

(Model.)

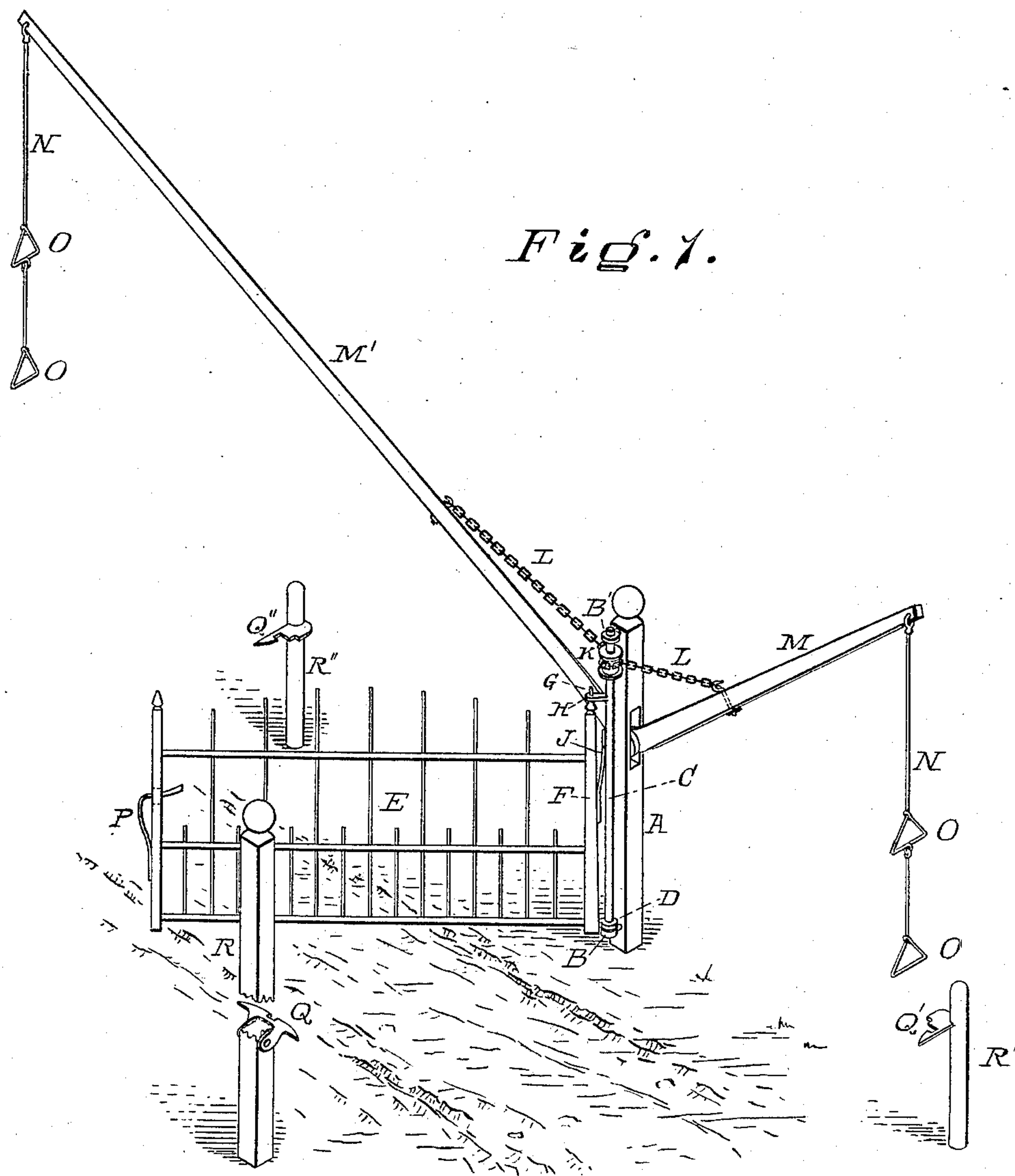
2 Sheets—Sheet 1.

