

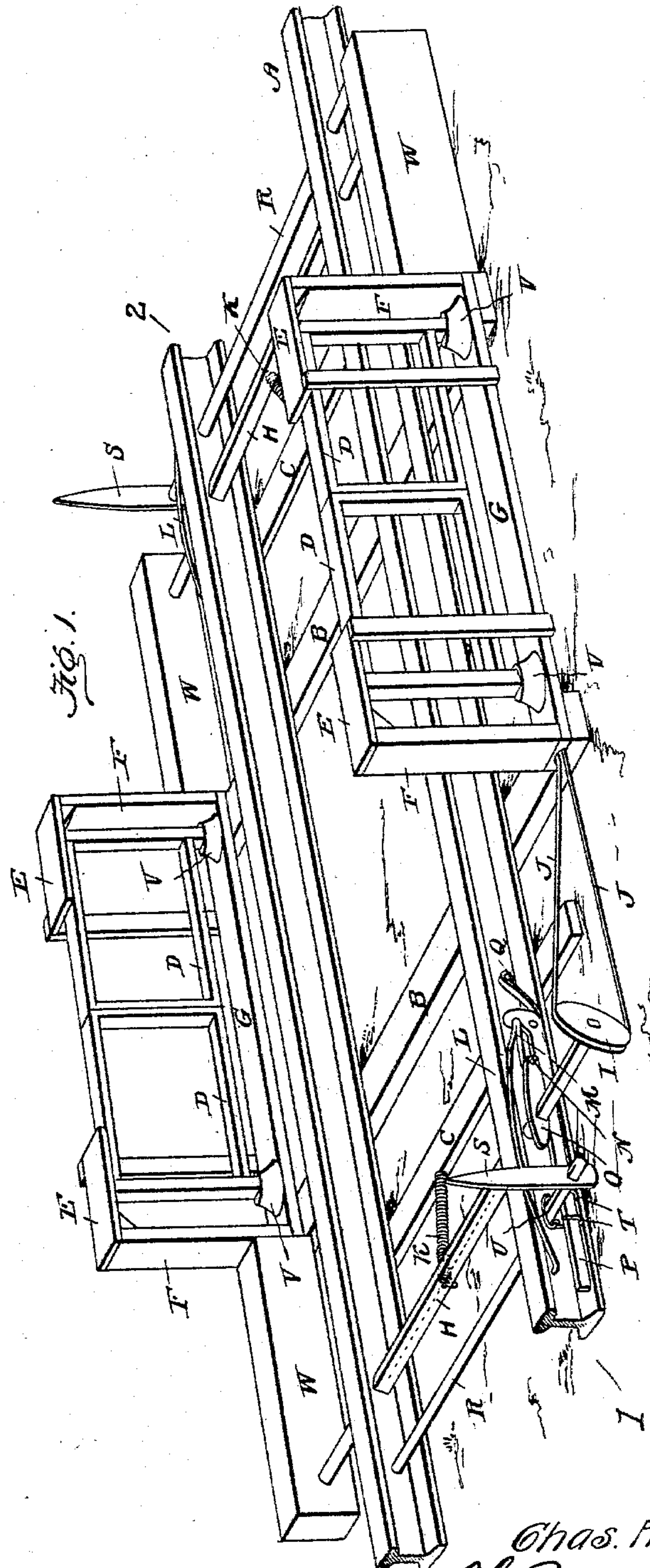
(No Model.)

3 Sheets—Sheet 1.

C. R. McDANIEL.
RAILWAY GATE.

No. 589,533.

Patented Sept. 7, 1897.



