

(No Model.)

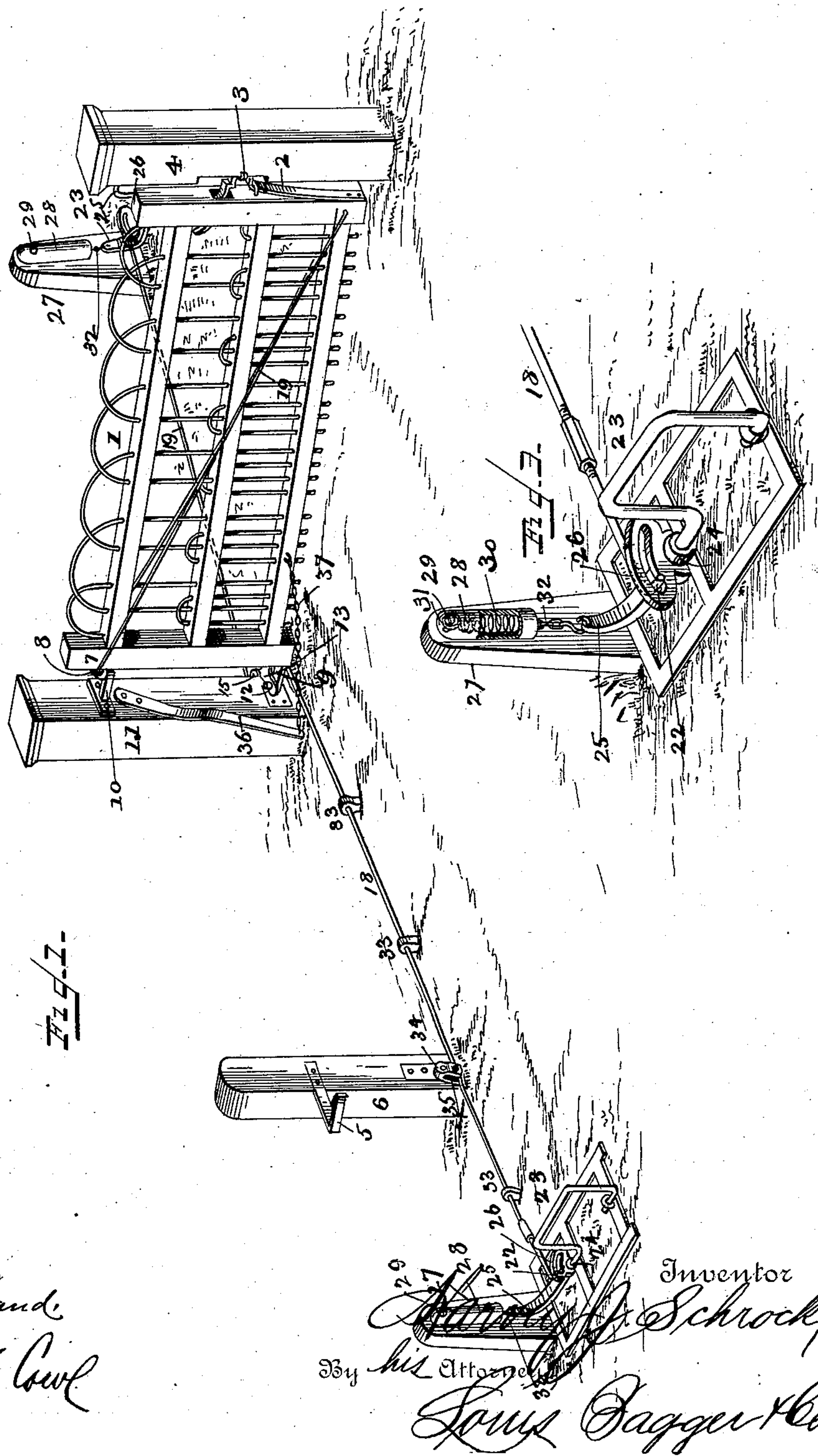
2 Sheets—Sheet 1.

H. J. SCHROCK.

AUTOMATIC GATE.

No. 365,638.

