

(No Model.)

T. A. HILL.
Swinging Gate.

No. 237,748.

Patented Feb. 15, 1881.

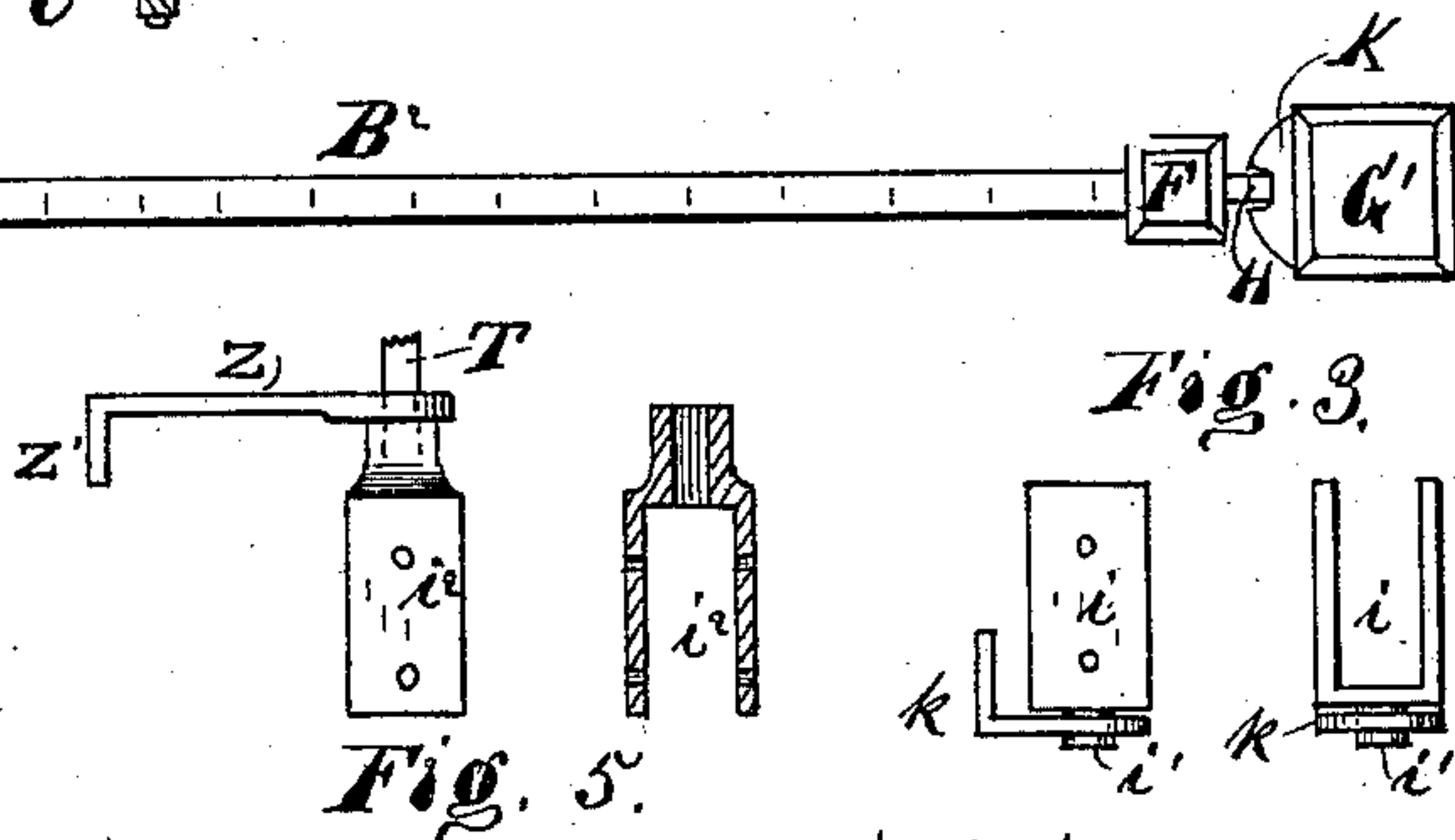
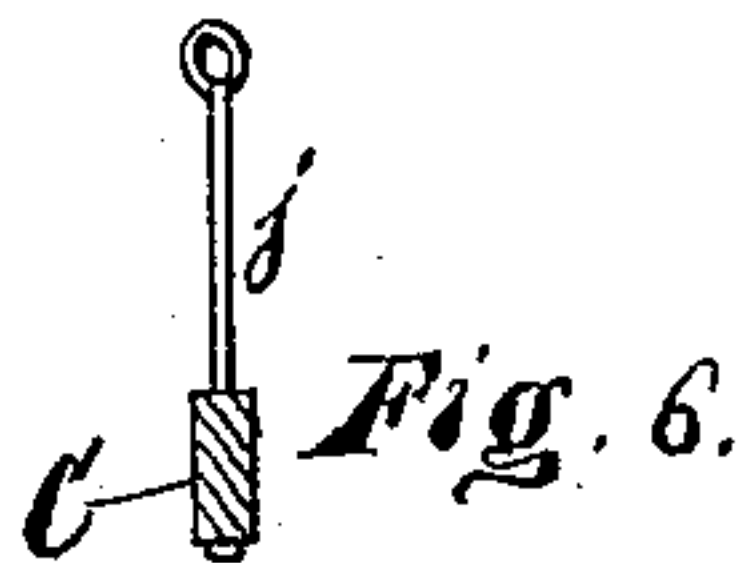
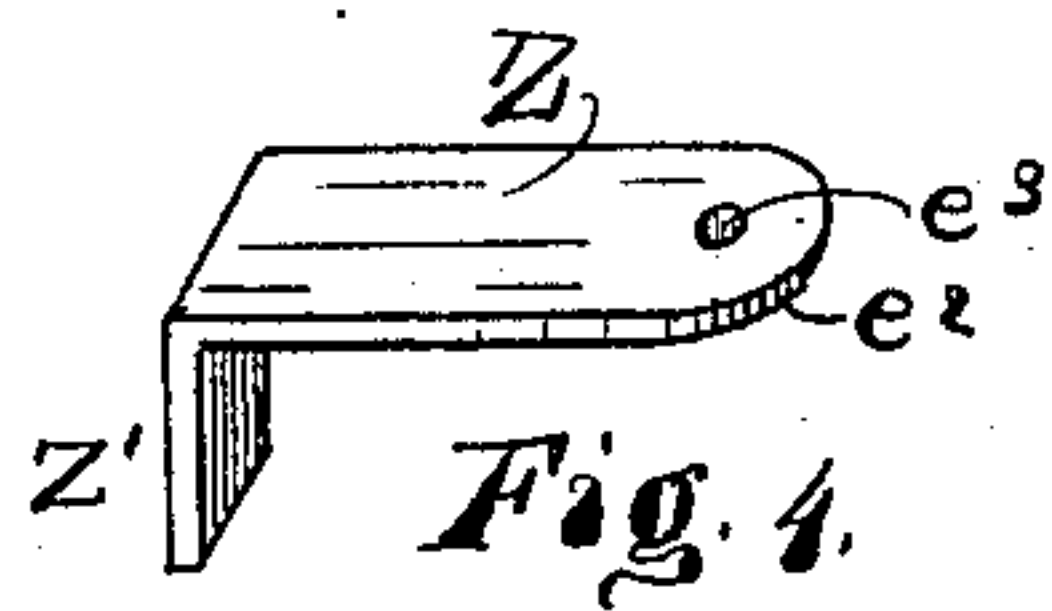