Witnesses

Wm. C. Ashmead
J. A. Wilson

Inventor
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Attorney

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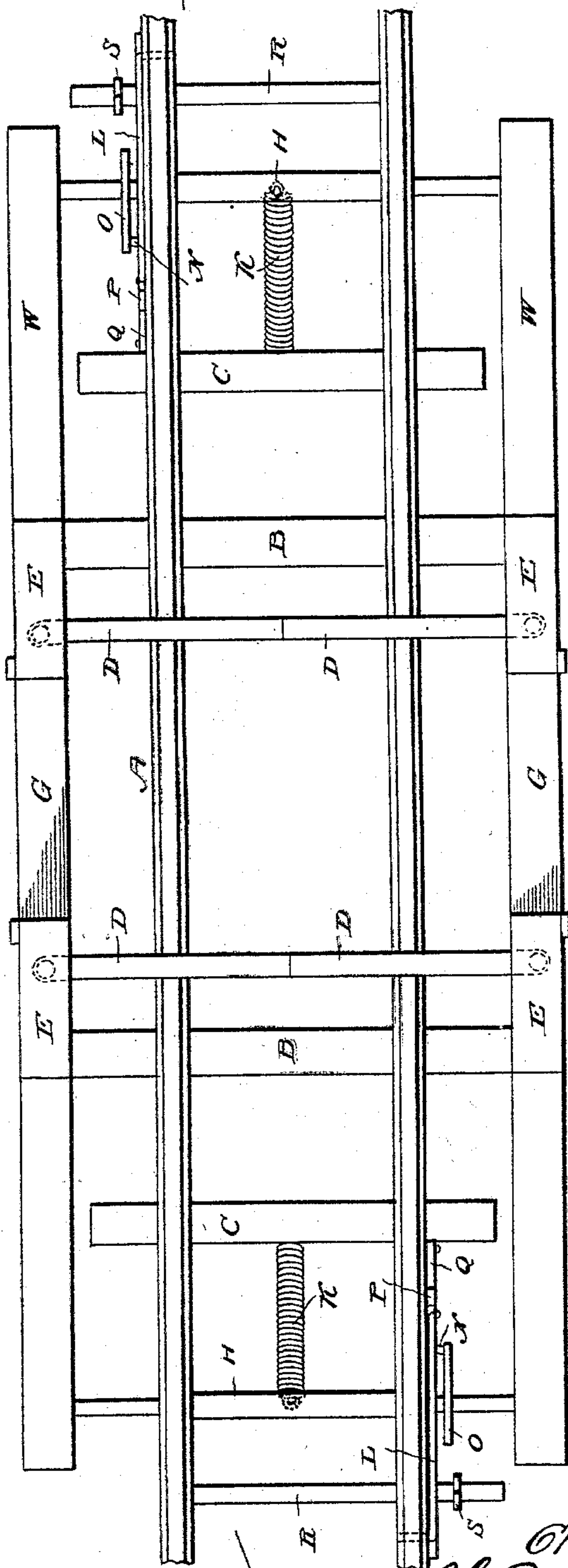


Fig. 2.

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(No Model.)

