

(No Model.)

P. O. HIRSCH.
GATE.

No. 426,725.

Patented Apr. 29, 1890.

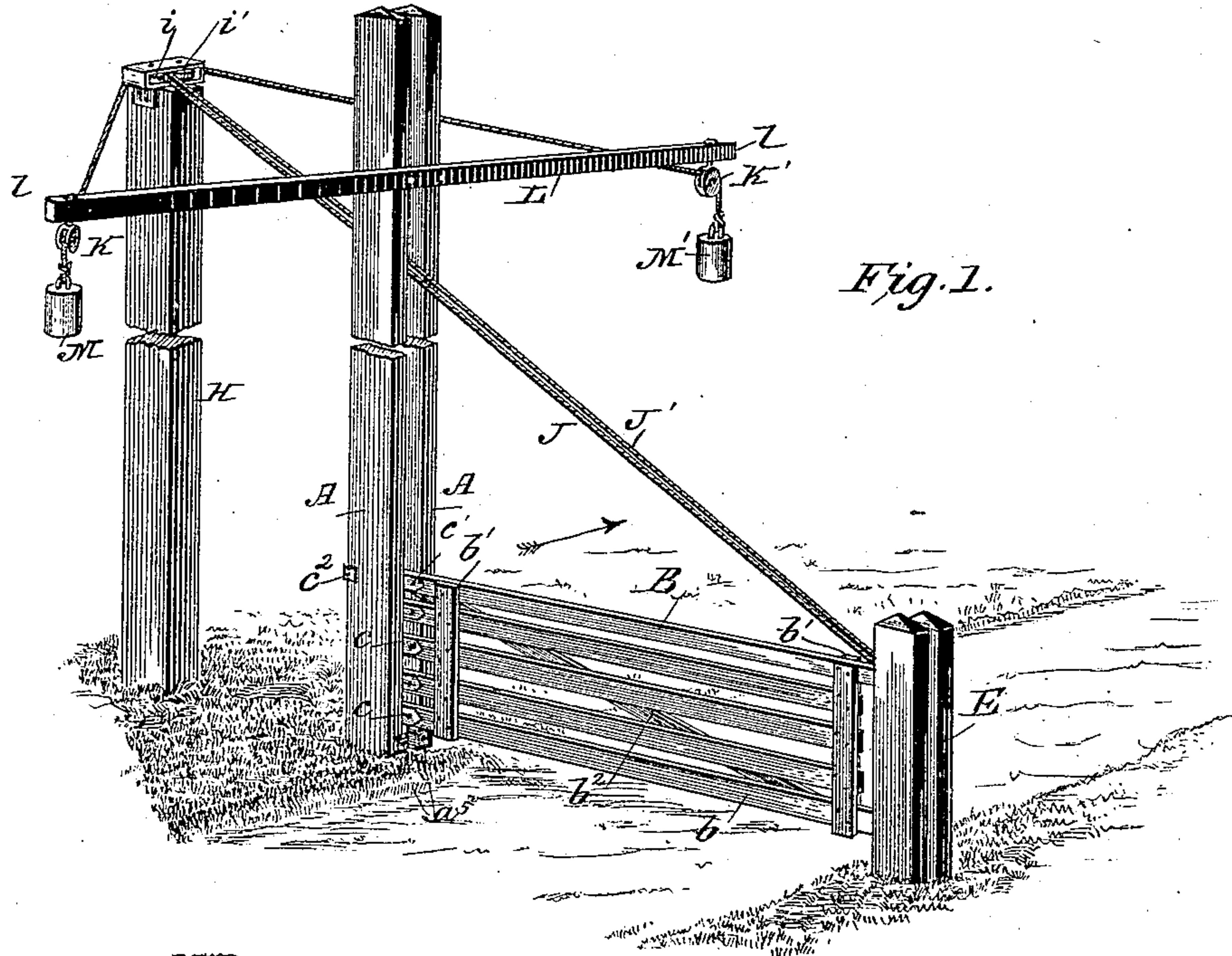


Fig. 1.

