

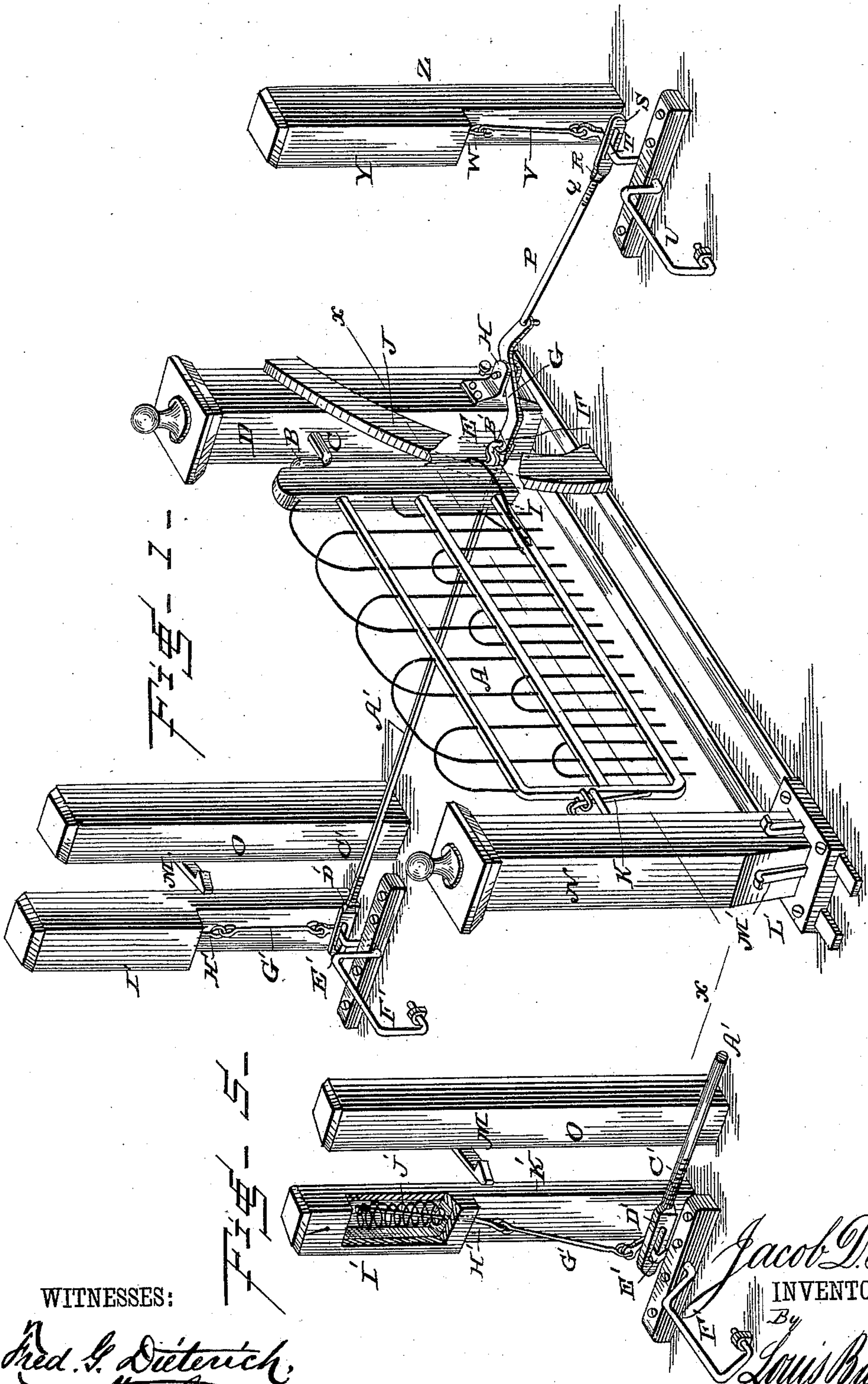
(No Model.)

