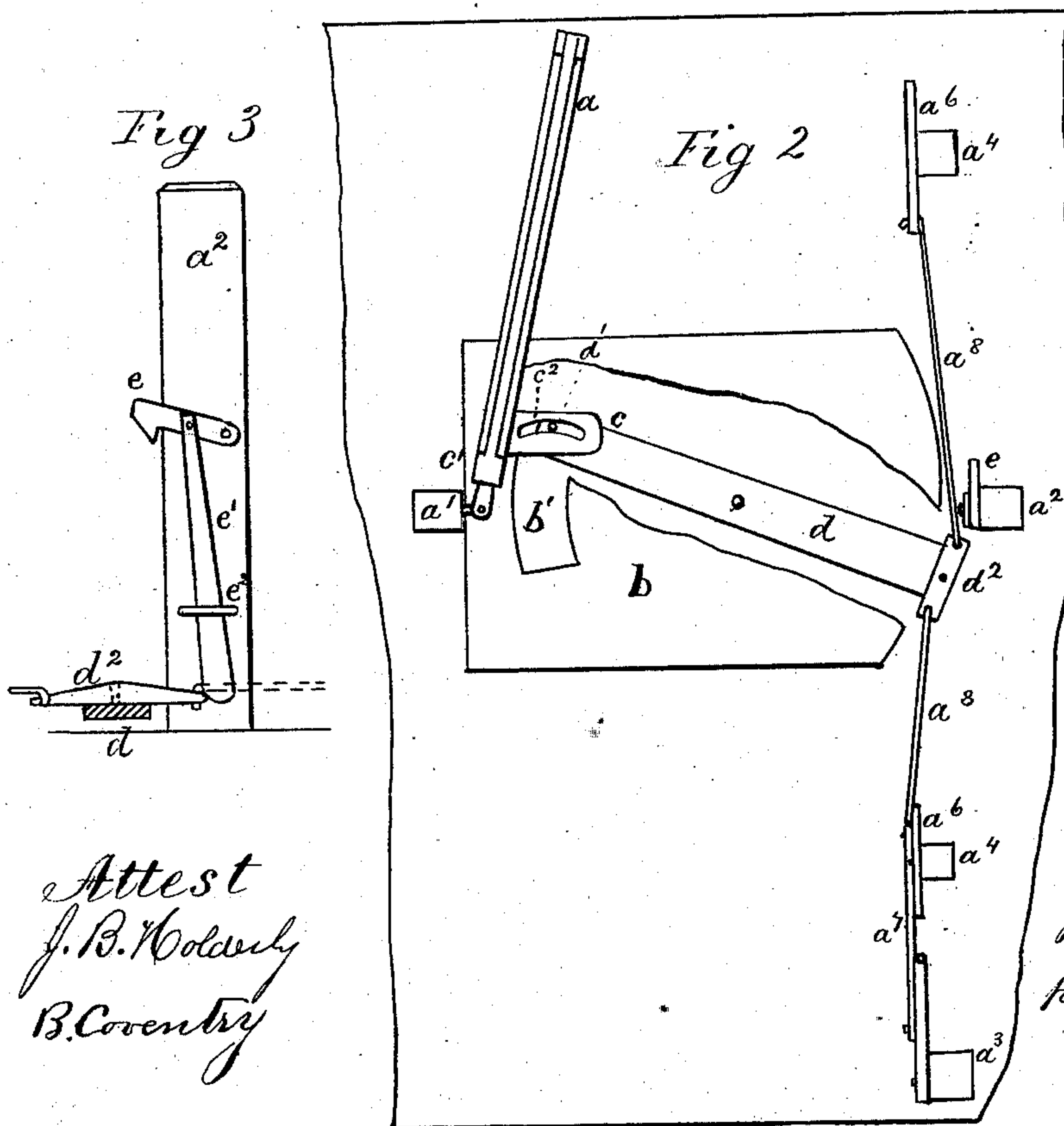
