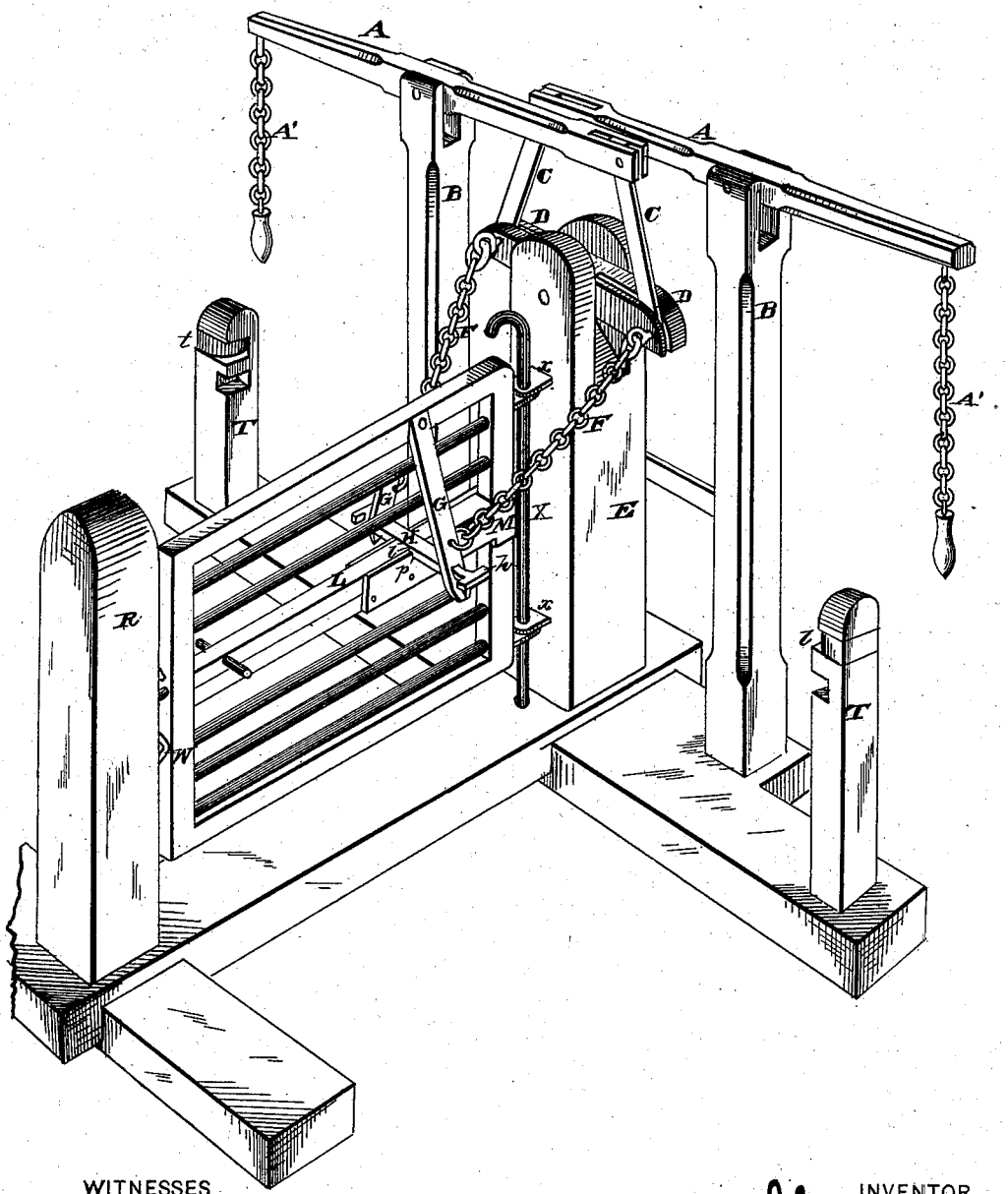
2 Sheets—Sheet 1.

# A. LEE.

## Gate.

No. 205,107. Patented June 18, 1878.

Fig. 1.




WITNESSES

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INVENTOR

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2 Sheets—Sheet 2.

# A. LEE.

## Gate.

No. 205,107. Patented June 18, 1878.

Fig. 2.

