fig. 3, a longitudinal section of the same; Fig. 4, a transverse section, taken on line *x x* of Fig. 2, and Fig. 5, a plan view of one of the rock-shafts, with balance-weights attached.

Similar reference numerals indicate similar parts throughout the several views, in which—

The numeral 1 indicates the rails of a railroad track, and 2 a cross-tie, of suitable size and form, upon which are rigidly secured two posts, 3 and 4, respectively.

The numeral 5 indicates the gate or guard, which is comprised of two independent sections, 6 and 7, respectively, each section having its outer end strongly pivoted between a cap-piece, 8, securely fastened to the top of each post and the cross-tie 2. The upper portion of the lower pivot of each gate or guard section, is square and passes through a square

hole in a bifurcated lever 9, which is provided with a bolt, 10, passing through the ends of said bifurcated lever, the purpose of which will be hereinafter explained.

The operating platform, consists of two parallel beams 12 connected together, near their respective ends, by cross-plates or bars 13. This platform is situated between the two track-rails and its ends extend some distance on each side of the gate or guard. Both ends of each side beam are inclined, as shown at 14, so as to facilitate and render easy the action of the wheel-flange of the locomotive or car as the same strikes the end of the platform.

Secured between two cross-ties at each end of the platform and at each side of the track, is a block, 15, through which passes the horizontal arm 16, of a rock-shaft, 17, which is journaled in bearing-blocks 18, secured to the under side of the beams upon the platform. Thus it will be seen that said platform is supported upon a central horizontal portion of the rock-shafts, one being placed at or near either end of the platform. Attached to the outer end of each side arm of the rock shaft is a lever, 19, and to the upper end of each lever is connected one end of a rod, 20, the other end of said rod being connected to the bolt 10, of the respective bifurcated levers. Each lever 19, extends downwardly beyond its point of connection with the rock-shaft arm and has attached to it a weight, 21, which serves to hold the platform in normally raised position and to return it automatically to its normal position after it has been depressed by a passing train to open the gate or guard.

The operation of the device will be evident from the above description, without further explanation, other than to state that the wheel flanges of a train moving in either direction will strike the inclined ends of the side pieces of the platform, and, depressing the same, will throw open the sections of the gate or guard, as shown by dotted lines Fig. 3; it being understood that the instant the flanges of the wheels strike the inclined end the platform is forced forward and the rock-shafts caused to rock in the same direction. Thus the platform is depressed and held in such position by the moving train until said train

has passed over said platform. The instant the train leaves the platform the weights restore it to its normal position.

It will be observed that as the rock-shafts are caused to move forward the upper ends of the levers are also thrown forward, and as said levers are connected to the bifurcated levers by the rods 20, the gate or guard section will be instantaneously thrown open, as said bifurcated levers are rigidly connected to the pivotal part of the section.

In order to prevent injury to the sections from the sudden "throw" to which they are subjected, by the train striking the platform, I locate at a suitable point a spring buffer, 22, to cushion the shock.

Various changes or modifications of the invention may be made without departing from the principle thereof, such, for instance, as employing but one set of rock-shaft levers, connecting rods, and weights, as it is only necessary for efficient operation to employ but one set of each although in practice I prefer to use the two sets, so that in case of breakage of any of the parts the device will not necessarily be rendered inoperative and useless for the purpose intended; or instead of loosely attaching the weights to the levers, as shown in the drawings, they may be integral with said levers.

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

1. In a railway gate or cattle-guard, the combination, with a gate composed of two swinging sections, of two or more transverse rock-shafts having their respective arms connected with the gate-sections, a platform-

frame mounted upon said rock-shafts, between the track-rails, and adapted to be depressed by the wheels of passing trains to open the gate-sections, and means for automatically returning said platform-frame to its normal position, to close said gate sections.

2. In a railway-gate or cattle-guard, the combination, with a gate composed of two swinging sections, of a movable platform situated between the track-rails and mounted upon rock-shafts, levers secured to said rock-shafts, and connected to the respective gate-sections, and weights attached to said levers, substantially as specified.

3. The combination, with a railway-gate or cattle-guard composed of two swinging sections, each section provided with a rigidly secured lever, of a movable platform mounted upon rock-shafts provided with weighted levers, and rods connecting said levers with the gate-section levers, substantially as specified.

4. The combination, with a railway-gate or cattle-guard composed of two swinging sections, each section provided with a rigidly-secured lever, of two rock-shafts provided with arm extensions journaled in fixed blocks, a platform provided with inclined ends and supported upon said rock-shafts, weighted levers secured to the arms of the rock-shafts, and rods connecting said levers with the levers of the respective gate-sections, substantially as specified.

In testimony whereof I affix my signature in the presence of two witnesses.

SHIPLEY S. SMALLWOOD.

Witnesses:

JOHN W. GRIMES,
S. R. BARDUIN.