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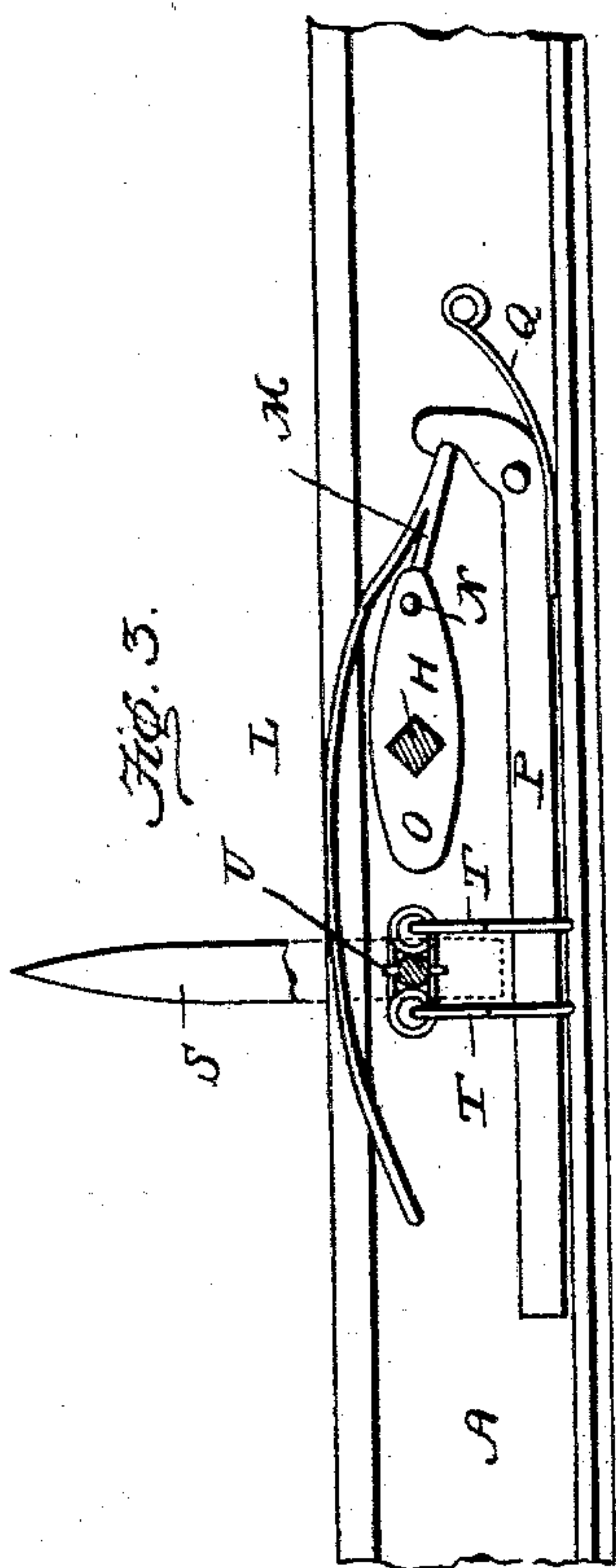
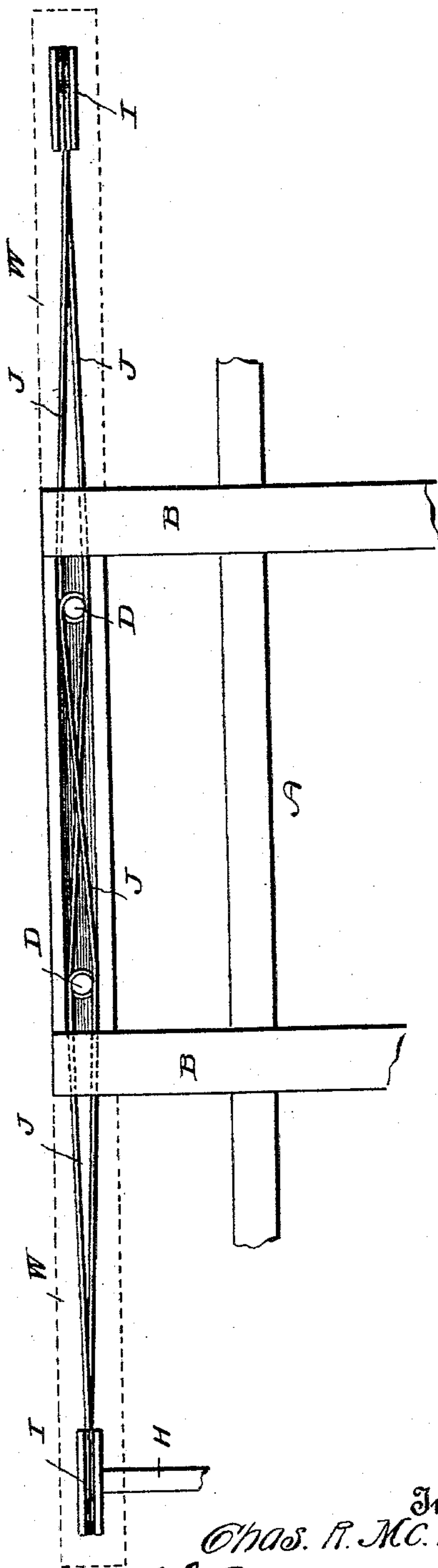


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES R. McDANIEL, OF RIDGEWOOD, MISSOURI.

RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 589,533, dated September 7, 1897.

Application filed March 16, 1897. Serial No. 627,750. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. McDANIEL, a citizen of the United States, residing at Ridgewood, in the county of Laclede and State of Missouri, have invented certain new and useful Improvements in Railway-Gates; and I do 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.

My invention relates to railway-gates; and the object is to provide gates of this character which upon the approach of a train will swing across the crossing and guard the same, and which after the train has passed will return to their normal positions across the track and serve as cattle-guards.

With this object in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a perspective view of my invention with the gates swung guarding the crossing. Fig. 2 is a top plan view showing the gates in the position they assume when acting as cattle-guards. Fig. 3 is an enlarged side view illustrating the tripping mechanism, the tripping-arm being broken away to more clearly illustrate the links connecting the trigger with the tripping-arm shaft; and Fig. 4 is a detail plan view of the under side of the sill-cap, showing the manner of connecting the cables to the gate-posts.