Patented June 28, 1887.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2-

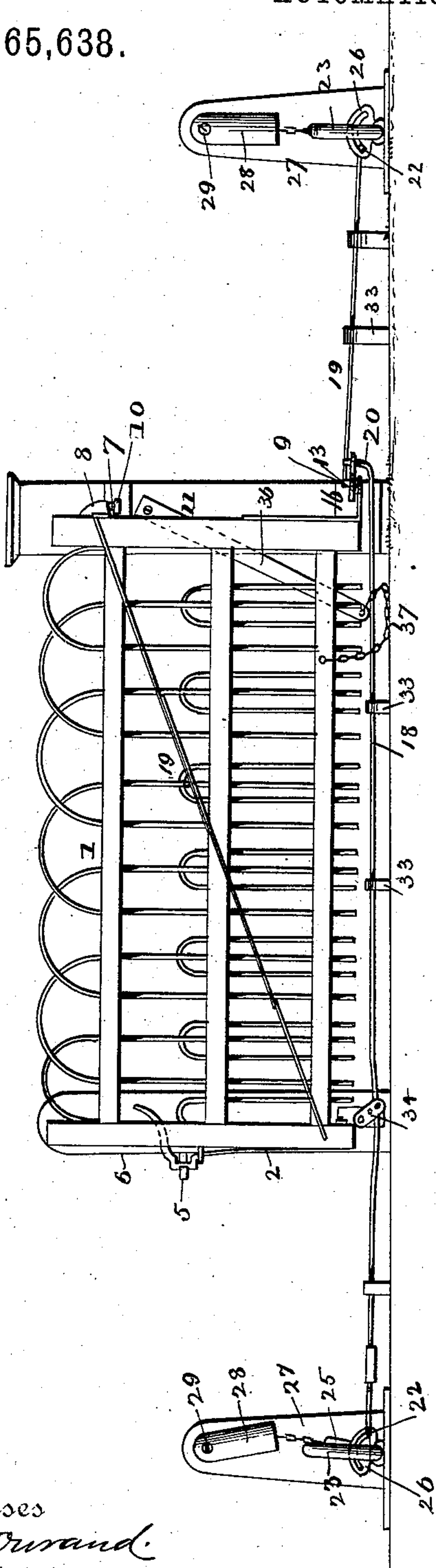