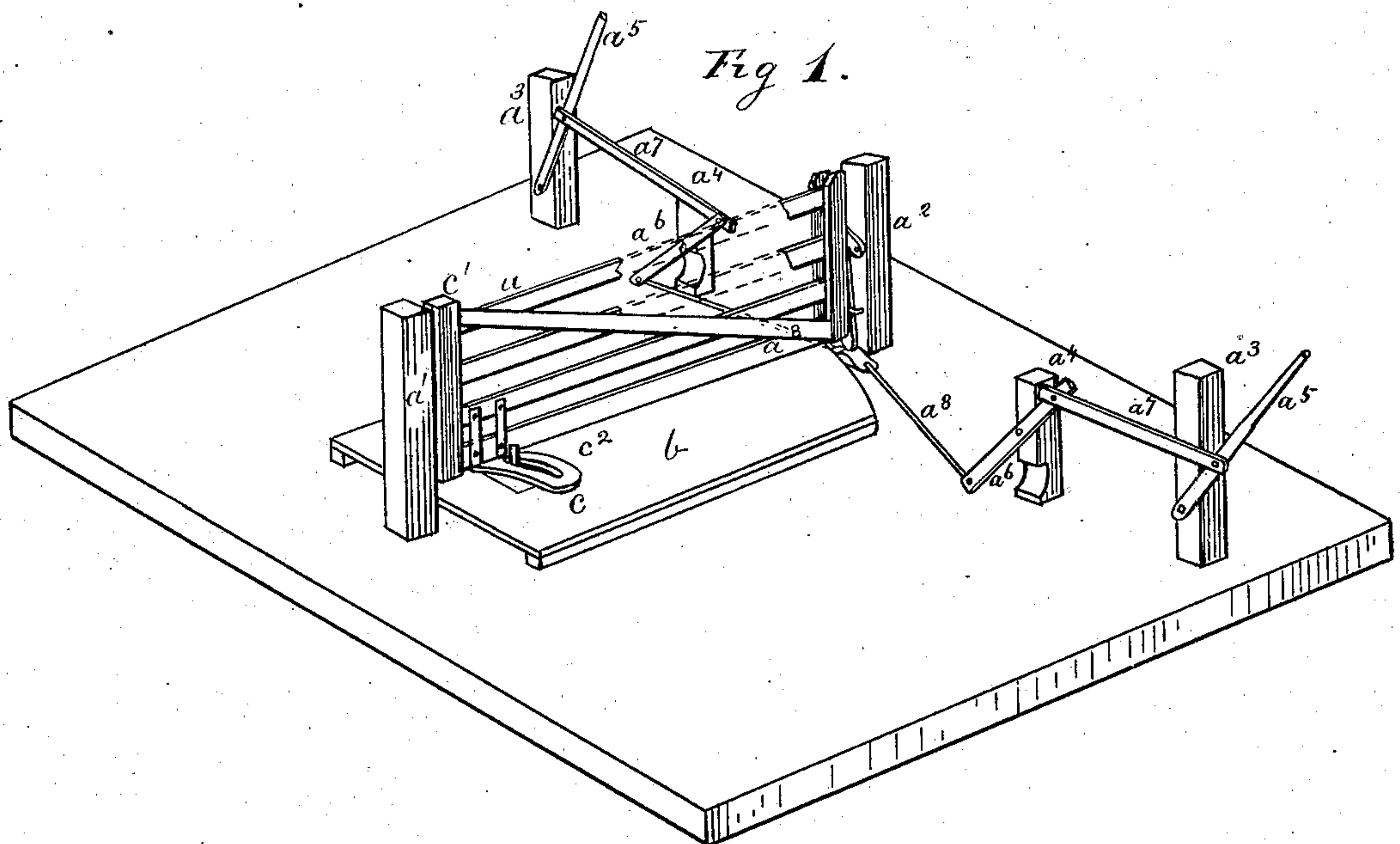