2 Sheets—Sheet 1.

J. D. SHROCK.
AUTOMATIC GATE.

No. 307,732.

Patented Nov. 4, 1884.



WITNESSES:

Fred. G. Dieterich
Wm. Fecher

Jacob D. Shrock
INVENTOR.
By *Louis Bagger*
ATTORNEYS.

(No Model.)

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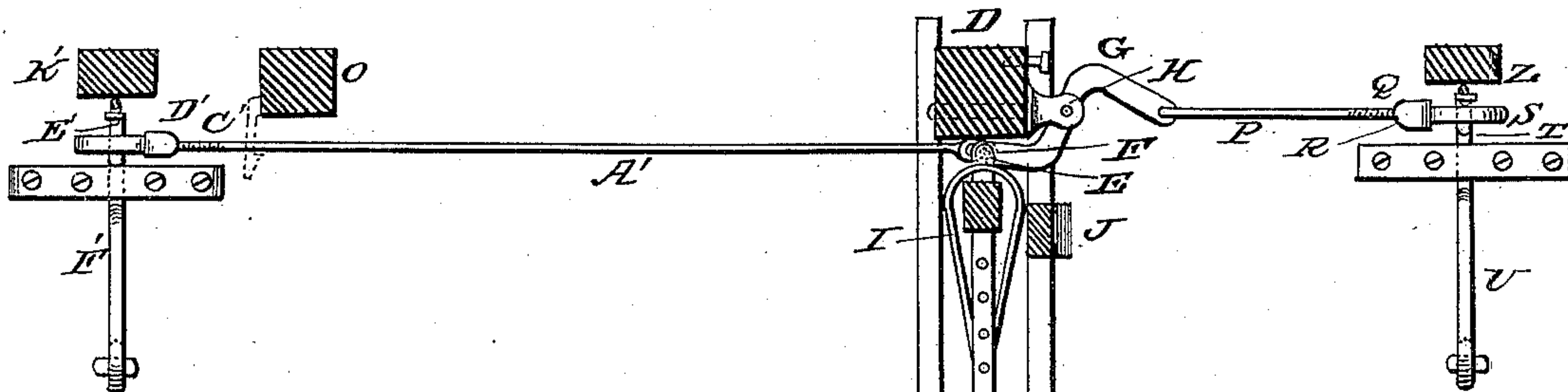


