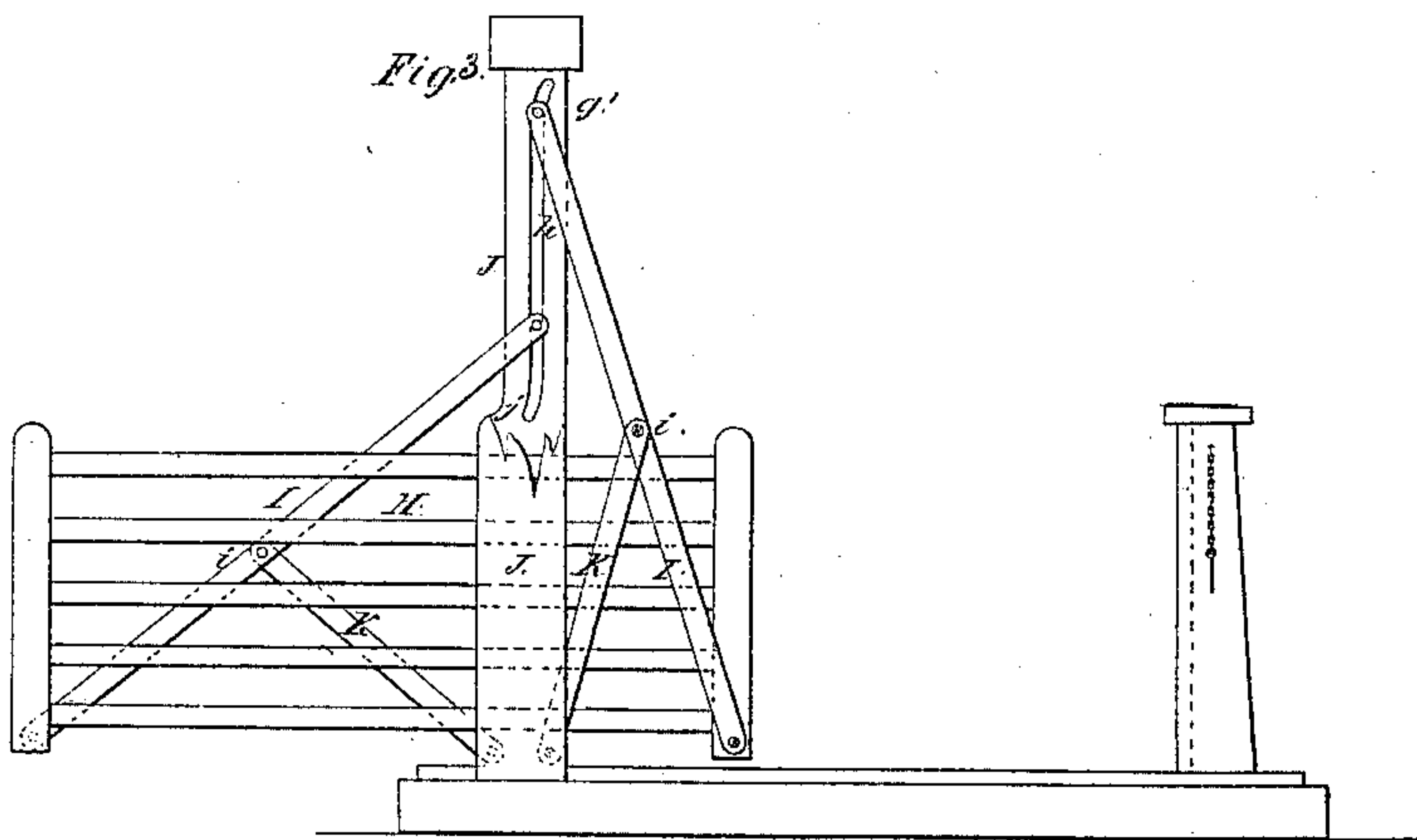
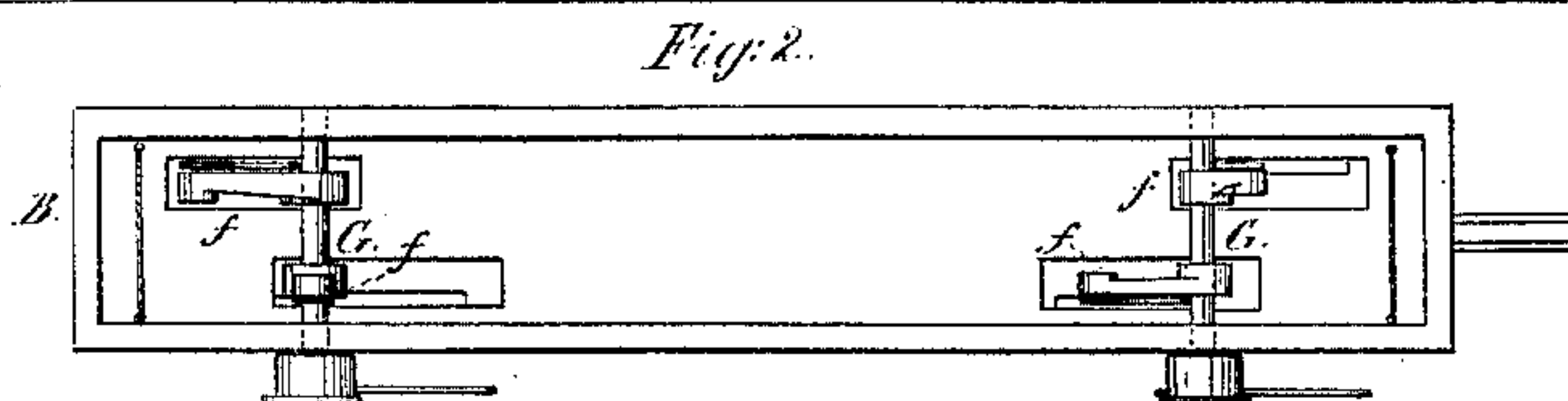