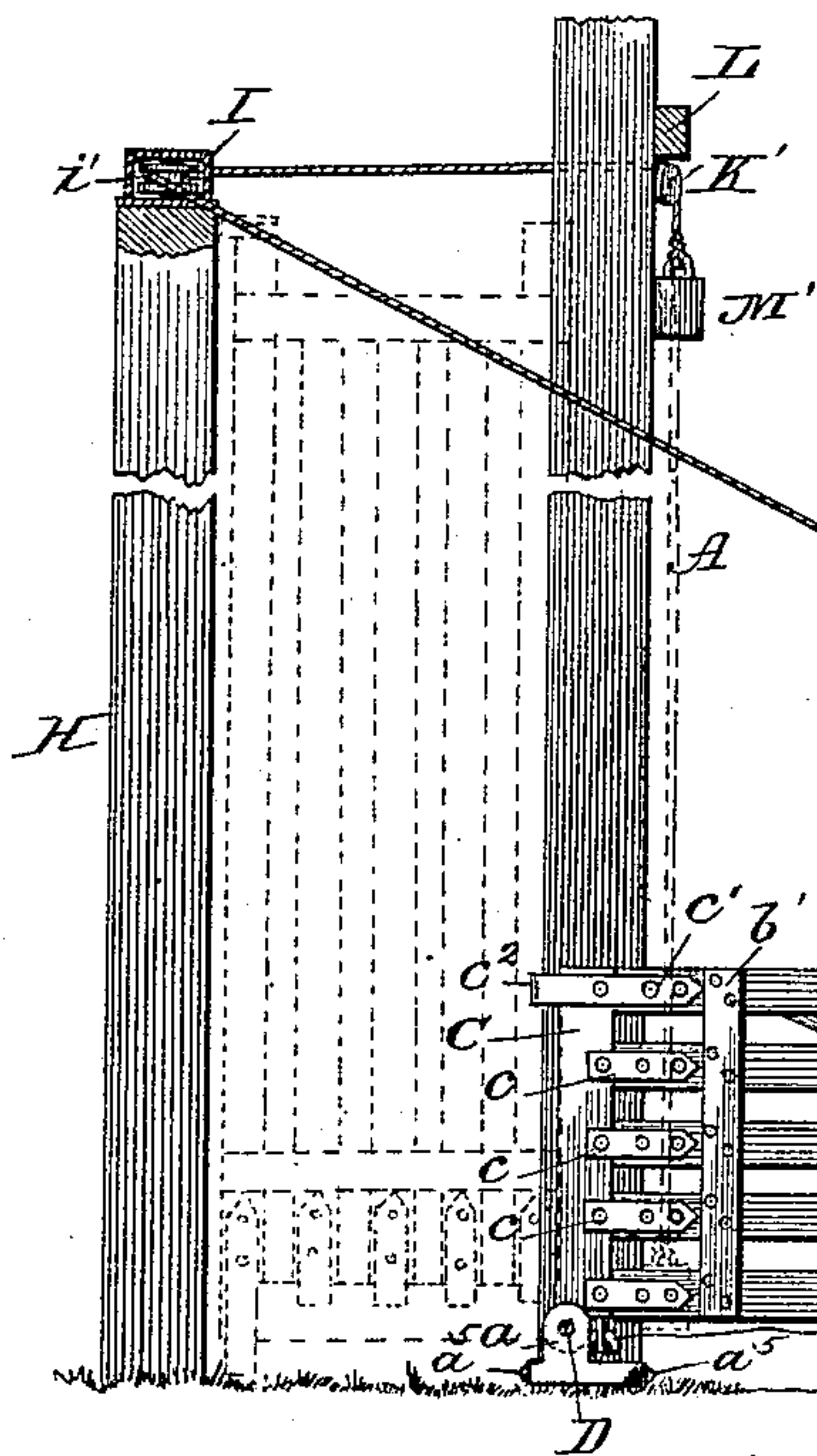


Fig. 2.