Fig. 4-

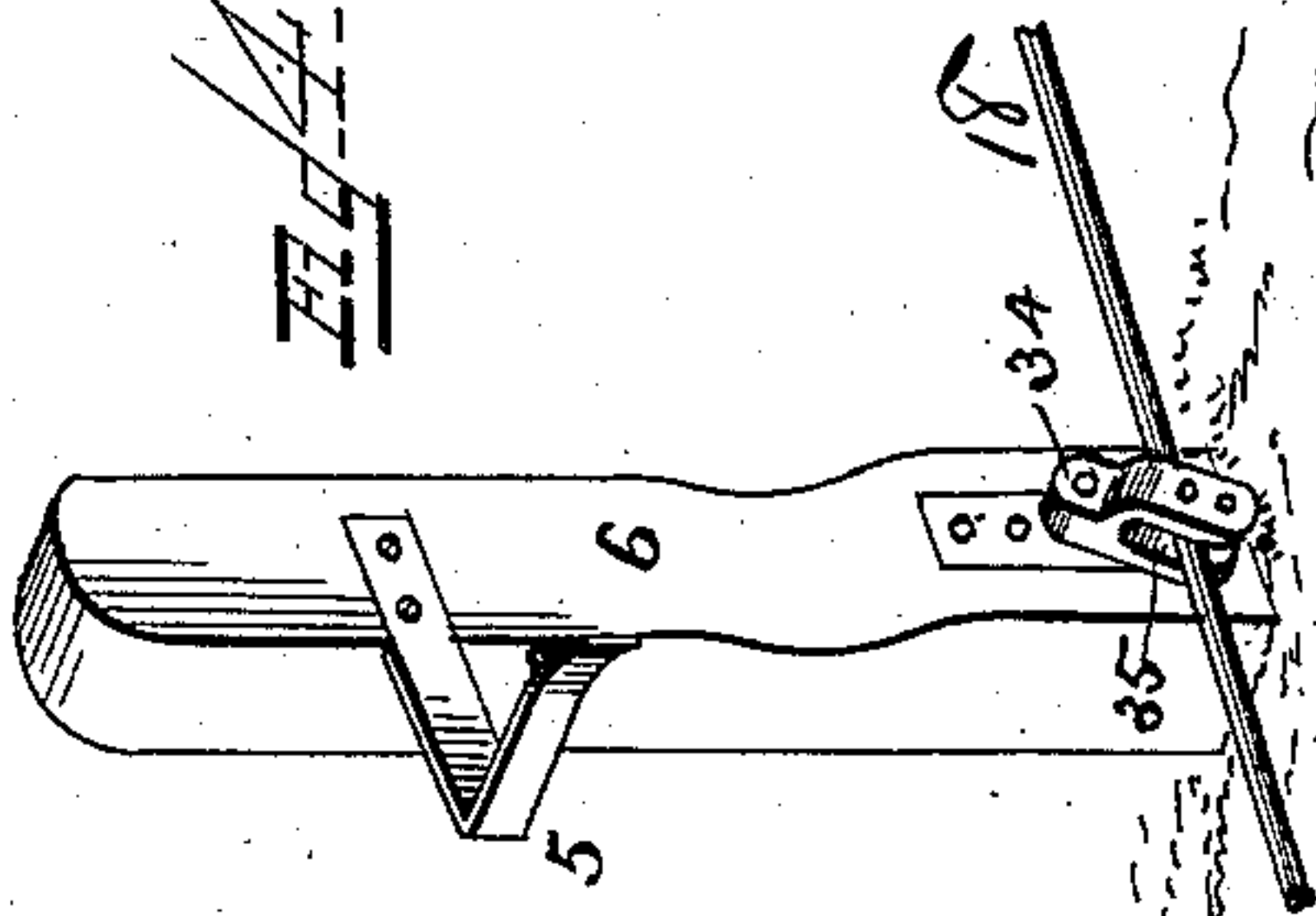
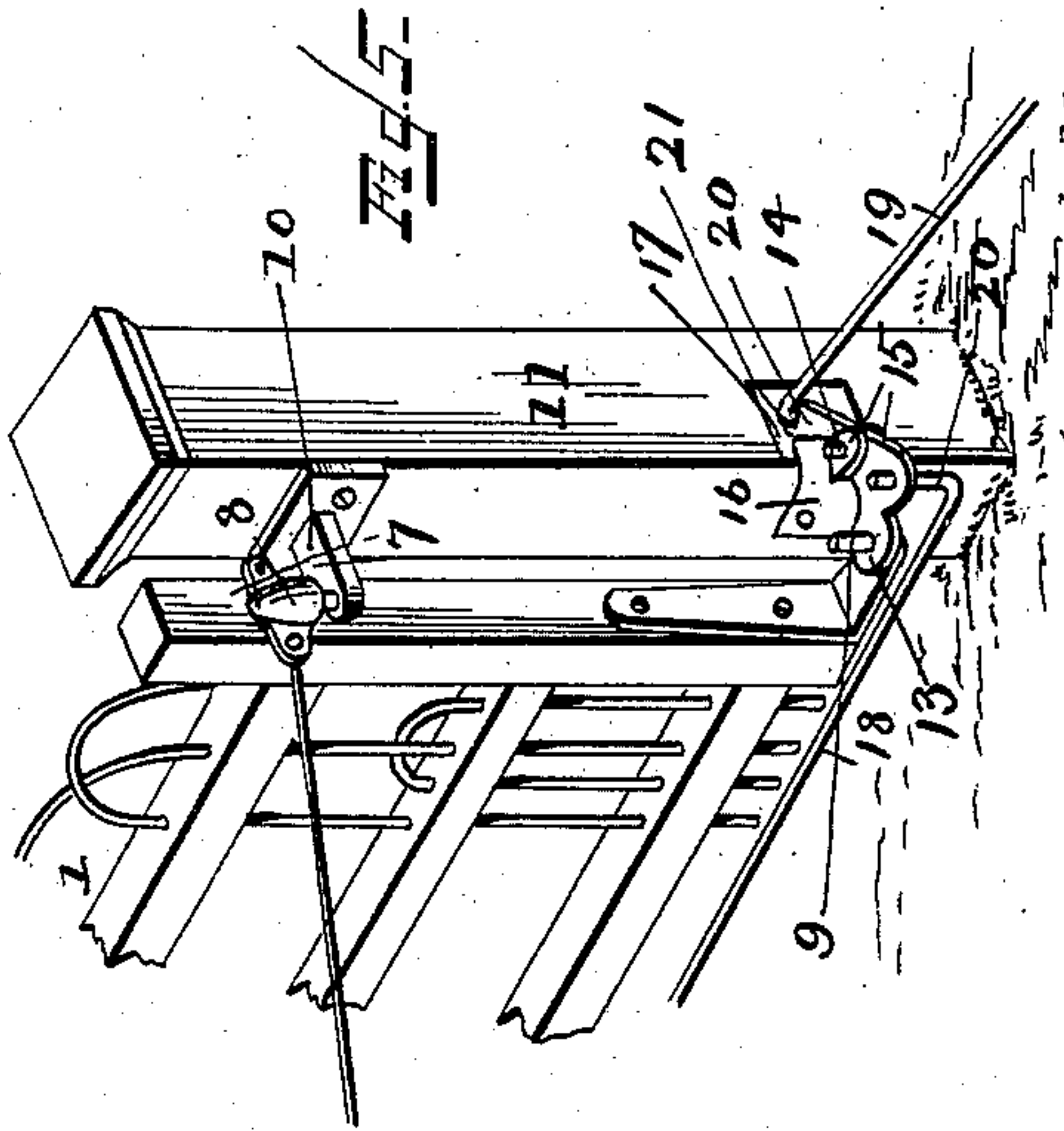


