(No Model.)

H. GREEN.

GATE.

No. 332,341. Patented Dec. 15, 1885.

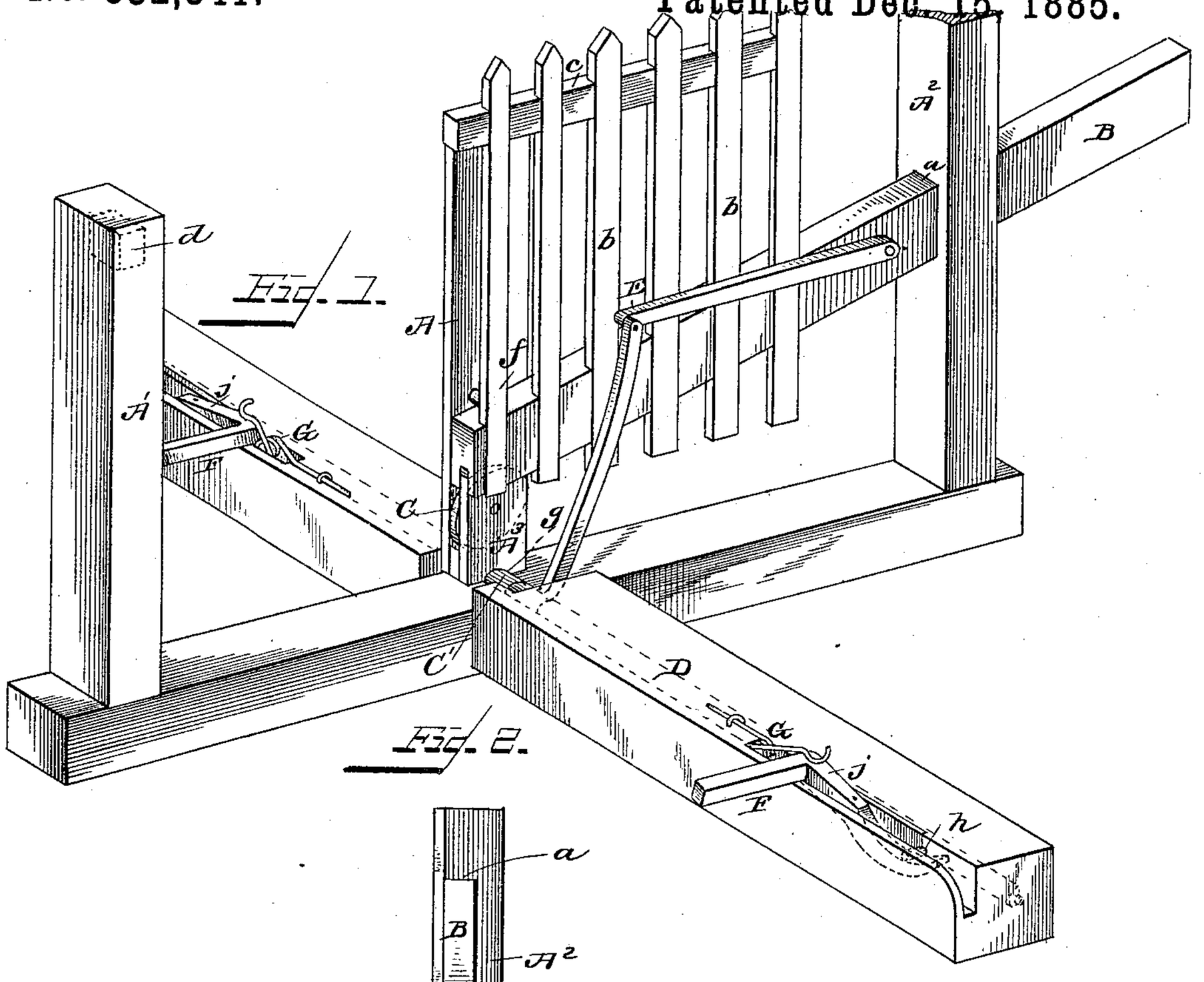

Fig. 1.

Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

HORATIO GREEN, OF CLINTON, MISSOURI.

GATE.

SPECIFICATION forming part of Letters Patent No. 332,341, dated December 15, 1885.

Application filed April 23, 1885. Serial No. 163,167. (No model.)

To all whom it may concern:

Be it known that I, HORATIO GREEN, a citizen of the United States, residing at Clinton, in the county of Henry and State of Missouri, have invented a new and useful Improvement in Gates, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to sliding gates, the object being to provide improved mechanism for operating the same, whereby the gate may be automatically opened and closed by a vehicle in passing through the same.

A further object of the invention is to provide improved means for holding the gate in an open position until the vehicle has passed the same.

A further object of the invention is to provide a gate of the character mentioned which shall be simple in its construction, readily and easily operated, one that will be strong and durable, and not likely to get out of order.