In the drawings the letter A indicates a section of a line of track.

B denotes the sills at the crossing, and C denotes the supporting-ties.

D denotes four gates, the posts of which are provided at their upper and lower ends with pintles, the upper ones of which are journaled in cross-bars E of uprights F, and the lower ones of which project through the sill-caps G and are seated in sockets in the sills aforesaid.

H denotes gate-operating shafts, which are journaled in the rails, as shown, at suitable distances away from the crossing. On the ends of these shafts are pulleys I, those on each side being connected by two cables J, which pass between the sill-cap and sill in a

groove formed in the sill for the purpose and are engaged with the lower pintles of the gate-posts preferably by passing the cables through holes formed in the ends of the same.

K denotes a coiled spring, one being provided for each shaft and each being connected to one of the cross-ties aforesaid. The tension of these springs is exerted to hold the gates in the position shown in Fig. 2—that is, across the track—to prevent animals from wandering up and along the same.

L denotes operating-levers for the gate, one being arranged on each side of the track. Each lever consists of a rod having one end pivoted to the track and a portion of its body extending above the track in position to be engaged by the tread of the wheels of the passing coach, while the other end is bent backward upon itself, as at M, and outward, as shown at N, and connected to a crank O, secured to the gate-operating shafts.

P denotes the trigger, which is pivoted to the track and which receives and retains the end N of the operating-lever when the same is depressed by the wheels of a passing train.

Q denotes a spring connected to said trigger and to one of the ties, and is for the purpose of returning the trigger to its normal position after the operating-lever has been released.

R denotes the trip-shaft, journaled in the rails and provided at its outer end with a trip-arm S, which projects upwardly and is adapted to be engaged by brackets or devices secured to the rear end of the rear car of the train.

T denotes two U-shaped links, which support the long end of the trigger and which have their upper ends pivoted to a staple U, secured to the trip-shaft.

V denotes conical shells, which are arranged at the lower end of each gate-post and serve to protect the same from the inclemencies of the weather.

W denotes casings, which extend parallel along the track and are for the purpose of inclosing and protecting the cables that lead from the operating-shaft to the gate-posts.

The operation of my invention is as follows: The gates being in the position shown in Fig. 2, as the train approaches the wheels of the locomotive will engage the gate-operating le-

vers at end 1 of the track and depress the same into engagement with the trigger. This movement causes the operating-shaft to be rotated and the pulleys on the ends of the same to wind up one set of ropes, which will cause the gates to be thrown parallel with the line of track and across the grade-crossing. As the train passes the crossing it will likewise depress the other operating-lever into engagement with the trigger. Then as the last car passes the tripping-arm at the end 1 of the track it will engage the same and swing it to release the operating-lever from the trigger. This movement, however, will not allow the gates to be returned to their normal position by the springs, as the other trigger is holding the operating-lever at the end 2 of the track; but as soon as the rear car of the train passes the tripping-arm at end 2 of the track and the bracket on said car actuates said trip-arm the operating-lever will be released by the trigger and the gates will then be allowed to swing across the track in the position shown in Fig. 2, in which position they serve as cattle-guards to prevent animals wandering along the track.

It will of course be understood that the distance between the two levers L is less than the length of the shortest train to run over the road. Otherwise the gate would be released by the trip on the approach side before the lever L on the other side was depressed.

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

The combination with swinging gates normally swung across the track, of operating-shafts provided with pulleys, cables connecting the pulleys with the gates, coiled springs connecting the operating-shafts to ties and exerting energy to retain the gates in a position across the track, crank-arms on the operating-shafts, gate-operating levers pivoted to the rails of the track extending upward within the path of the wheels of a traveling train, and having an end as N and a lateral extension, spring-actuated triggers pivoted to the rail below the operating-levers and adapted to engage the end N of the same, the cranks on said shafts connected to the lateral extensions of the operating-levers, trip-shafts connected to the outer ends of said triggers by links, and trip-arms projecting upward and adapted to be engaged by a bracket or other device carried by the rear end of the rear car, all arranged and combined as set forth.

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

CHARLES R. McDANIEL.

Witnesses:

ROBT. HOLMAN,

CHAS. A. DELABAR.