Fig. 5-



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UNITED STATES PATENT OFFICE.

HARVEY J. SCHROCK, OF GOSHEN, INDIANA.

AUTOMATIC GATE.

SPECIFICATION forming part of Letters Patent No. 365,638, dated June 28, 1887.

Application filed April 5, 1887. Serial No. 233,741. (No model.)

To all whom it may concern:

Be it known that I, HARVEY J. SCHROCK, a citizen of the United States, and a resident of Goshen, in the county of Elkhart and State Indiana, have invented certain new and useful Improvements in Automatic Gates; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved gate, showing the gate closed. Fig. 2 is a side view seen from the roadway, showing the gate opened. Fig. 3 is a perspective view of the operating-bail and of the post having the spring-casing. Fig. 4 is a similar view of the latch-post receiving the latch end of the gate when opened, and Fig. 5 is a perspective view of the hinge-post and of a portion of the hinge-stile of the gate.

Similar numerals of reference indicate corresponding parts in all the figures.

My invention has relation to that class of gates in which the gate is opened by tilting bails projecting in a vertical plane in the roadway, and in which the gate is moved by tilting the lower end of the hinge-stile outward, raising the latch out of its notch and changing the center of gravity of the gate in such a manner that it will swing upon its pivots; and it consists in the improved construction and combination of parts of such a gate, and more particularly to the means for operating said bails and the mechanism for connecting them with the gate, as will be hereinafter more fully described and claimed.

In the accompanying drawings, the numeral 1 indicates the gate-panel, which may be of any suitable construction, and which is provided at its latch edge with a suitable spring-latch, 2, which engages a notched catch, 3, upon the latch-post 4, and a similar catch, 5, upon the post 6, against which the gate abuts when the gate is opened.

The hinge-stile 7 of the gate-panel is provided with an upper pintle, 8, and with a lower pintle, 9, the upper pintle being pivoted in a common eye, 10, upon the hinge-post 11, and the lower pintle is pivoted in a perfora-

tion, 12, in the end of one arm of an L-shaped lever, 13, which is pivoted upon a bolt, 14, passing through the inner portion of its longer arm and through two perforated ears or lips, 15, projecting from a plate or casting, 16, upon the lower end of the hinge-post, the said plate being bent to be secured to two sides of the post, the portion of the plate facing the latch-post being flush with the face of the hinge-post, while the other portion of the plate is secured in a recess, 17, formed in the face of the post at an acute angle to the other face.