Fig. 2—

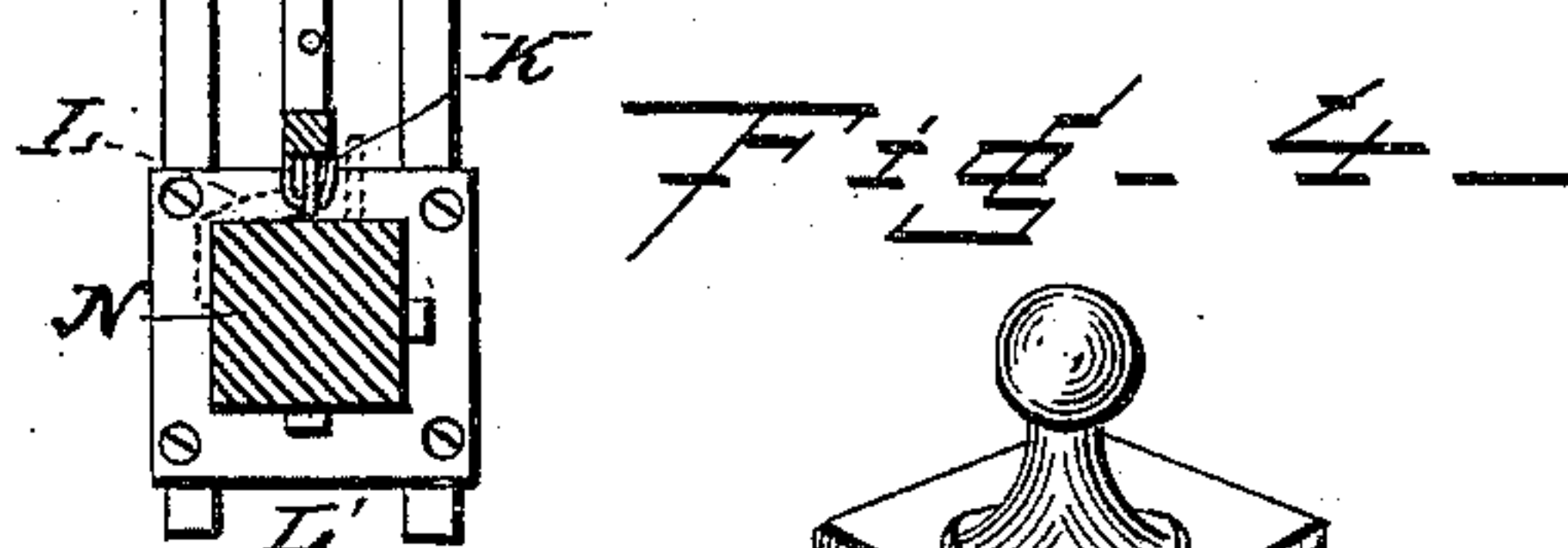
