

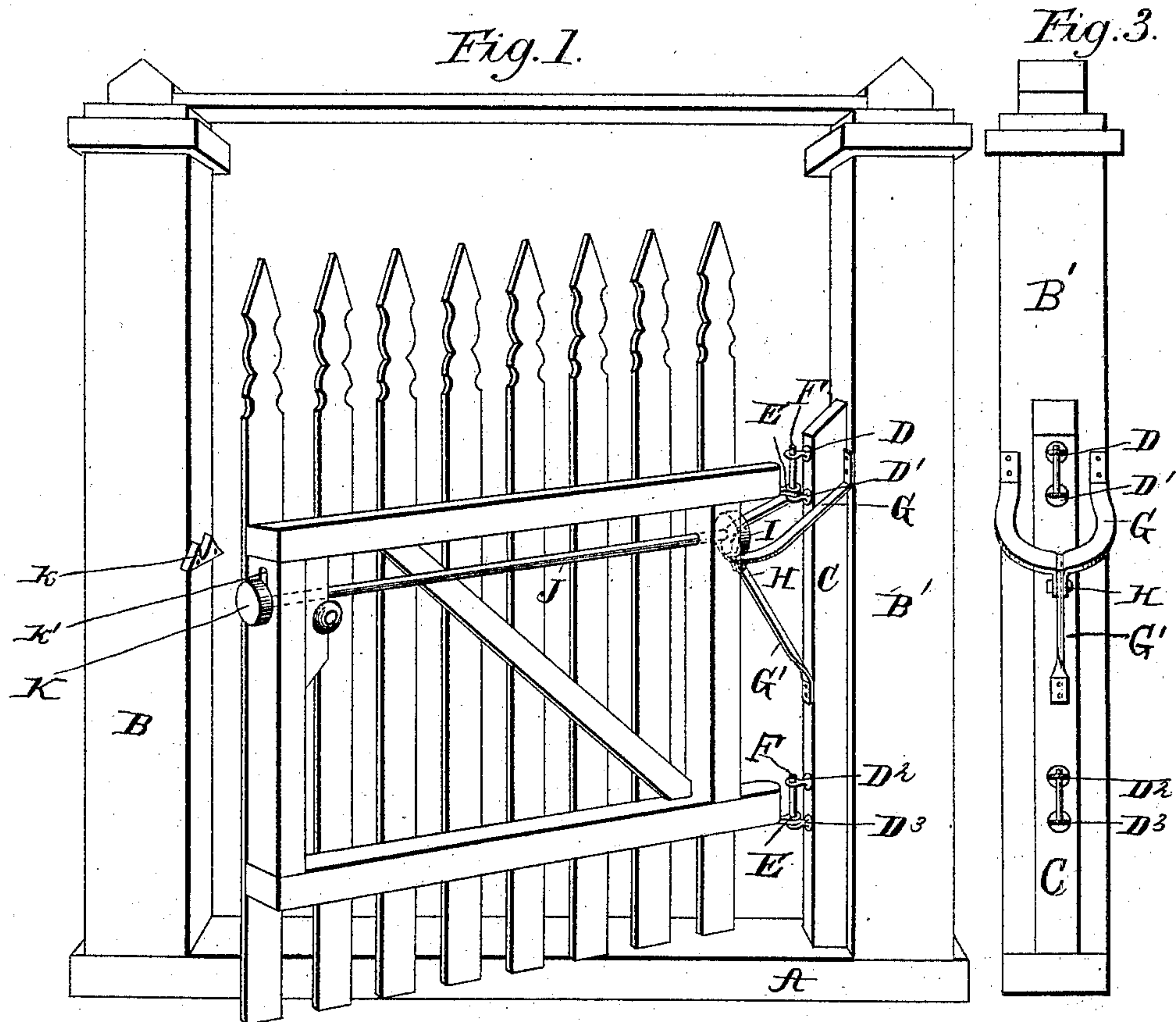
(No Model.)