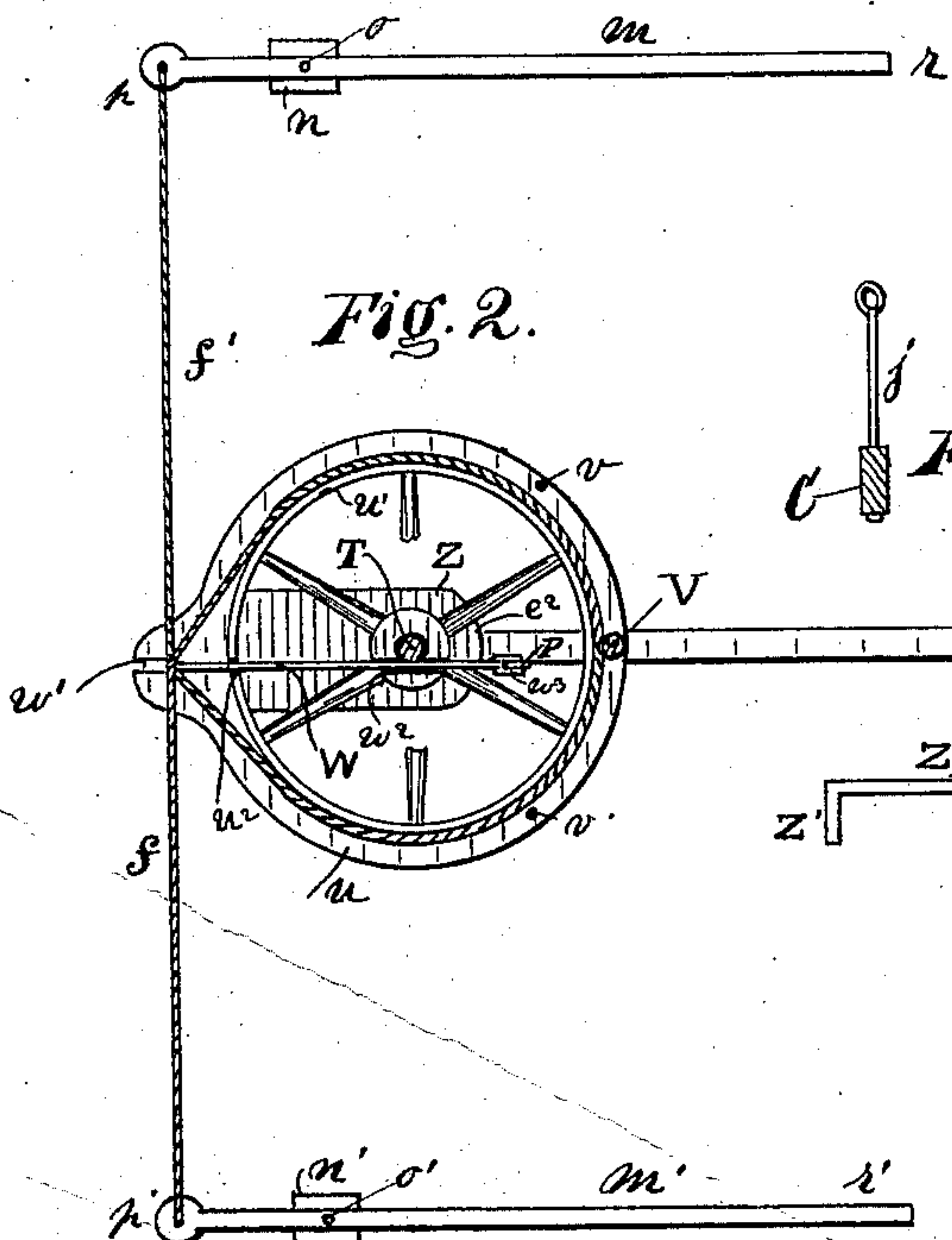
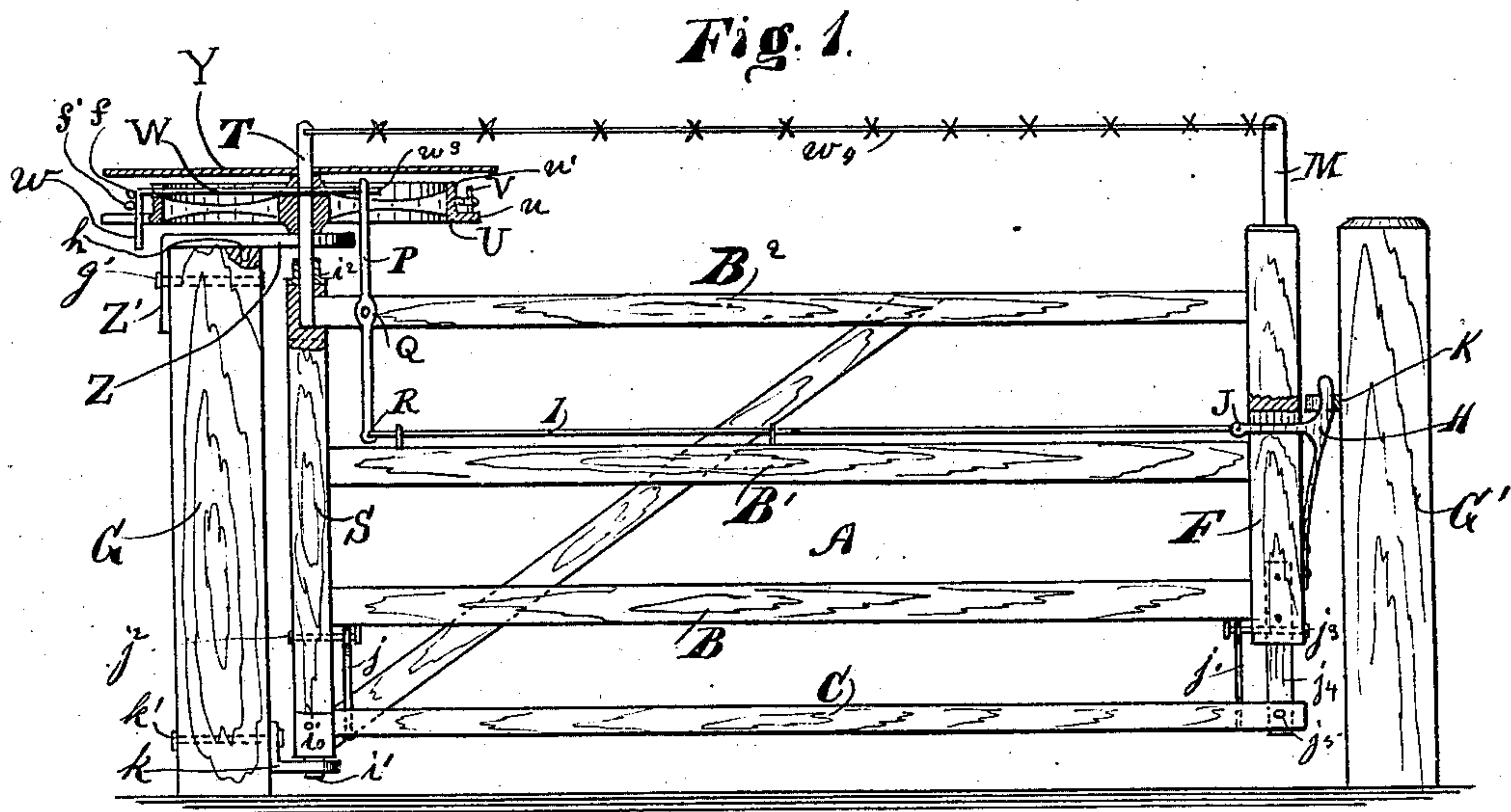