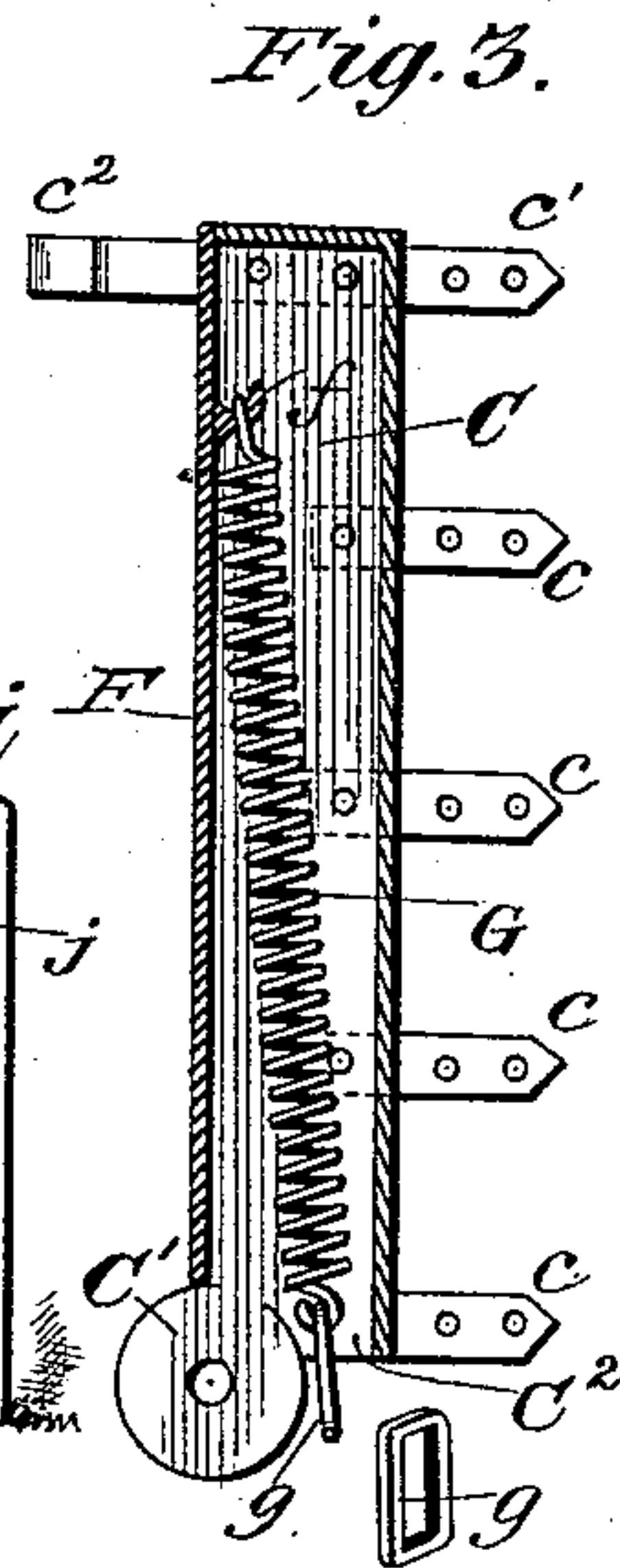


Fig. 3.