With these ends in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section of the means for opening and closing the same. Fig. 3 is a sectional elevation.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A A′ A^2 represent posts or uprights, the post A^2 being provided near its upper end with an opening or passage, *a*, in which is adapted to slide a bar, B, which is set on an incline. Secured to this bar B are a series of slats or palings, *b*, which are connected near their upper ends by a cross-slat, *c*, the end of which is extended and adapted to fit a recess, *d*, on the inner side of post A′, thus forming the gate. It will be seen that when the gate is closed the cross-slat will engage the recess *d*. The bar B is provided on its under side with a gutter or channel, *e*, in which is located the end of a short upright, A^3, which does not bear against the end of the channel, but is located a slight distance therefrom to permit the bar to slide easily upon the upright, said upright serving as a guide. Journaled between the uprights A^3 and A is a roller, C, which bears against the inner lower edge of the bar B. Secured to the upright A, and projecting outwardly therefrom, is a pin, *f*, which bears against the upper side of the bar B. It will thus be observed that the said bar is held in position and guided in its movements by the roller and pin.

In the present case the several uprights A A′ A^2 A^3 are secured to a base-beam, and the central upright, A, is provided with a passage or opening, *g*, through which passes a rock-shaft, C′, which is preferably inclosed by a casing, D, to exclude rain, snow, and dirt.

E represents a jointed lever, which is secured to the rock-shaft at one end, an opening being made in the casing for the passage of said lever, and to the beam B at its other end. It will thus be seen that when the rock-shaft is turned it will, through the medium of the jointed arm, raise the gate. At each end of the rock-shaft are provided outwardly-extending pins *h*, which project through elongated slots formed in the sides of the casing. Supplemental strips are secured to the inner sides of the casing at each end thereof, and between said strips and the casing are pivoted bell-crank levers F, the upper ends of which project above the casing, and are turned inwardly at right angles to their body portions. The short arms J of the bell-crank levers have curved inner faces, which are adapted to engage the under sides of the pins *h*, whereby when the upper ends of said bell-crank levers are moved inwardly toward the gate the short arms will be raised. As the short arms are raised they bear against the under sides of the pins *h* and raise the same, which action partially rotates the rock-shaft and raises the gate.

G represents spring-arms, which are arranged upon the upper side of the casing containing the rock-shaft, and which are adapted, when either of the bell-crank levers is lowered, to fit over the outturned upper ends of the same, and thus hold the gate open until the other lever is depressed, which causes said lever to bear against the pin on the rock-shaft adjacent thereto and withdraw the spring-arm from engagement with the other bell-crank lever.

For throwing the bell-crank levers to an

upright position after they have been released by the spring-arms G, I employ spiral springs H, which bear against the inner sides of the bell-crank levers, thus throwing them to an upright position after they have been released by said spring-arms G.

In operation one of the front wheels of a vehicle strikes one of the bell-crank levers, depressing the same and causing the gate to be opened, said bell-crank lever being held depressed by its arm G. After the vehicle has passed through the gate it strikes the other bell-crank lever, thus causing the said lever to strike the pin *h* on the rock-shaft adjacent thereto, and depressing the same, thus causing the other bell-crank lever to be forced from engagement with the spring-arm G, and closing the gate.

It will be seen that while the gate before described is particularly adapted to be operated by wagons, it might be operated by foot-passengers, in which case the levers would be depressed by the foot. Said gate is also well adapted for use as a railroad-gate.

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

1. The combination, with the posts or uprights, one of which is provided with a slot, of the gate having the inclined bar working in the slot and grooved on its under side, an upright having its end located in the groove of said bar, a roller bearing against the lower inner edge of the bar, and a pin, *f*, for the purpose set forth.

2. The posts or uprights, in combination with the sliding gate, a rock-shaft located below the gate and connecting therewith, a lever for partially rotating the rock-shaft, and a catch for holding the lever down to retain the gate in its open position, as set forth.

3. The combination, with the posts or uprights, of a sliding gate, a rock-shaft located below the gate and connected therewith by a jointed arm, pins extending outwardly from the rock-shaft, and pivoted levers to bear against the pins, whereby the rock-shaft can be partially rotated, as set forth.

4. The combination, with the posts or uprights, of a sliding gate, a rock-shaft located below the gate, a jointed arm connecting the rock-shaft and gate, pins extending outwardly from the rock-shaft, levers for raising the pins, and thereby turning the rock-shaft, said levers having bent upper ends, and catches to engage said bent ends of the levers, for the purpose set forth.

5. The combination, with posts or uprights, of a sliding gate, a rock-shaft, a jointed rod connecting the rock-shaft and gate, pins projecting outwardly from the rock-shaft, pivoted levers to engage with said pins, spring-catches to engage the bent upper ends of the levers, and springs bearing against the inner sides of the levers, as set forth.

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

HORATIO GREEN.

Witnesses:

C. H. SNYDER,

E. W. SNYDER.