Fig. 5.

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UNITED STATES PATENT OFFICE.

TERELIUS A. HILL, OF CATLIN, ILLINOIS.

SWINGING GATE.

SPECIFICATION forming part of Letters Patent No. 237,748, dated February 15, 1881.

Application filed September 28, 1880. (No model.)

To all whom it may concern:

Be it known that I, TERELIUS A. HILL, a citizen of the United States, residing at Catlin, in the county of Vermillion and State of Illinois, have invented certain new and useful Improvements in Gates, of which the following is a specification.

My invention relates to improvements in gates, in which a flanged wheel operates in conjunction with wires, levers, a slide-bar, and a spring-latch; and the objects of my invention are, first, to provide facilities for opening and closing a gate by levers at each side of the gate, or without levers at the gate; and, second, to provide the gate with an adjustable or folding lower rail. These objects I accomplish by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of the entire device, partially in section to show the construction and arrangement of certain parts. Fig. 2 is a top or plan view of the same, showing the levers and their connecting mechanism for operating the gate. Fig. 3 represents a side and edge view of the pivot-socket bearing for the base of the gate-stile. Fig. 4 is a perspective of the top hinge-plate. Fig. 5 represents a side and edge view of the top pivot-socket, and Fig. 6 is an end view of the lower adjustable rail and one of its supporting-links.

A represents the gate; B B' B², the stationary rails of the gate; F and S, the stiles; G, the post to which the gate is hinged, and G' the post against which the gate closes.

The lower end of the stile S of the gate is inserted in a cast-iron pivot-socket, *i*, and the pivot *i'* of this socket operates in a hole formed in the cast-iron bracket *k*, which is secured to the post G by the bolt *k'*.

On the top of the post G is secured an angle-iron hinge-plate, Z Z', the angle part Z' projecting downward on the rear side of the post, and made fast to the post by the bolt *g'*. The top part, Z, is provided with pins or lugs *h* on its lower side, which fit into holes formed in the top of the post. The front end of this angle-plate Z Z', Figs. 2 and 4, is provided with a pin-hole, *e*³, for the pivot T of the gate to operate in, and its front end is made round, as at *e*², for the upper end of the lever P to slide round on.