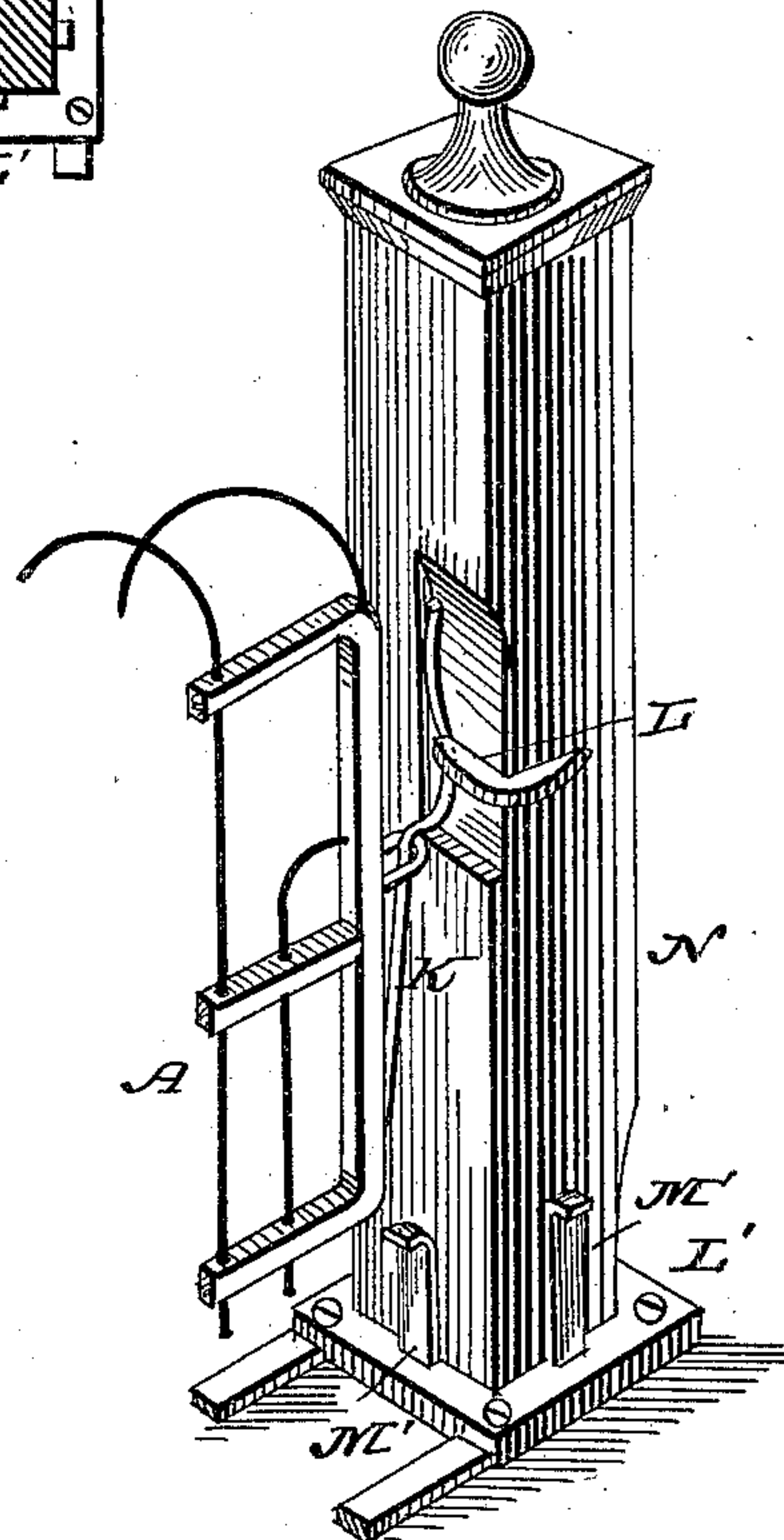
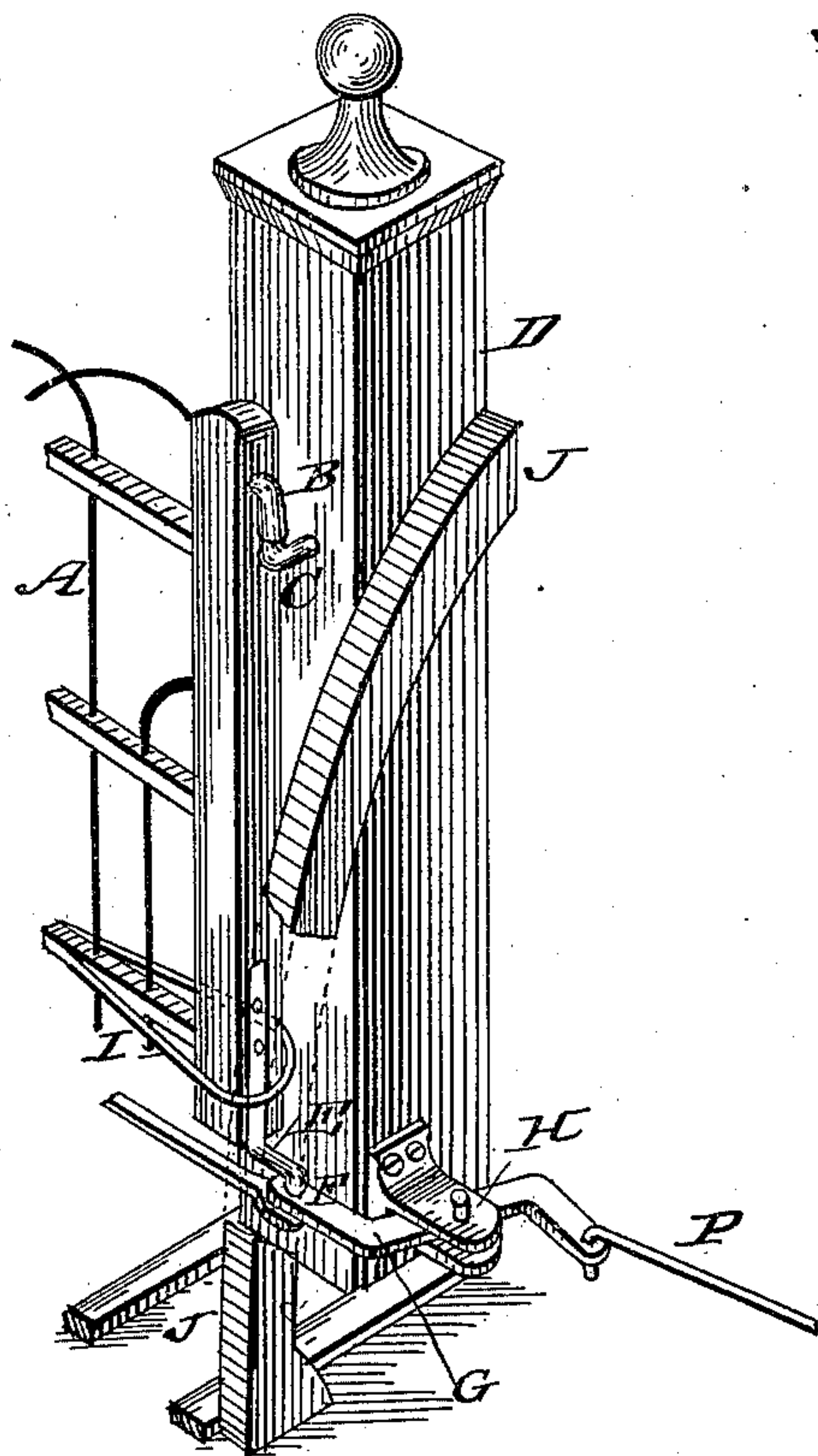