O. E. SEYMOUR.

GATE.

No. 324,735.

Patented Aug. 18, 1885.



Attest:

A. P. Knight

Geo. L. Wheelock

Inventor
Oliver E. Seymour

By Knight Bros
attys.

(Model.)

2 Sheets—Sheet 2.

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Fig. 2.

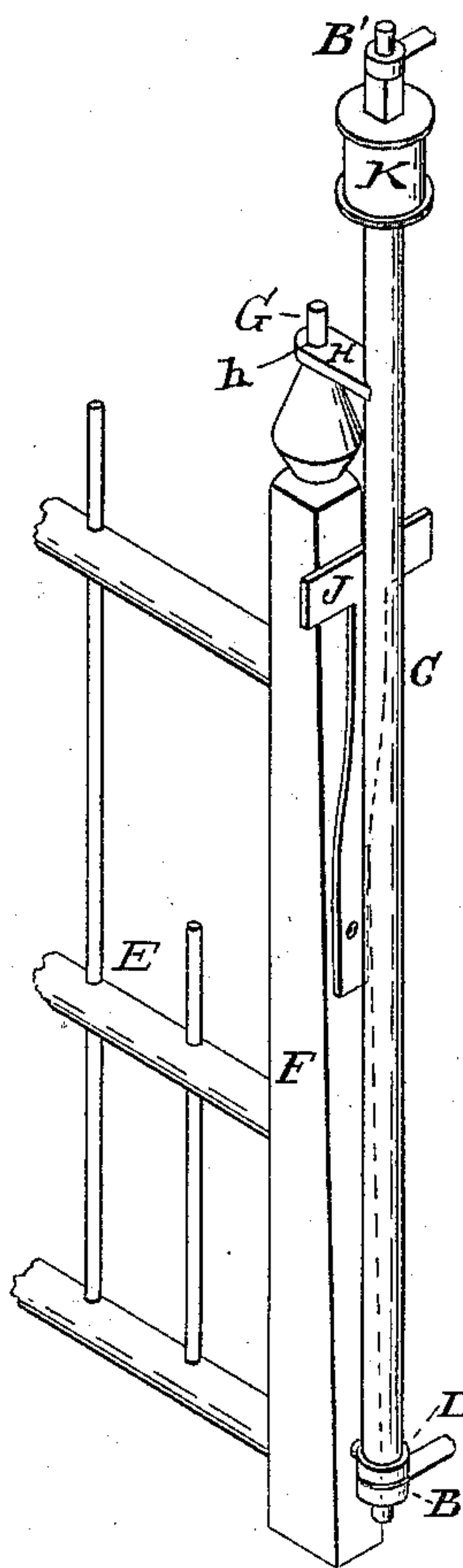
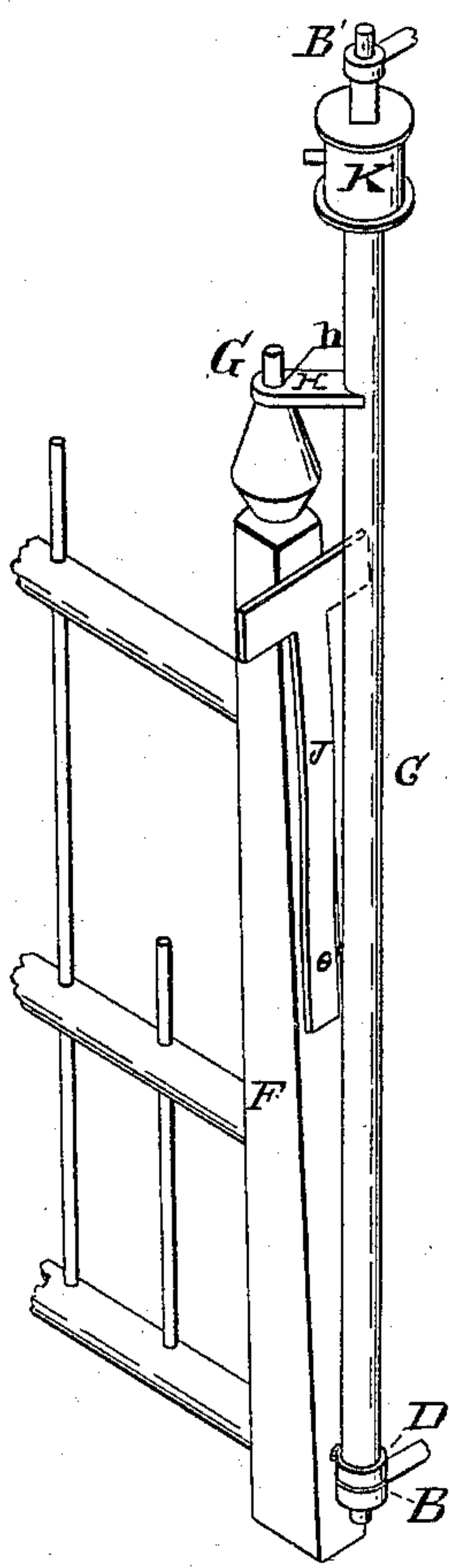