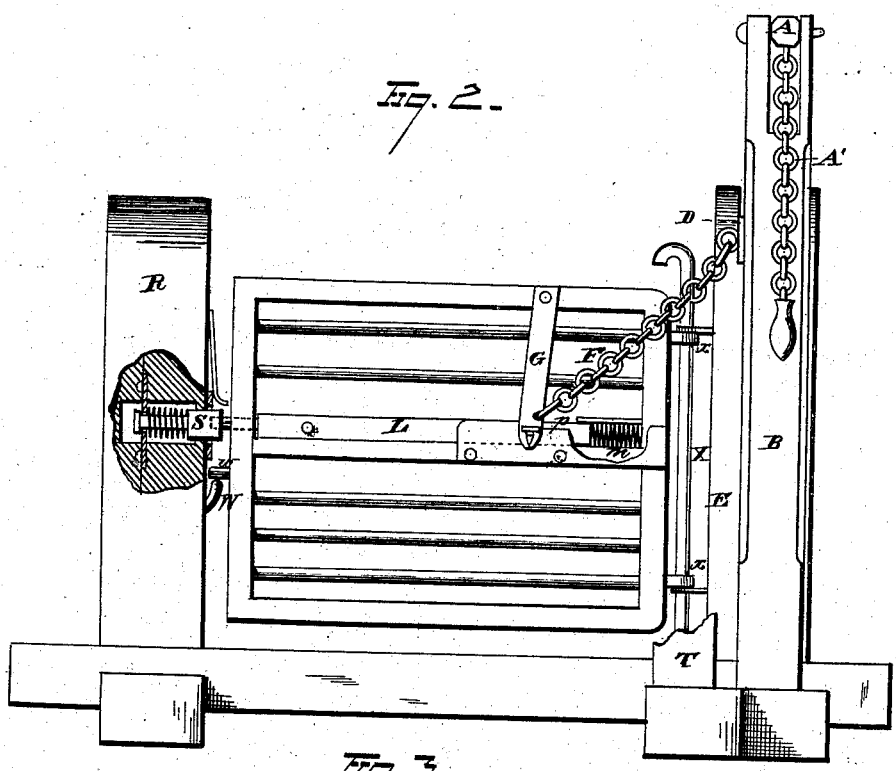
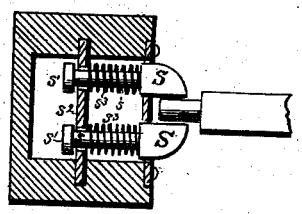



Fig. 3.

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# UNITED STATES PATENT OFFICE.

ALBRO LEE, OF MASSILLON, OHIO.

## IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **205,107**, dated June 18, 1878; application filed March 12, 1878.

*To all whom it may concern:*

Be it known that I, ALBRO LEE, of Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in carriage-way gates, and consists in the following construction:

The two actuating-levers, pivoted one on each side of the gateway, and provided with suitable chains or other depending means for operating the same, connect by respective links to a pivotal cross-head, which latter works in a slotted formation made in the upper body of the gate-supporting post. To the ends of this pivotal cross-head chains or other flexible connections are secured, and intermediately engage the same, respectively, with two vertically-inclined levers, which latter are pivoted at their upper extremities to each side of the gate, and whose lower ends are slotted and engage with the headed extremities of a cross-bar, which operates the latch-bar. This cross-bar is seated in a transverse recess made in the latch-bar, so as to allow the upper surface of the cross-bar to be flush with that of the latch-bar, and is secured therein by a pin. The latch-bar extends rearward nearly the length of the gate, and is urged forward by spring-pressure to engage with a two-part spring-catch, which latter is formed in the gate-post, each of said parts of the catch being adapted to operate in and out from its receiving-socket independently of the other part. The latch-bar is adapted to have movement in a longitudinal line, and is operated horizontally, so that by the action of the vertically-inclined levers it is drawn in line with itself, free from engagement with the locking-catch. Secured to the rear body of the gate is a casing about the latch-bar, which incloses the same and retains it in its proper position on the gate, especially as it is being operated to disengage the latch from the front gate-post, and also from the two side posts, with which the latch connects when the gate is swung open on either side of the carriage-way.

Referring to the drawings, Figure 1 is a view, in perspective, of a gate embodying my invention. Fig. 2 is a view, part in side elevation and part in section, of the same. Fig. 3 is a detail view of the two-part catch.

The two actuating-levers A, one on each side of the gateway, are suitably pivoted in slotted standards B, and connect by links C, respectively, with the extremities of the pivotal cross-head D. This latter part works in a slot formed in the upper end of the rear or gate-supporting post E, and is provided with chain or other flexible connections F, which engage, respectively, with the two levers G. These levers are pivoted at their upper extremities to each respective side of the gate, at a vertically-angular inclination thereto, and their lower slotted ends engage with the headed extremities *h* of the cross-bar H. A transverse recess, *l*, in the latch-bar L receives this cross-bar, so as to make the upper surfaces of the two flush with each other; and in this recess, formed with rectangular sides, the cross-bar is secured by a pin or other suitable device. The latch-bar is provided with a spring, *m*, interposed between its rear end and the rear upright of the gate, which spring urges the latch forward or outward therefrom.