H. HAMMOND.  
Automatic-Gate.

No. 164,831.

Patented June 22, 1875.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN AUTOMATIC GATES.

Specification forming part of Letters Patent No. **164,831**, dated June 22, 1875; application filed April 30, 1875.

*To all whom it may concern:*

Be it known that I, HUGH HAMMOND, of Smithfield, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Farm-Gates; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in automatic farm-gates, which are constructed with capability of being opened by the person approaching them upon either side, and again closed behind him after he has passed through, without the necessity of his alighting from his horse or vehicle. It consists in a simple system of levers, a swinging bar or lever, a lifting-block, and a fixed arm, secured to the under board of the gate, all constructed so that they can be arranged and connected with any farm-gate of ordinary construction.

In the drawings, Figure 1 is a perspective of my gate, and Figs. 2 and 3 are detail views thereof.

$a$  is the gate;  $a^1$ , the post on which it swings, and  $a^2$  the post against which it closes.  $a^3$   $a^4$  are two sets of posts set on the same side of the carriage-way, and on both sides of and in line or nearly in line with the post  $a^2$ ; and to them are attached the operating-levers  $a^5$   $a^6$  and connecting-rods  $a^7$   $a^8$ , by which the gate is opened or closed.  $b$  is a box or trough placed under the gate. It is placed against the post  $a^1$ , and extends nearly to the post  $a^2$ , a small space being left, wherein moves the lifting-block hereinafter described. Its end next the post  $a^2$  is rounded or made convex, so as to permit the free movement of said block. It may be set in the ground flush with the surface of the road-bed, or it may be placed on top of the ground, and the roadway filled in on both sides thereof to make a gradual rise for the wheels of the vehicles. It is provided with the cross curved slot or opening  $b'$  near the end next the post  $a^1$ , and under the rear upright framing-piece of the gate. It forms a protection for and is of sufficient

size to permit of the free movement within it of the rocking bar, hereinafter described.  $c$  is an arm attached to the under side of the lower board of the gate, and so as to be over the opening  $b'$  when the gate is closed. It has the curved or cam-shaped slot  $c^2$  concave toward the rear of the gate, and is secured to the gate by any suitable means.  $d$  is the swinging bar or lever placed in the box  $b$ . It is pivoted at or near its center to the box, and on or near a line drawn from post  $a^1$  to post  $a^2$ . It reaches from the opening  $b'$  to, but does not touch, the post  $a^2$ . It has at its rear end the vertical pin  $d^1$ , which passes up through the opening  $b'$  and into the slot  $c^2$  in the arm  $c$ . It is provided at its front end with the lifting-block  $d^2$ , having its upper side beveled or rounded off each way from the center toward the ends, so as to form inclines, by which the latch-weight is raised, as hereinafter explained. To the ends of the block  $d^2$  are attached the rods  $a^8$ . Instead of using a distinct block,  $d^2$ , the end of the bar  $d$  may be made wider and thicker, so as to admit of suitable construction, for same purpose as the block is used.  $e$  is the catch for holding the latch. It is pivoted to the post  $a^2$ , and provided with the weight  $e^1$ , which extends downward to the block  $d^2$ . The weight is held to the post by the staple  $e^2$ , through which it has free movement. The gate is arranged to open in one direction only.

In approaching the gate when closed the lever  $a^5$  is moved in proper direction, which, acting on the other lever,  $a^6$ , and connecting-rods, causes the block  $d^2$  to pass under the end of the weight  $e^1$ , and thus raise the catch  $e$  and release the latch. At the same time the bar or lever  $d$  turns on its pivot and, the pin  $d^1$  acting in the slot  $c^2$ , throws the gate open. By a reverse movement of the lever  $a^5$  the gate will be closed. The weight  $e^1$ , in closing the gate, is raised by the block  $d^2$ , so that the latch will pass more readily under the catch  $e$ . It also holds the catch firmly on the latch, and thereby prevents the gate from being pushed open by animals.

It will be readily seen that my devices may be attached to the old or ordinary gates which swing on hinges.

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

1. The combination, with the gate *a* and the levers *a*<sup>5</sup> *a*<sup>6</sup>, and their connecting-rods, of the arm *c*, provided with the slot *c*<sup>2</sup>, and the swinging arm or lever *d*, provided with pin *d*<sup>1</sup>, substantially as and for the purpose specified.

2. The combination, with the catch *e* and the levers *a*<sup>5</sup> *a*<sup>6</sup>, and their connecting-rods, of

the bar *d*, provided with the block *d*<sup>2</sup>, and the weight *e*<sup>1</sup>, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HUGH HAMMOND.

Witnesses:

CHARLES MATHER,  
E. MCKINNEY.