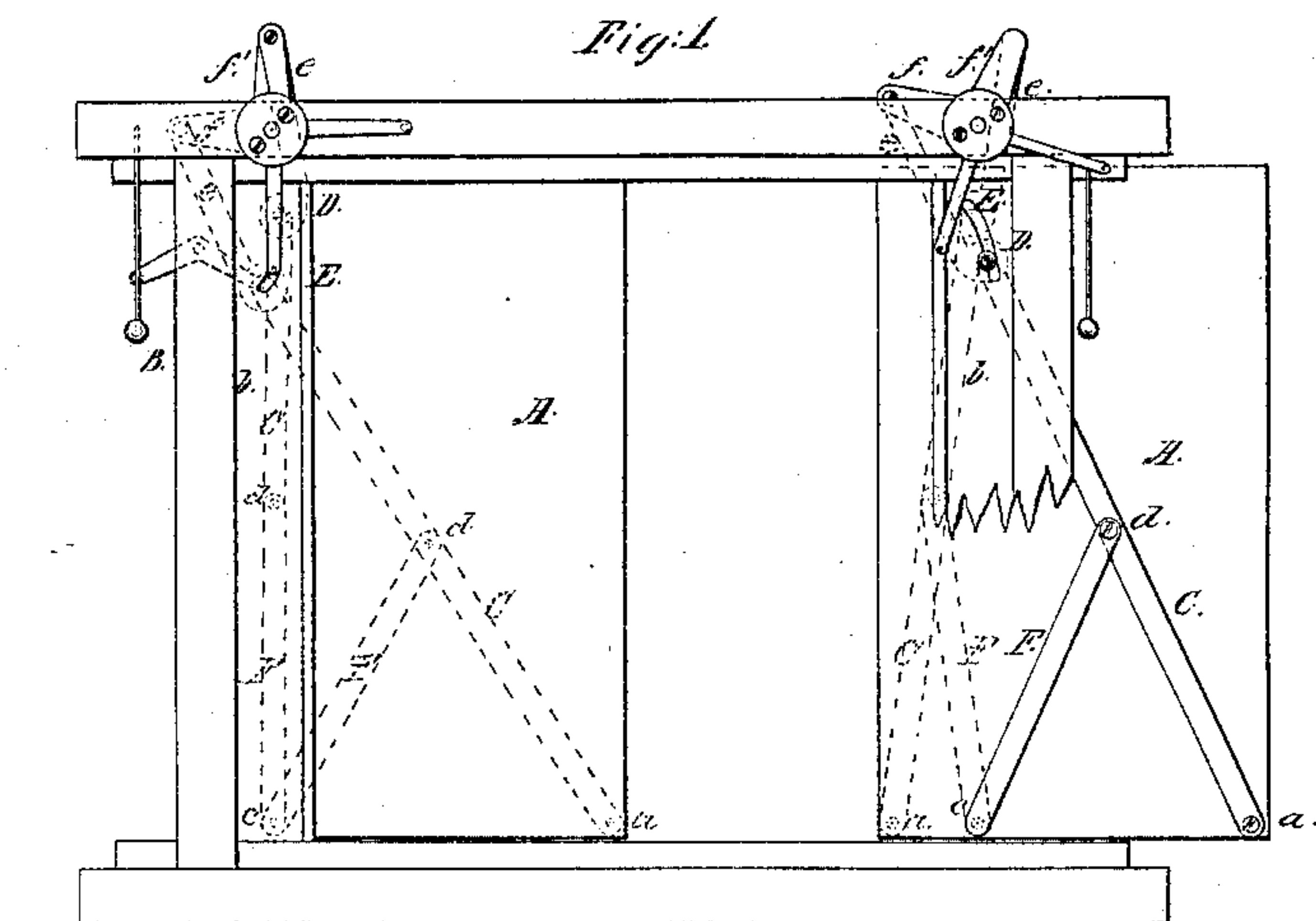