Fig. 3.



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C. P. Knight.
Geo. L. Wheelock

Inventor:

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UNITED STATES PATENT OFFICE.

OLIVER E. SEYMOUR, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO
HUGH McKENZIE, OF SAME PLACE.

GATE.

SPECIFICATION forming part of Letters Patent No. 324,735, dated August 18, 1885.

Application filed September 22, 1884. (Model.)

To all whom it may concern:

Be it known that I, OLIVER E. SEYMOUR, of Cincinnati, Hamilton county, Ohio, have invented an Improvement in Gates, of which the following is a specification.

My invention relates to improvements in the class of farm and park gates which are capable of being unlatched and of being swung to or from either the open or the shut position by a person approaching or leaving the gate on horseback or in a vehicle. The arrangement of my operating devices is such as to enable them to be brought to bear positively upon the gate, and thus compel it to swing in the desired direction even against a strong wind, such as would prevent its operating in the normal manner or by gravity alone.

In the accompanying drawings, Figure 1 is a perspective view of a gate embodying my invention, the gate being shown partly open. Fig. 2 shows the hinge end of such gate in its closed condition. Fig. 3 shows the same in a partly-open condition.

A is a firmly-planted post from which project two horizontal eyes, B B', within which is pivoted a vertical shaft, C, that, just above the lower pivot-eye, B, occupies an eye, D, near the bottom of the gate proper, E. Said eye D for this purpose constitutes a projection from the hinge-stile F of the gate proper.

The construction of gate proper, E, is such that the side of the hinge-stile F which is nearest the ground-post A and the shaft C inclines away or out of parallelism with said post and shaft when the gate is in its normal condition. The hinge-stile F is surmounted by a vertical pivot, G, which occupies an eye, h, in an arm, H, that projects horizontally from the shaft C.

In the preferred form of my improvement a T-formed spring, J, attached to the side of the hinge-stile F nearest to the vertical shaft C, presses by one or other of its horns against said shaft in the acts of swinging and tipping the gate. The shaft C carries near its upper end a sheave or pulley, K, a chain or cord, L, fastened to and wrapped partly around which, engages by its respective extremities with levers M M', from which depend rods N, having handles O.

The represented or any suitable spring or gravitating latch, P, is capable of self-engagement with either one of three notched keepers or detents, Q Q' Q'', of which one is attached to each of the three posts R R' R''. The detent Q on the post R holds the gate proper to its closed position, and one or other of the detents holds said gate to one or other open position.