WITNESSES:
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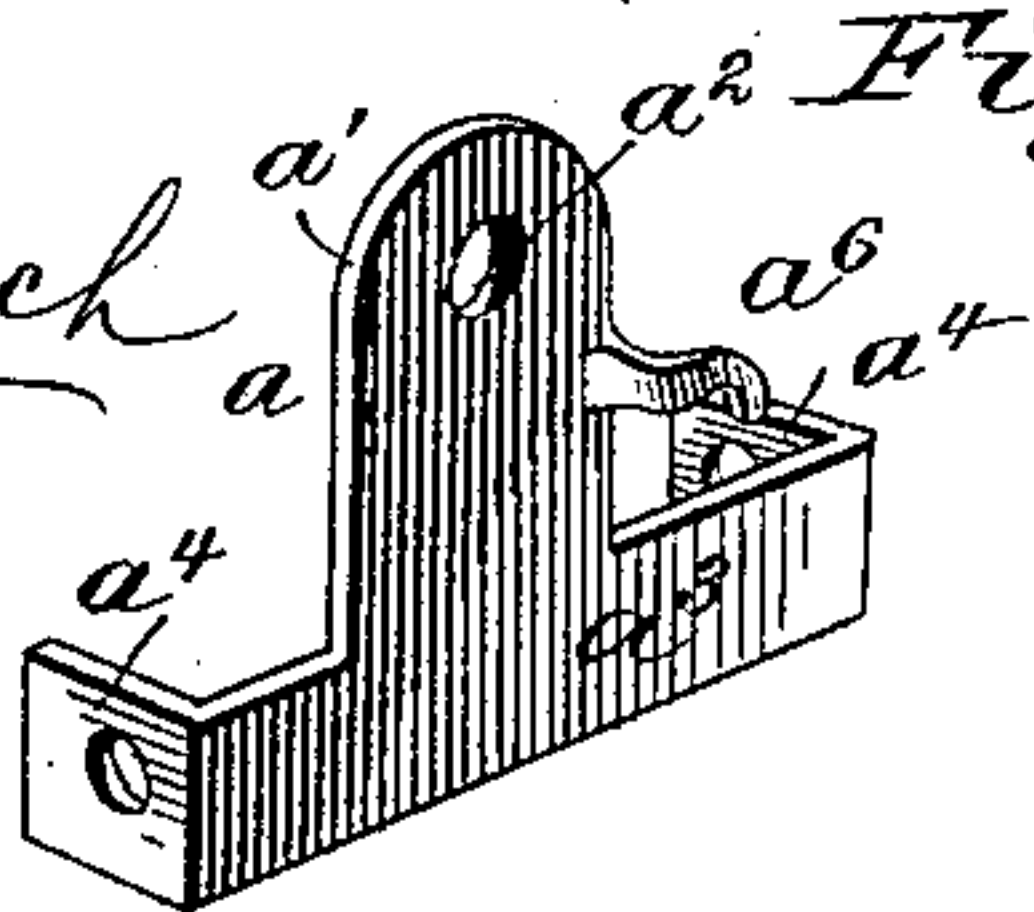


Fig. 4.