S. D. WELLS.

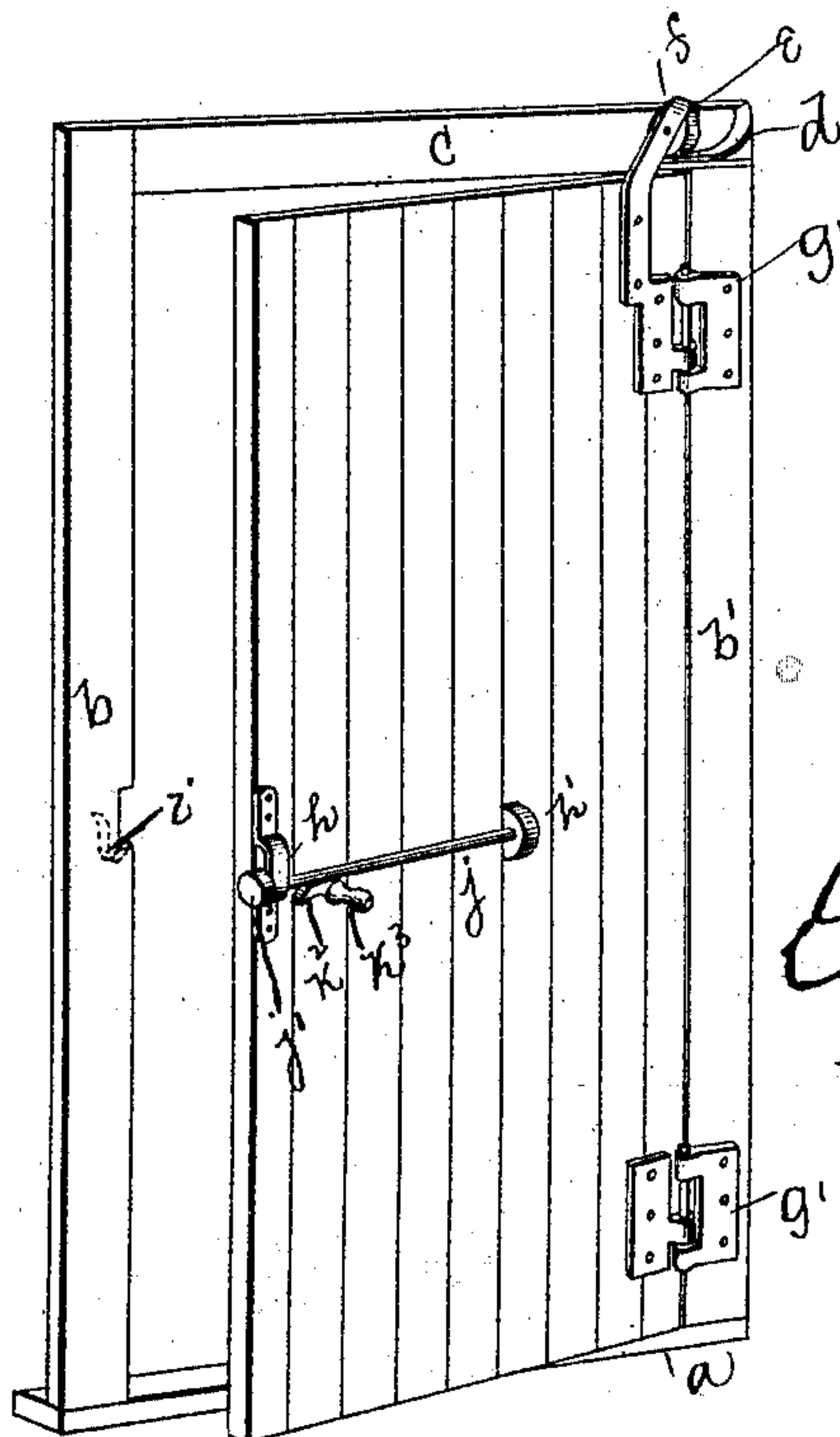
GATE HINGE.

No. 395,370.

Patented Jan. 1, 1889.



*Fig. 2.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## GATE-HINGE.

SPECIFICATION forming part of Letters Patent No. 395,370, dated January 1, 1889.

Application filed July 19, 1888. Serial No. 280,447. (No model.)

*To all whom it may concern:*

Be it known that I, SOLOMON D. WELLS, a citizen of the United States of America, and a resident of Fairmont, in the county of Martin and State of Minnesota, have invented a new and useful Improvement in Hinges for Gates, &c., of which the following is a specification.