The operating-rods 18 and 19 are pivoted with their bent ends 20 in perforations 21 in the ends of the long arm of the bent lever, and have their outer ends, 22, bent laterally. The operating-bails 23 are pivoted or journaled in suitable bearings, 24, and have at one end an upwardly-curved arm, 25, upon the horizontal portion of which is secured a segmentally-slotted block, 26, into which the laterally-bent end of the operating-rod projects, sliding within the slot.

Posts 27 are secured at the ends of the upwardly-curved ends of the shafts of the operating-bails, and tubular casings 28 are pivoted upon bolts 29, passing through the upper ends of these casings and into the posts, and have coiled springs 30 secured within them, the upper eyed ends, 31, of the springs being secured upon the pivotal bolts. The lower ends of the springs have chains 32 secured to them, and the lower ends of these chains are secured to the upwardly-bent ends of the shafts of the operating-bails, the said springs and casings thus serving to draw the bails into their upright positions.

The operating-rods slide in guides 33, and an arm, 34, having a longitudinal slot, 35, is pivoted with its upper end to the latch-post holding the opened gate, and has the operating-rod pivoted within its slot, one guide-bearing being at each side of this post.

A flat spring, 36, is secured obliquely with its upper end to the face of the hinge-post and has a chain, 37, secured to its lower end and to the gate, the spring serving to start the gate by drawing upon the same through the chain when being opened and by bearing upon the same when being closed.

It will now be seen that when the gate is closed and a vehicle is driven over one of the

operating-bails the segmentally-slotted block of the bail will bear with its end against the bent end of the operating-rod, which will cause the L-shaped lever to be tilted, with the end of its long arm, into the recess in the post, bringing the lower end of the hinge-stile outward from the post and to one side, causing the latch to be raised out of its catch and the gate to swing by its gravity toward the other latch-post, where the latch will be engaged by the catch upon the same. When, now, the vehicle has passed through the gate, the wheels will pass over the other bail, causing the slotted block at that bail to bear with the end of its slot against the bent end of the operating-rod, which will draw the operating-rods to the side to which the bail is tilted and tilt the L-shaped lever back into its normal position, swinging the gate back into its closed position.

The swinging casings with their springs will serve to return the bails to their vertical positions as soon as the wheels of the vehicle have passed over them, and the tubular casings will cover and protect the springs, while their being pivoted will serve to allow them perfectly free play, so that the springs may at all times be drawn in the direction of their axes while the curved arms of the bail-shafts are tilted, which would not be the case if the casings were stationary, as heretofore constructed.

The segmental slots in the blocks upon the shafts of the operating-bails, having the ends of the operating-rods playing in them, will allow the bails to return to their vertical positions as soon as the gate is opened, and will admit of the gate being operated in the opposite direction to the direction in which it has been moved by tilting the same bail in an opposite direction to the last movement.

By having the operating-rod pivoted in the slot of the arm pivoted upon the upright post, instead of the ordinary construction, the spring of the rod between the two guide-bearings will

cause the arm to swing to one side or the other as soon as it has passed the vertical position, thus causing the arm to throw the rod to the side toward which it is moved by the bail, finishing the motion of the bail, this construction admitting of the gate being opened by a vehicle passing rapidly over the bail, as the springiness of the rod will finish the throw of the rod started by the vehicle passing over and tilting the bail.

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

1. In an automatic gate, the combination of a tilting operating-bail having one end of its shaft formed into an upwardly-curved arm, an upright post secured at the end of the upwardly-curved arm, a tubular casing pivoted upon a bolt passing through its upper end into the post, a coiled spring secured with its upper eyed end upon the bolt within the casing, and a chain having one end secured to the lower end of the spring and the other end secured to the end of the upwardly-curved arm, as and for the purpose shown and set forth.

2. In an automatic gate, the combination of a horizontally-sliding operating-rod, horizontal guide-bars for the same, an upright post placed between two of these bearings, a bail for throwing the rod to either side, and a longitudinally-slotted arm pivoted at its upper end to the upright and having a rod pivoted within its slot at a distance from the pivotal point greater than the vertical distance between the rod and the pivotal point of the arms, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

HARVEY J. SCHROCK.

Witnesses:

AARON S. ZOOK,
CHRISTIAN MARTIN.