It will be observed that the latch-bar has a movement in line with itself, and that it is operated in a horizontal plane, so that as it is acted upon by the levers G it is longitudinally withdrawn from the locking-catch.

A casing, M, is formed about the rear longitudinal body of the latch-bar, which is recessed on both sides, as shown at *p*, so as to permit of the movement of the cross-bar H as the latter draws the latch-bar rearward.

The locking-catch, secured in the front gate-post R, consists of the two parts S, each of which is outwardly spring-pressed, and adapted to be operated independently of the other. These parts are respectively provided with the stems *s*, which extend right-angularly from their rear sides, and have headed extremities $s^1$, the inner faces of which latter have free bearing against the vertical plate $s^2$. The spiral springs $s^3$ are placed about the stems of the catch, between each part S and the

plate $s^2$, and provide spring-pressure bearing for the same.

As the stems of the two-part catch work longitudinally in horizontal slots formed in the vertical plate $s^2$, the catch is held in proper position, and the headed extremities $s^1$ prevent the withdrawal of the catch. The two chains A′, or other suitable depending connections from the free end of each of the actuating-levers, being of sufficient length to be reached by a person sitting in the carriage or vehicle, serve to operate the foregoing-described apparatus; and by means of the same the gate is unlatched, swung open, and locked in open position by means of the spring-pressed latch engaging with the sockets *t* of the side posts T. After passage through the gateway, by operating the lever on that side thereof the latch is withdrawn from engagement with the socket of said side post, and the gate is swung to, and latched in its closed position.

The two-part spring-catch serves to allow the latch of the gate thus swinging to its closed position to force backward that part of the catch which it strikes on the outer beveled side thereof, and yet arrests the gate by means of the latch striking the inner plane side of the other part of the double catch.

To keep the gate from sagging, I provide the double-inclined support W, secured to the front gate-post, and upon which the pin *w* of the gate has bearing. The gate is preferably hung upon the eye-hinges *x*, connected together by rod X; and it will be understood that the frame-work of the gate may be of any desired character, the same being either metallic or wood, and made in any suitable manner.

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

1. The combination, with the levers, whose upper extremities are pivoted to opposite sides of the swinging gate, and which depend therefrom in diagonal vertical inclination, of the cross-bar connecting their lower extremities and the spring-pressed latch-bar, which latter is adapted to have longitudinal movement in a horizontal line, substantially as set forth.

2. The combination, with the levers, whose upper extremities are pivoted to the gate, and the connecting cross-bar, of the latch-bar, which is adapted to be operated horizontally in line with itself, substantially as set forth.

3. The combination, with the gate-pivoted levers formed with slotted lower extremities, of the cross-bar which connects the two, and is seated in a recess of the latch-bar, said cross-bar made with headed extremities, which engage with said slotted extremities of the pivoted levers, substantially as set forth.

4. The combination, with the levers, pivoted in diagonal vertical inclination to the gate, and the cross-bar which connects their lower extremities, of the spring-pressed latch-bar, which has movement in a horizontal line, and is adapted to be longitudinally operated by said levers and cross-bar, substantially as set forth.

5. In mechanism for operating a swinging gate, the combination, with the actuating-levers and connecting-links, of the cross-head, which is pivoted within a recess formed in the top of the gate-supporting post, and is adapted to have tilting movement in a vertical plane, substantially as set forth.

6. The combination, with the actuating-levers, connecting-links, and pivotal cross-head, which has vertical movement in a recess formed in the gate-supporting post, of the levers which are pivoted to the gate, and the chains or other flexible connections which engage them to said pivotal cross-head, substantially as set forth.

7. The combination, with the actuating-levers, connecting-links, and cross-head, pivoted to the gate-supporting post, so as to have tilting movement in a vertical plane, of the chains or other connections engaging with the levers which are pivoted to the gate, together with said lever, the cross-bar connecting their lower extremities, and the spring-pressed latch-bar adapted to have a longitudinal movement, substantially as set forth.

8. The combination, with the gate-latch, of the catch made in two independent parts, each of said parts being provided with a rear horizontal stem, and a spiral spring placed about the latter, said spring having respective end bearing against the catch and the vertical plate, which latter provides free bearing for the headed extremity of said stem, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of March, 1878.

ALBRO LEE.

Witnesses:
THOMAS BLACKBURN,
J. DAVENPORT.