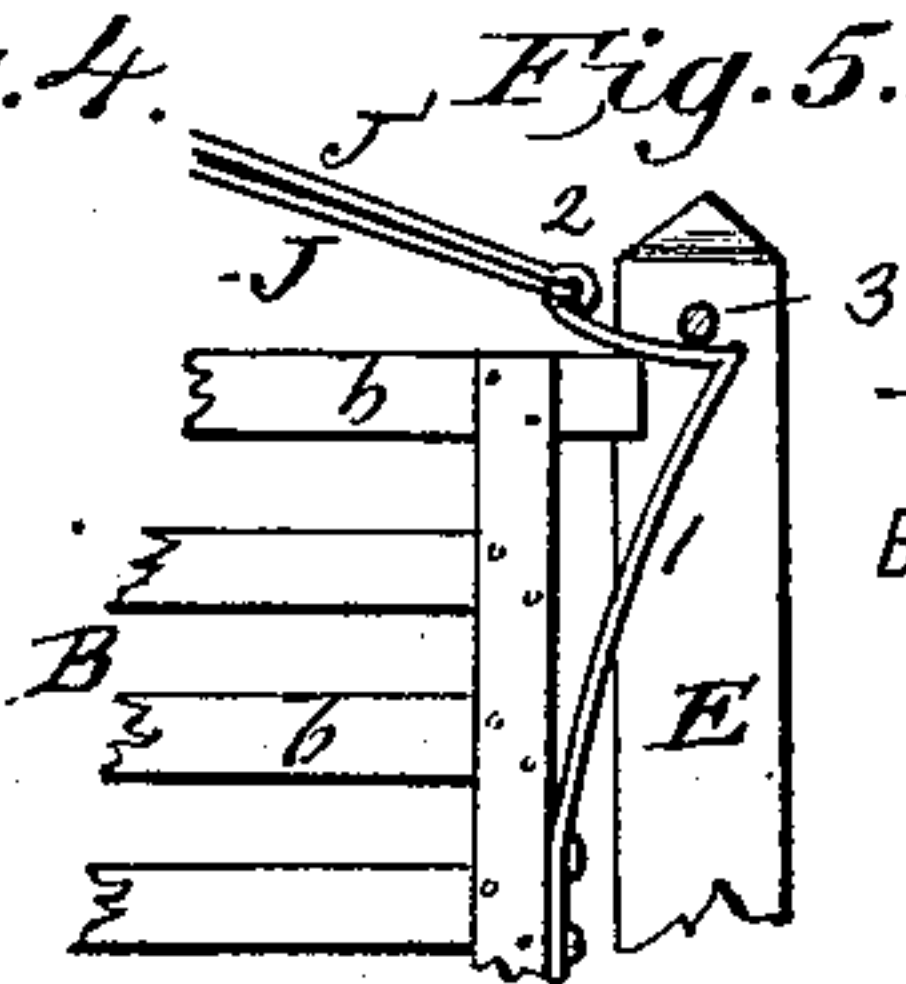


Fig. 5.

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PHILIP OTTO HIRSCH, OF GRAND ISLAND, NEBRASKA.

GATE.

SPECIFICATION forming part of Letters Patent No. 426,725, dated April 29, 1890.

Application filed January 23, 1890. Serial No. 337,837. (No model.)

To all whom it may concern:

Be it known that I, PHILIP OTTO HIRSCH, of Grand Island, in the county of Hall and State of Nebraska, have invented certain new and useful Improvements in Gates, of which the following is a specification.

My invention relates more particularly to that class of gates known as "tilting" gates; and it consists in the sundry novel combinations and peculiar arrangement of parts, which will be hereinafter fully described in the annexed specification and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved gate. Fig. 2 is a central vertical section of the same, and Figs. 3, 4, and 5 are detail views hereinafter referred to.

In the accompanying drawings, A A indicate two tall posts, between which the gate B is pivoted and swings to a vertical position when opened. $a a$ indicate two metallic plates, each of which consists of a central vertical portion a' , provided with an aperture a^2 , and a transverse base portion a^3 , provided with lateral apertured ears a^4 , as most clearly shown in Fig. 4 of the drawings. These plates are secured upon the lower inner faces of the posts A A, and are secured thereto by bolts or screws $a^5 a^5$, which pass through the apertured ears, as shown.

B denotes the gate, which may be of any approved construction, being in this instance shown as constructed of horizontal bars b , connected by the vertical bars $b' b'$ at their ends and the diagonal brace-bar b^2 . By means of the metal straps $c c$, I connect the rear end of the gate to a vertical hollow post C, the lower end of which is provided with an apertured disk-like projection C' , which fits between the central vertical portions a' of the plates a and is held to swing thereon by means of a pintle D, which is inserted through apertures $a^2 a^2$ and the apertured disk C' . The forward end of the gate fits, when closed, between the two short parallel guide-posts E E.

