(No Model.)

F. KENNEDY.

AUTOMATIC TILTING GATE.

No. 271,336. Patented Jan. 30, 1883.

Fig. 1.

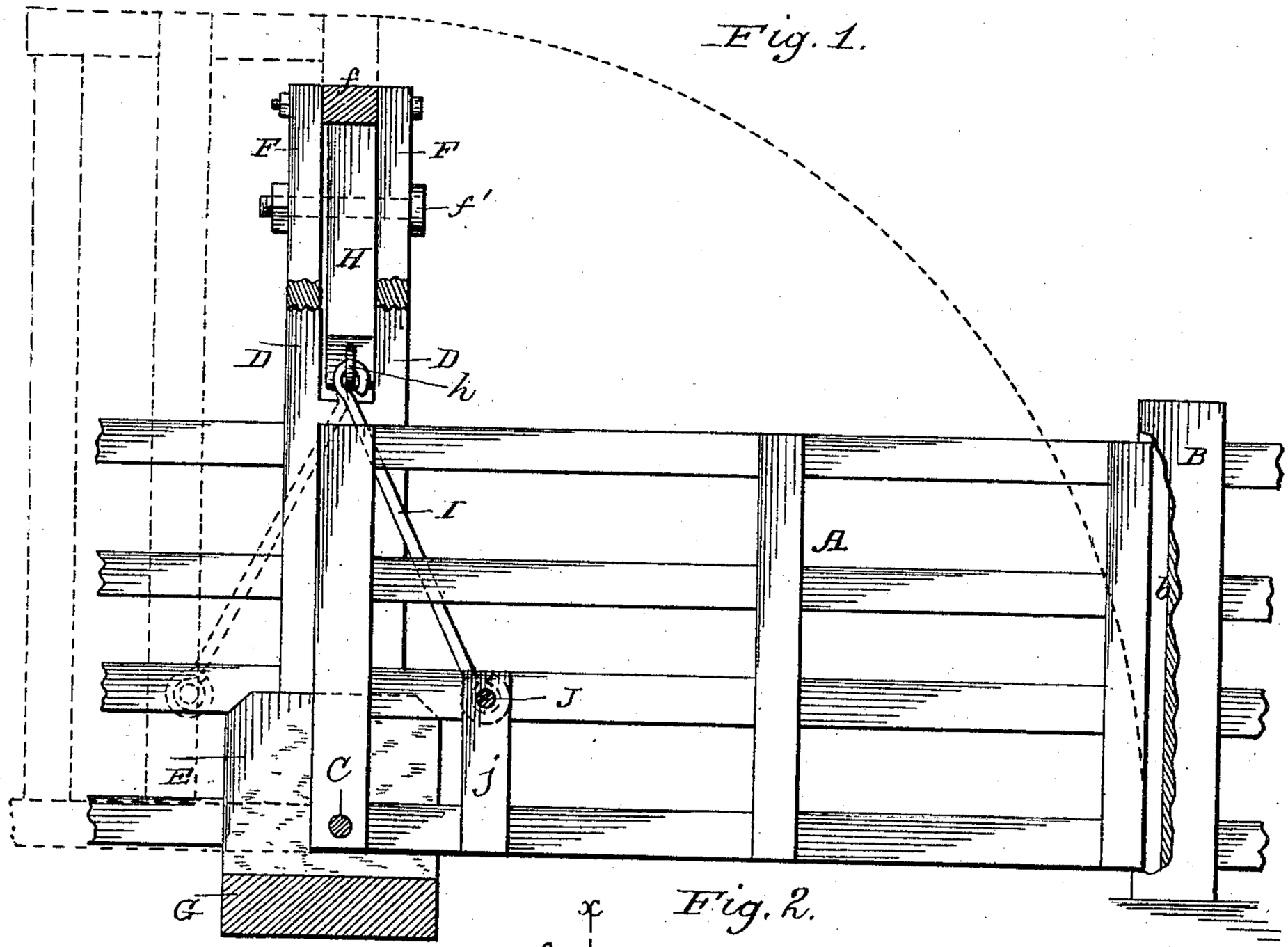
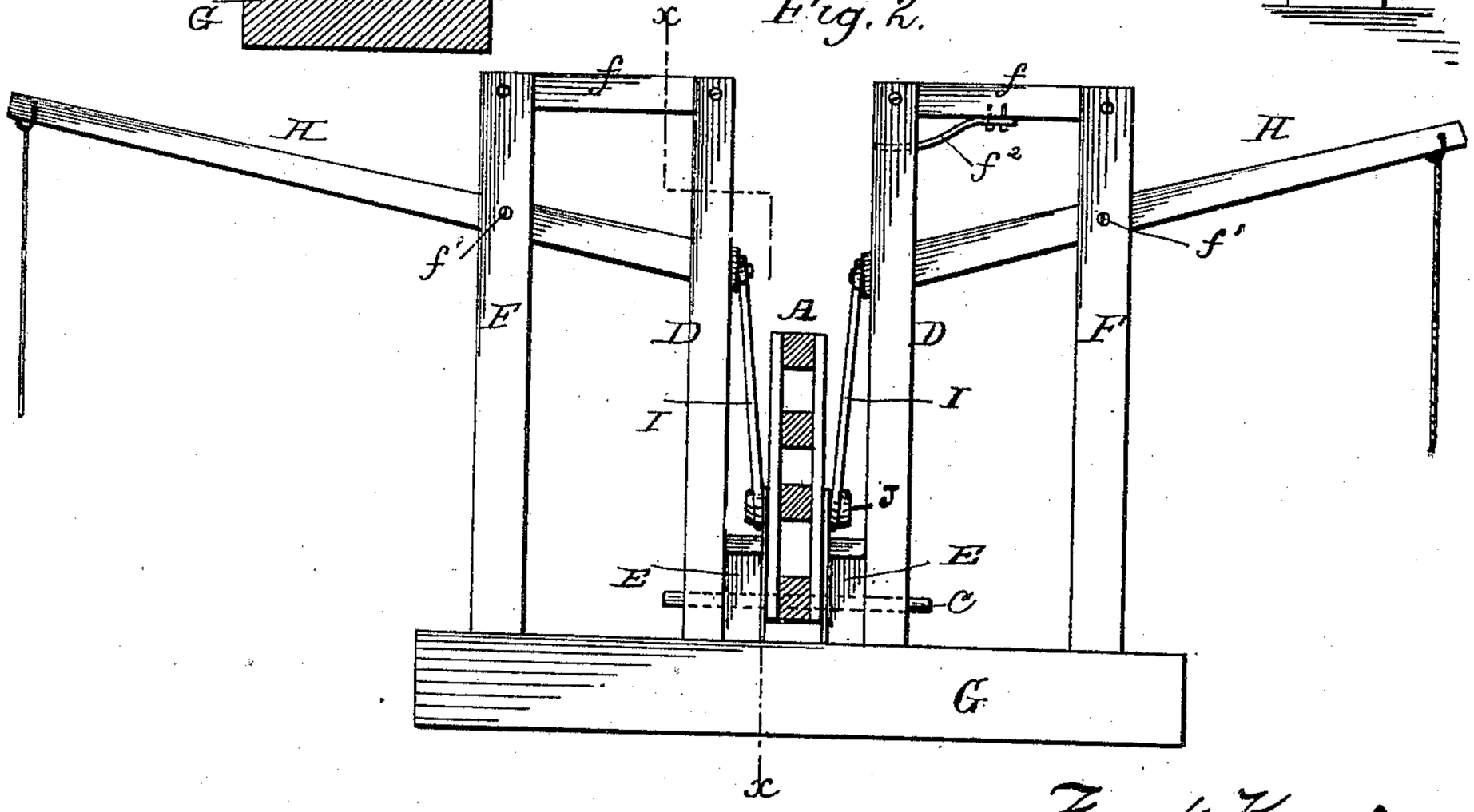