This invention relates to improvements in hinges for gates; and it has for its object to improve and simplify and cheapen the cost of the construction thereof and to facilitate the opening and closing of the gate from either direction by its own gravity.

To this end the invention consists in the novel construction and combination of the several parts, as will be hereinafter more particularly described, and specifically pointed out in the claim.

In the accompanying drawings, which fully illustrate my invention and to which reference is had, Figure 1 is a perspective view of my improved hinge applied to a gate partly open. Fig. 2 is a similar view showing a modification of the hinge applied to a door; and Fig. 3, a front view of the inner face of the rear gate-post, showing the hinges and inclined U-shaped track or way.

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

In the drawings, A represents a sill having two uprights or standards, B B', their ends being mortised in or otherwise secured to the ends of the sill.

C is a strip secured to the inside of the post B', by which means the gate-frame is prevented from jamming the post and obstructing the gate in its movements.

D D' D<sup>2</sup> D<sup>3</sup> are metallic eyes, the ends of which are screwed into the strip C near the top and lower portion, respectively. Through these eyes and eyes E E, secured to the ends of the cross-pieces of the gate, bolts F F are passed, thus forming the hinges of the gate.

G is an inclined U-shaped track or way formed in two sections, and having its rear ends bent up at right angles to the plane of the track and secured to the post B' in any suitable manner, the forwardly and inclined ends of the track also being bent downwardly at right angles, as shown in Fig. 1, and pro-

vided with holes, hereinafter referred to, said track being re-enforced and supported at this end in position relatively to the rear post and gate by means of an inclined bar, G', having a hole in its upper end, the hole in this bar and the holes in the forward angle ends of the track or way registering with each other, through which a bolt, H, is passed, which secures the upper end of the inclined bar to the track or way, the lower end of the inclined bar G' being secured to the forward edge of the strip C. This U-shaped inclined track or way forms a bearing for a friction-roller, I, which traverses the track in its up-and-down movement with the movement of the swinging of the gate, and is secured upon the rear end of a rod, J, which is passed transversely through the forward and rear ends of the gate-frame. The forward end of this rod J has secured upon it another roller, K, this end of the rod J having the roller K playing vertically in a vertical slot, k', in the forward end and near the top of the gate-frame, for the purpose of enabling the roller K to ride up over and engage and disengage with a catch, k, secured midway upon the inner side of the post B, its movement being simultaneous with the movement of the roller I upon the rear end of the rod J as the gate is opened or closed. The rear end of the rod J or roller-bar aids in opening and shutting the gate, while the other or forward end facilitates closing and securing the same.

In Fig. 2 I have shown a modification of my device as applied to a door, a representing the sill, b b' the jambs, and c the lintel. Secured to the lintel c and top of the jamb b' is an inclined curved track, d, which serves as a bearing for and over which traverses a roller, e, journaled in a hanger on a section of one or the upper portion of a pair of hinges, g'. To the door, near about midway its length, is secured a bearing, h', and a vertically-slotted bearing, h, through which a shorter rod or roller-bar, j, than that used upon the gate is passed, this bar having a roller, j', secured to its forward end only, the forward end of said bar resting in its normal position upon a button, k<sup>2</sup>, curved and secured at right angles to a knob, k<sup>3</sup>, the roller j' fitting, when the door is closed, in a curved depression or

catch, *i*, secured to or formed upon the inner edge, about midway its length, of the jamb or upright *b*.

From the foregoing description, taken in  
5 connection with the accompanying drawings, the operation of my device will be obvious.

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

10 The combination, with the posts *B B'*, sill *A*, and gate, of the strip *C*, interposed between the gate and post *B'*, hinges secured to the

strip *C* and comprising the plates *D D' D<sup>2</sup> D<sup>3</sup>*, having eyes *E E*, the inclined **U**-shaped track *G*, secured to the post *B'*, inclined bar *G'*, and 15 rod *J*, having rollers *I K* secured at each end, whereby the gate is opened and closed by its own gravity, substantially as and for the purpose described.

SOLOMON D. WELLS.

Witnesses:

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