F denotes a metal plate secured to the hollow post C, which is provided at its upper end with an inwardly-projecting lug f , to which is connected one end of a stout coiled spring G, which extends down through the lower open

end C^2 of the post, and is provided at said end with a bail g , which engages hook-like projections $a^6 a^6$, formed on the inner faces of the plates $a a$. By this construction it will be seen that the gate will through the medium of the spring be normally pulled down to its closed position, and to prevent the forward end from being forced down to the ground I extend the upper pair of straps $c' c'$ and provide the same with lateral ears $c^2 c^2$, which engage the rear faces of the posts A A and hold the gate from being forced too far down, and at the same time serve to form rests for the gate when the same is tilted back to the position shown in dotted lines in Fig. 2 of the drawings.

H denotes a post arranged in the rear of the posts A and in alignment therewith at a distance therefrom equal to the height of the gate. Upon the upper end of this post I secure a bracket I, provided with guide-pulleys $i i'$, between which pass ropes J J', connected at their lower ends with a staple j , formed on the upper front end of the gate. The free ends thereof pass over pulleys K K', suspended from the outer ends of a transverse beam L, secured to the tops of the posts A A and projecting in the roadway at each side of the gate, as shown. Said ropes J J' are provided with weights M M', which are arranged to counterbalance the tension of the spring G.

The operation of my improved gate is as follows: When a person on horseback or in a wagon is coming in the direction indicated by the arrow in Fig. 1 and desires to open the gate, he pulls down on the weight M, which raises the gate to a vertical position between the posts A A, as shown, the weight M' at the same time dropping to its lowest position.

It will be understood that the weights are of such a size as to counterbalance the spring-tension and hold the gate in its vertical or tilted position. Now, when the person has passed through the gate he takes hold of the weight M' and raises it, so as to relieve the spring from its weight. It (the spring) will then force the gate forward to a closed position.

If desired, the front end of the gate may be provided with a simple locking device for holding it in a locked position, such device consisting of a flat spring-catch 1, provided

with a rearwardly and upwardly projecting portion 2, to which the ropes or cords J J' are connected, as clearly shown in Fig. 5.

In operation when the gate is closed the spring-catch will engage a stop-pin 3, arranged between the posts E E. When the rope J is pulled to open the gate, it will first pull the latch 1 from engagement with the pin 3 and permit the gate to swing upward, as shown.

From the foregoing description, taken in connection with the drawings, the advantages of my improved gate will readily appear. It will be seen that the same is exceedingly simple in its operation and can be constructed at a reasonable cost.

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

1. The combination, with the posts A A, the guide-posts E, the gate B, pivoted at its lower rear end between the posts A A, and the tension-spring G, secured at its upper end to the gate in rear of its pivot and at its lower end to the posts A in advance of the gate-pivot, of the post H, disposed to the rear of the posts A, guide-pulleys *i i* on the upper face of said post, the transverse bar L, secured to the upper portion of the posts A A, the guide-pulleys K K', suspended from the outer ends of said cross-bar, the guide-ropes J J', secured to the forward end of the gate, passed through the pulleys *i i* and over the pulleys K K', and

the weights M M', secured to the ends of the cords J J', said weights adapted to counterbalance the tension of the spring G and the gate, substantially as and for the purpose described.

2. The combination, with the main posts and the plates *a*, secured to the lower inner faces of the posts and provided with projecting hooks *a*¹, of the gate B, provided with a hollow post C at its rear end, the lower end thereof pivoted between the plates *a a*, a coiled spring secured at its upper end to said post C, its lower end connected to the lugs *a*¹, the ropes secured to the free end of said gate, the counterbalance-weights secured to said ropes, and the guide-pulleys and their supports, substantially as shown and described.

3. The combination, with the main posts A A, provided at their lower inner faces with pivot-supporting plates *a a*, consisting each of the vertical perforated extension *a*¹, the base portion *a*², and the lateral apertured lug *a*³, for securing said plates to the posts, of the gate B, provided with a depending apertured disk-like projection adapted to be pivoted between the extensions *a*¹ *a*¹, and means for elevating the gate, substantially as shown and described.

PHILIP OTTO HIRSCH.

Witnesses:

OTTO HERMAN KIND,
CARL MUELLER.