Fig. 4—



WITNESSES:

Fred. S. Dietrich
Witness

INVENTOR.

Jacob D. Shrock
By Louis Bagger & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JACOB D. SHROCK, OF GOSHEN, INDIANA.

AUTOMATIC GATE.

SPECIFICATION forming part of Letters Patent No. 307,732, dated November 4, 1884.

Application filed April 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, JACOB D. SHROCK, a citizen of the United States, and a resident of Goshen, in the county of Elkhart and State of 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 swinging gate. Fig. 2 is a horizontal section on line *xx*, Fig. 1. Fig. 3 is a perspective detail view of the hinge-post and of the operating-lever. Fig. 4 is a similar view of the abutment-post; and Fig. 5 is a similar view of one of the operating-bails, the post containing the spring raising the bail and the abutment-post at the side of the former post.

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

My invention has relation to that class of swinging gates which are opened and closed by driving against and over upwardly-projecting bails in the roadway; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the gate, which has a socket, B, near the upper end of its hinged end post, which turns upon a pintle, C, projecting from near the upper end of the hinge-post D, and a pintle, E, near the lower end of the hinged end post, which turns in an eye, F, in one end of an S-shaped lever, G, pivoted between two laterally-projecting lips, H, upon the side of the hinge-post. A spring, I, is secured at its ends upon both sides of one of the bars of the gate, passes around the hinge end of the gate near the lower edge of the same, bulges out to both sides at its inner doubled end, and bears with one bulged side against the hinge-post when the gate is opened, and with its other bulged side against an oblique brace, J, when the gate is closed, the said brace projecting into the roadway. The free abutting end of the gate is provided with a spring-rod, K,