In still conditions of the atmosphere the operation of the device acts to cant the upper rear corner of the gate proper away from the operator, so as to disturb the center of gravity and cause the gate to swing away from the operator in the manner familiar in this class of devices; but should there be, as is often the case, a stiff breeze in the contrary direction, interfering with the automatic swing of the gate, the action of the eye H upon the hinge-stile will drag it into a more and more oblique position, and at last bring its angle into contact with the shaft C, after which the force applied to the lever will act directly in swinging the gate.

The T-spring J facilitates the operation, both because its arm supplies an earlier and more advantageous point of contact, and because its elasticity stores up the force applied, so that the gate can be opened by a more gradual exertion.

The provision of a pulley as the means for imparting additional rotation of the shaft to move the latter forcibly with the gate after the ordinary means shall have moved it their full extent renders such structures of more value. In previous devices of this type the shaft has had a limited movement of about forty-five degrees, or at the most sixty degrees, whereas in my invention the shaft can be rotated sixty degrees to compress the spring or bring the hinge-stile against the shaft, and then to ninety degrees or one hundred degrees by positive force to compel the gate to open wide. Such positive movement to open the gate cannot be obtained in previous structures of this type, where the positive force is wholly expended in the mere release of the gate-latch, leaving the gate to open by gravity. It will be seen, therefore, that a pulley combined with the shaft of such a structure, instead of a swing-arm, has a new and useful

function not possessed by previous devices of this type.

I have preferred to operate on the cords or chains through the intervention of levers, as shown, because of the greater purchase thereby afforded for the positive action which is occasionally necessary, instead of the more common device in which the operator grasps the cord itself; but I do not desire to limit myself to the use of such levers or of any special means of operating the cords.

I am aware that it is old to secure a gate to a shaft having a pulley and cords by which it is rotated to open and close the gate; also, that it is old to secure a gate to a shaft by means of an arm by which it is tilted to incline it in the direction in which it is desired to move the gate, said shaft having another arm by which the shaft is turned. In my construction I employ both a tilting-arm and a pulley combined.

I claim as new and of my invention—

1. The combination of a ground-post, a vertical shaft supported thereon and having near its upper end an arm projecting therefrom and a pulley secured thereto, the gate proper having a hinge-stile provided with an eye embracing the lower part of said shaft, a pivot-pin surmounting said hinge-stile and turning in said arm, and operating cords or chains wrapped around said pulley, to cause the release of said gate and force the latter to another position by dragging said hinge-stile of said gate proper into close contact with said shaft and holding it to the latter, as explained.

2. The improved swinging gate, comprising a ground-post, A, eyes B and B', secured

thereto, vertical shaft C, having near its upper end an arm, H, and occupying the eyes on the post, the gate proper, E, whose hinge-stile F is provided with an eye, D, embracing the lower part of shaft C, and is surmounted by a pivot, G, which turns in the arm H, a pulley, K, near the top of said shaft C, and operating cords or chains L L', attached to said pulley, the whole being combined and operating substantially as set forth.

3. The combination, in a swinging or automatic gate, of the post A, the eyes B B', projecting therefrom, the vertical shaft C, having the arm H h, and occupying the said eyes B B', the gate proper, E, whose hinge-stile has an eye, D, which embraces said shaft, and a pivot, G, turning in said arm H h, a pulley, K, secured to the shaft C above the arm H h, levers M and M', hinged to the post, and connections L and L', wrapped partly around and secured to the pulley and connecting it with said levers, substantially as set forth.

4. In a swinging gate, the combination of ground-post A, having the eyes B B', the vertical shaft C, having perforated arm H h for the upper gate-pintle, G, occupying the eyes B B', and an eye, D, on the gate proper and having a pulley, K, for the operating cords or chains L L', there being attached to said gate proper a T-formed spring, J, substantially as and for the purposes set forth.

In testimony of which invention I hereunto set my hand.

OLIVER E. SEYMOUR.

Attest:

GEO. H. KNIGHT,
CHAS. E. PRIOR.