G. W. Holly,
Automatic Gate,

No. 58,827.

Patented Oct. 16, 1866.



Witnesses:
Wm. E. Lyon
Wm. Freurn

Inventor:
Geo. W. Holly
per *Attorney*

UNITED STATES PATENT OFFICE.

GEORGE W. HOLLY, OF LOW MOOR, IOWA.

IMPROVED METHOD OF HANGING DOORS.

Specification forming part of Letters Patent No. 58,827, dated October 16, 1866.

To all whom it may concern:

Be it known that I, GEORGE W. HOLLY, of Low Moor, in the county of Clinton and State of Iowa, have invented a new and Improved Mode of Hanging Gates and Doors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of a pair of doors hung and arranged to operate according to my invention; Fig. 2, a plan or top view of the same; Fig. 3, a side view of a gate hung according to my invention.

Similar letters of reference indicate corresponding parts.

This invention consists in hanging a gate or door by means of pivoted bars and guides in connection with braces, all being arranged in such a manner that the gate or door may slide and open and close freely, the invention being capable of being applied to any of the known forms of gates or doors in use, which may be arranged so as to open and close by a sliding movement.

A A, Fig. 1, represent two sliding doors, fitted in a framing or casing, B. To each door A, at its lower end and both sides, there are connected, by pivot *a*, the lower ends of bars C. The upper ends of these bars have each a pin, D, projecting horizontally from them, and these pins pass through slots E, made in the posts *b* of the framing or casing, and to each post *b*, at its lower part, there is secured by a pivot, *c*, a bar, F. The upper ends of these bars are pivoted to the bars C, as shown at *d*. The bars C, at one side of the doors, are connected to their inner or front edges, and said bars, at the opposite sides of the doors, are connected to the outer edges of the same.

The slots E serve as guides for the bars C, and they are curved, as shown in Fig. 1. The doors, it will be seen, by this arrangement are supported by the bars F, and the bars C control the movement of the doors, the curvature of the slots E, which are of slight cyma-form, causing the doors to slide in a horizontal direction, or nearly so.

These doors may be moved, opened, and closed directly by hand; or the upper ends of the bars C may be connected by metal plates or rods *e* to arms *f f'*, which are keyed on shafts G, in the top of the framing or casing, at right angles to each other. By turning these shafts first in one direction and then in the other, the arms and straps or rods, by their action on the bars C, will open and close the doors.

It will at once be seen that the doors, in consequence of being supported by and working upon the pivoted bars F, will slide easily, and that the curvilinear movement made by said bars F in opening and closing the doors is compensated for by the bars C, which are pivoted at their lower ends to the lower parts of the doors, and by their movement cause the doors to slide about horizontally, the curvature of the slots E aiding in effecting this movement.

I do not confine myself, however, to any precise shape of slots E. They may be modified in form and still effect the same result. Some degree of curvature would be necessary in all cases where a horizontal, or nearly horizontal, movement of the doors is desirable.

In Fig. 3, my improvement is shown applied to a gate. H represents the gate, having the lower end of a bar, I, pivoted to each side of it and to opposite ends, near its bottom. The upper ends of the bars I are provided with horizontal pins *g*, which work in slots *h* in the inner sides of the gate-posts J J, and to the lower parts of the posts J J there are pivoted the lower ends of bars K, the upper ends of the latter being pivoted to the bars I, as shown at *i*. The lower end of the rear bar K is adjustable with the posts J J, a slot, *k*, being made in the lower part of the post to which the bar is pivoted.

When the gate H is opened and closed, it will be seen that one bar, I, rises as the other falls, and the same may be said of the bars C of the doors A A, as said bars are connected to opposite ends of the gate and doors.

The slots *h* in the posts J J of the gate are curved at their lower ends, as shown at *j* in Fig. 3. This curvature admits of the gate settling down as it reaches an open and a closed

position, the gate being raised slightly as the pins *g* pass out of the lower curved ends of the slots *h*.

I would remark that any proper attachment may be applied to the doors or gates for the purpose of operating them from a carriage or from a horse; and I would further remark that a spring-catch may be used to engage with the pins *D* of the bars *C* in order to secure the doors in a closed state. Any suitable fastening, however, may be employed for this purpose.

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

The arms *ff'* and rods *e*, arranged and operating relatively with the bars *C F* and door *A*, substantially as described, for the purpose specified.

GEORGE W. HOLLY.

Witnesses:

AMHERST RUSSELL,
H. W. HOADLEY.