Fig. 2.



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UNITED STATES PATENT OFFICE.

FRANK KENNEDY, OF GRAND BLANC, MICHIGAN.

AUTOMATIC TILTING GATE.

SPECIFICATION forming part of Letters Patent No. 271,336, dated January 30, 1883.

Application filed August 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANK KENNEDY, a citizen of the United States of America, residing at Grand Blanc, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Automatic Tilting Gates; and I do hereby 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of gates known as "tilting," which are, in the operation of opening and closing, turned up on end returned to a horizontal position; and my invention consists in certain features, hereinafter described, and specifically set forth in the claim.

Referring to the drawings, Figure 1 is a front view of a closed gate provided with my improved means for opening and closing the same, the view being partly a section on line *x x*, Fig. 2. Fig. 2 is an end view of the same.

Like letters refer to like parts in all the figures.

A represents a post-and-rail gate of usual construction, and B represents the latch-post, which is partially broken away to show a slot or pocket, *b*, formed on its inner surface to receive and retain the gate when closed. Any other well-known means may be employed to secure the gate in a closed position. The end of the gate rests on the bottom of the pocket, as shown. The swinging end of the gate moves in the course indicated by the dotted lines, while the fixed end is pivotally supported on a bolt, C, located at the lower corner of the gate and passing through the end post and bottom rail thereof and through two guide-posts, D, as clearly shown in Fig. 2. Two bearing-blocks, E, are interposed between the guide-posts and the gate, and the bolt C passes through these also.

If desired, ordinary washers may be substituted for the blocks.

Outside of the guide-posts are on each side of the gate two lever-posts, F, which are connected at their tops to the guide-posts by beams *f*.

The lower ends of the posts may be mortised in a base, G, or set in the ground, as desired.

Levers H are pivoted to the posts F at *f'*, and are provided at their inner ends with staples or eyes *h*, to each of which a link, I, is pivotally attached, and the lower end of said link is provided with an eye, through which and a rail of the gate is passed a bolt, J.

Short posts *j* may be provided to add strength to the rail, through which the bolt J passes.

A spring, f^2, may be secured to the under side of the beams *f*, if desired, for a purpose stated hereinafter.

This being the construction, the operation is as follows: The operator, approaching the gate from either direction, depresses the outer end of the lever H, which is in easy access from the ground or a vehicle, and by means of the link I the free end of the gate is lifted to a position nearly over the pivot-bolt C, when by dexterously releasing the outer end of the lever the momentum given the gate while being lifted to this point carries it beyond it, when, if desired, by lifting on said outer end of the lever the gate may be forced back to an upright position, as shown by dotted lines in Fig. 1; or the gate may be opened by a sudden jerk as the gate approaches a perpendicular position. To overcome the necessity of a certain dexterity required on the part of a person attempting to operate the gate at the instant the lever is depressed to its lowest point, when the pivotal connections C, *h*, and J are in line, which dexterity consists in not impeding the momentum of the gate, various changes of detail may be employed. For example, the spring f^2 will be compressed by the lever H when it arrives nearly at its highest point, and the resistance of said spring will tend to automatically change the direction of movement of that end of the lever, so that at the instant the momentum of the gate acts to carry it over, the spring acts as a check to any effectual resistance to the operation of the gate in this regard, and hence an operator unacquainted with this peculiar feature in the operation will be enabled to successfully open the gate, while without the aid of the spring a positive and accurate manipulation of the lever will produce the desired result.

In a further modification the bolt is simply

loosely fitted in the rail, whereby sufficient lost motion at that point is secured to cause a rest in the action of the lever and link at the vertical point, and by this means the necessity of more than ordinary skill to operate the gate is obviated.

It is apparent that the operation of closing the gate is identical with that of opening it, force being first applied to depress the lever to its lowest point and then releasing the lever from said force and applying subsequently and quickly force in the opposite direction, when the gate will fall to a closed position.

In case the gate is constructed of iron posts and rails, the lower ends of the links are secured lower down and farther from the pivot, for the purpose of securing greater leverage and rendering the operation of opening and closing easy of accomplishment.

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

The combination of the gate A, blocks E, bolt C, and guide-posts D, with the posts F, levers H, links I, bolt J, and spring f^2 or its described equivalent, substantially as shown and described.

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

FRANK KENNEDY.

Witnesses:
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C. H. ROCKWOOD.