moving in a vertical plane, which may catch in a beveled catch, L, upon the abutment-post N, and into a similar catch, M, upon the post O, against which the end of the gate abuts when the gate is swung open. A connecting-rod, P, is pivoted at one end in the free end of the S-shaped lever, and turns with its other screw-threaded end, Q, in the female-threaded end R of a longitudinally-slotted block, S, which slides upon the crank-shaped end T of a pivoted bail, U, which is pivoted across one track of the roadway, convenient for being turned down by a wheel passing over it. A rod, V, is attached to the end of the crank, and is attached at its upper end to the lower end of a rod, W, which passes through a spiral spring inclosed in a box, Y, upon the upper end of a post, Z, placed at the side of the roadway, and is secured at the upper end of the said spring, compressing the same when drawn downward. A similar connecting-rod, A', is pivoted or hinged with its eyed end B' upon the lower end of the pintle at the lower end of the hinged end post of the gate, and turns with its other screw-threaded end, C', in the female-threaded end of a block, D', slotted longitudinally, which block slides with its slot upon the crank-shaped end E' of another rocking bail, F', pivoted across the roadway at the other side of the gate, the said crank-shaped end of the bail having a rod, G', attached to it, which is attached to the lower end of a rod, H', passing through a spring, J', and attached to its upper end, the said spring being inclosed in a box, I', upon the upper end of a post, K', placed at the side of the post against which the end of the gate abuts when the gate is swung open, the connecting-rod, pivoted bail, rods and spring, and box being all of the same construction as the same parts at the other post. The lower end of the abutment-post is inserted into a metallic box, L', which is inserted into the ground, and is held in place in the box by means of wedges M', so that the post may be fastened in its socket or box, when it, by accident or wear, becomes loose, by driving the wedges tighter, and may also be removed for the passage of vehicles or machinery wider than the gateway. When the gate is closed, the inner ends of the slots in the blocks at the

ends of the connecting-rods bear against the ends of the cranks; and it will be seen that when a vehicle is driven with one of its wheels against the bail, forcing it toward the gate, the connecting-rod will be forced toward the gate, swinging the end of the S-shaped lever, upon which the gate is hinged, outward, raising the lower end of the abutting-post of the gate, and causing the spring-catch upon that end of the gate to be disengaged from the beveled catch upon the abutment-post, when the bulged spring upon the inner end of the gate will, by its bearing against the side of the inclined brace, force the gate to swing open, and after the vehicle has passed through the gate, and its wheel strikes the bail at the other side of the gate, the slotted block upon the other connecting-rod has been drawn by the swinging gate so as to bear with its outer end against the end of the crank upon the end of that bail, so that that connecting-rod will be drawn, which will raise the lower end of the outer end of the gate upward, releasing the catch upon the end of the gate from the beveled catch, and allowing the bulged spring, which now bears against the side of the hinge-post, to force the gate closed. It will be seen that by having the slotted blocks upon the ends of the connecting-rods the bails may be tilted from the gate when the gate is closed and toward the gate when it is open without affecting the gate, and that the bails may always remain in an upright position, which will prevent them from freezing fast to the ground, as is often the case where double bails are used, the springs in the boxes upon the posts always drawing the ends of the cranks into upright positions.

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

1. In a swinging gate, the combination of

the gate, a spring secured at its ends upon the sides of the gate and passing around the hinge end of the gate with its doubled and bulged end, the hinge-post, and a brace projecting into the gateway, and means for releasing the gate when closed or swung open, as and for the purpose shown and set forth.

2. In a swinging gate, the combination of the hinge-post having a pintle near its upper end and two lips near its foot, upon the other side, an inclined brace projecting into the gateway, the gate pivoted at the upper end of its hinge end, and having a downwardly-projecting pintle at the lower end of the said end, a spring-rod moving in a vertical plane upon the free end of the gate, an S-shaped lever pivoted at its middle between the lips upon the foot of the hinge-post, and having the lower pintle of the hinge end of the gate pivoted in its end, connecting-rods pivoted at their ends at the ends of the S-shaped lever, and having their other ends screw-threaded, slotted blocks fitting with their female-threaded ends upon the ends of the connecting-rods, bails pivoted transversely across the side of the roadway, and forming cranks at their inner ends sliding in the slotted blocks, posts forming boxes at their upper ends, spiral springs inclosed in the said boxes, rods secured to the upper ends of the springs and passing down through them, rods secured to the lower ends of said rods and hinged to the ends of the cranks of the bails, and abutment-posts having beveled catches, 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.

JACOB D. SHROCK.

Witnesses:

W. J. DAVIS,
CHRIS. SHROCK.