The upper end of the gate-stile S is also provided with a socket-cap, *i*², having a square or oblong hole in its top, in which is secured the pivot T. This pivot T forms the shaft of a flanged wheel, U, which rotates in a horizontal plane above the hinge-plate Z Z'. This flanged wheel U is of peculiar construction, to wit: The rim is formed with a horizontal flange, *u*, and a vertical flange, *u'*, all around it for supporting and holding in position the ropes *f f'*. The flange *u'* is provided with a notch, *u*², at one side, to permit the rod W to slide therein, and the hub of the wheel is also provided with a notch, *w*², for the inner end of the rod W to operate in. The flange *u* at one side is made broader than at other parts, and provided with a slot, *w'*, for the bent end of the rod W to operate in, as shown. The outer end, *w*, of this rod is turned down and fits in the slot *w'*, formed in the flange *u* of the wheel U, around which the wires *f f'* pass. The inner end of this slide-rod operates in the slot *w*², formed in the hub of the wheel U, and projects beyond the hub of the wheel, and is provided on its end with a fork, *w*³, which connects with the lever R, as shown. The wires *f f'* are wound around the stud V to make them fast to the flange of the wheel U, and these wires are then carried half-way round the wheel on the flange *u'* and passed in opposite directions at the bent end *w* of the slide-bar W, and then lead off at each side of the gate, and are connected to the rear ends of the levers *m m'* at *p p'*. These levers *m m'* are pivoted to upright posts *n n'* at *o o'*, and the projecting ends *r r'* of the levers are operated by the person who desires to open the gate, as will be hereinafter described.

Above the wheel U is a cap, Y, large enough to protect the wheel U and its mechanism from the weather.

The lever P is pivoted to the gate at Q, and to its lower end, at R, is attached the rod I. This rod extends to the front end of the gate, and connects with the rear end of the latch, which passes through a hole formed in the stile F, as at J. The lower end of the latch H is secured to the front of the stile F, and its upper end is free to vibrate and catch in the keeper K, as shown.

The lower gate-rail, C, is a loose folding rail, the ends of which are held in position by links

5 $j j$, the upper ends of which links are pivoted
 on the studs $j^2 j^3$, by means of which the rail
 may hang down or be turned up against the
 rail B' . The front end of the rail C is secured
 10 to the stile F of the gate by the bar j^4 and bolt
 j^5 when it is desired to fasten the rail down;
 but when the rail is turned up then the bolt j^5
 is removed.

10 Above the gate, and attached to the top of
 the stile F or to an upward-projecting plate,
 M , and to the pivot T , is a barbed wire, w^1 .

The operation of my device is as follows, to
 wit: The gate being closed, in order to open
 it from either side by persons in vehicles, the
 15 operator pushes either of the levers m or m'
 toward the gate. Thus, if the lever m' is
 pushed toward the gate the wire f is drawn
 back with the lever. The wire presses the
 slide W in, thus forcing the lever P forward,
 20 and the lower end of the lever moves the rod I
 also back, thus removing the latch H from its
 keeper on the post G' . At the same time the
 wire rotates the wheel U , causing the gate to
 swing open away from the operator until the
 25 gate reaches a position at right angles to that
 when it is closed, thus permitting the operator
 to pass through. The operator then grasps
 the lever m and pulls the end r toward the
 gate, thus repeating the operation just de-
 30 scribed, but in the opposite direction, and the
 gate is closed.

What I claim as new, and desire to secure
 by Letters Patent, is—

1. In combination with a gate, A , and gate-
 post G , the top hinged plate, $Z Z'$, having its 35
 front end, e^2 , round and provided with a hole,
 e^3 , the pivot T , forming the shaft of the wheel
 U , the wheel U , having a slide-rod, W , the
 lever P , the wires or ropes $f f'$, and the levers
 $m m'$, all arranged to operate substantially as 40
 shown and described.

2. The wheel U , having the slide W , com-
 bined with the wires $f f'$, the gate A , the post
 G , and the lever P , as and for the purpose set
 forth.

3. The loose folding rail C , with links $j j$, 45
 in combination with the stiles $S F$ and bar j^4 ,
 substantially as shown and described.

4. The wheel U , having the shaft T , and the
 slide W , combined with the lever P , rod I , and 50
 spring-latch H , as and for the purpose speci-
 fied.

5. The wheel U , having flanges $u u'$, slots
 w^1 , w^2 , and w^3 , and stud V , combined with the
 ropes or wires $f f'$, the bent rod $W w$, and 55
 lever P , as and for the purpose specified.

In testimony whereof I have signed my name
 to this specification in the presence of two
 subscribing witnesses.

TERELIUS A. HILL.

Witnesses:

E. O. FRINK,
 GEORGE H. RENNETT.