

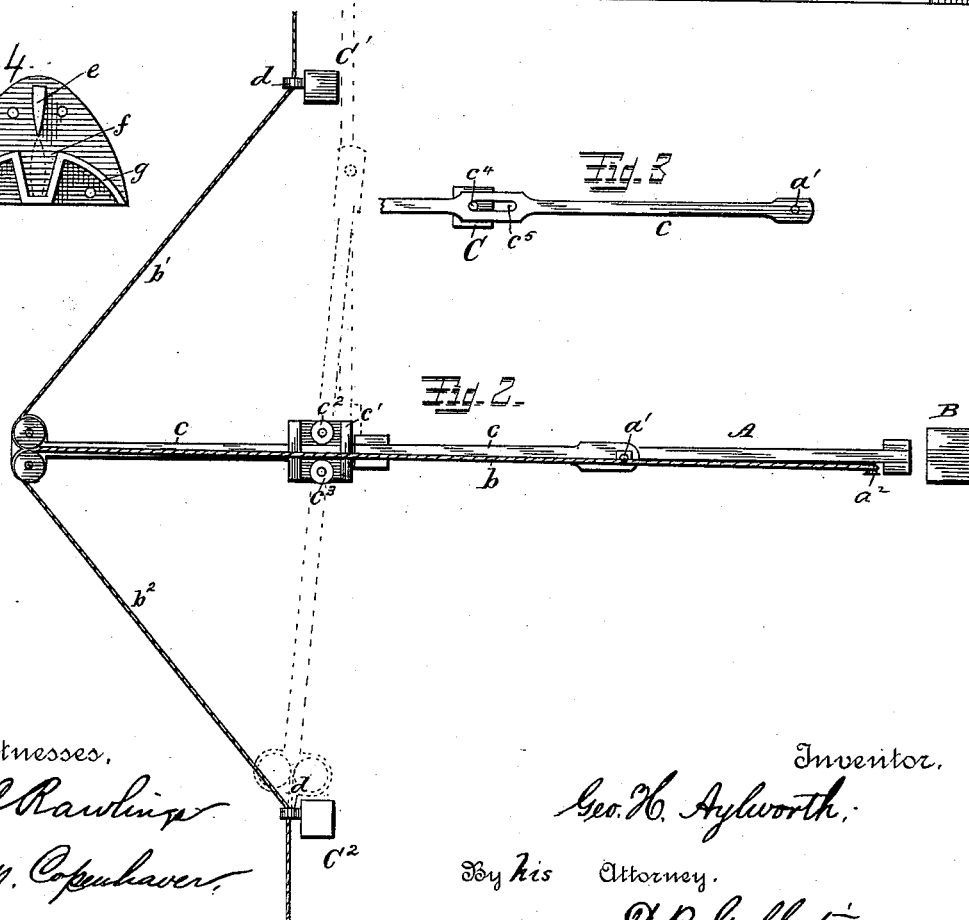
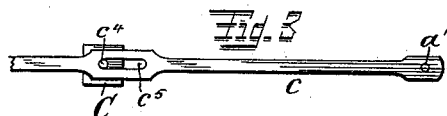
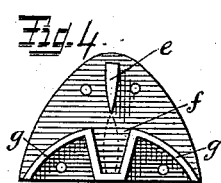
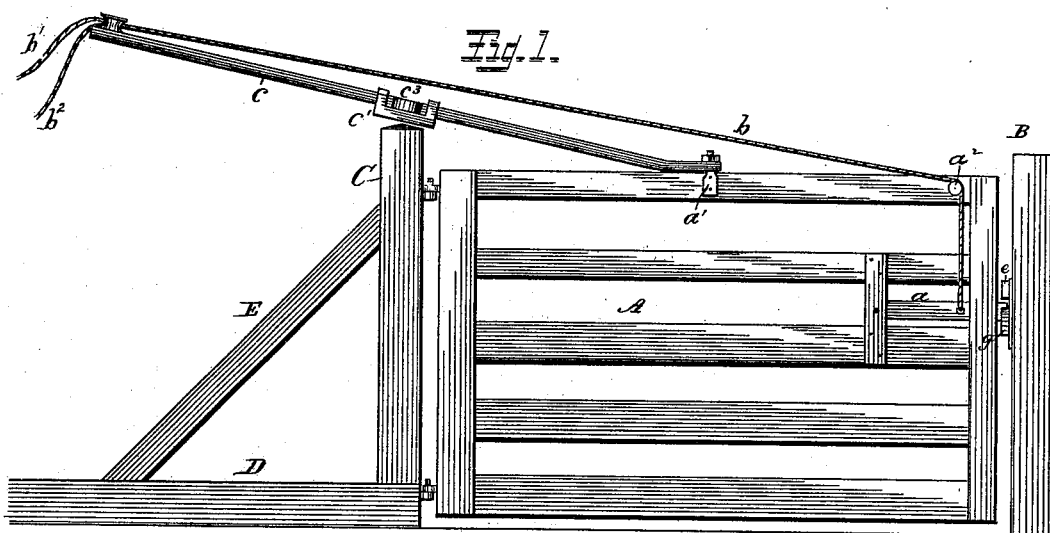
(No Model.)

G. H. AYLWORTH

GATE.

No. 384,552.

Patented June 12, 1888.



Witnesses,

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UNITED STATES PATENT OFFICE.

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GATE.

SPECIFICATION forming part of Letters Patent No. 384,552, dated June 12, 1888.

Application filed March 30, 1888. Serial No. 268,970. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. AYLWORTH, a citizen of the United States, residing at Brighton, in the county of Macoupin and State of Illinois, 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 appertains to make and use the same.

My invention relates more especially to the means for opening and closing swinging gates, and has for its object to enable such gates to be easily and conveniently opened and closed by persons on horseback or in vehicles without the trouble of dismounting.

To this end the invention consists, essentially, of a lever for opening and closing the gate, fulcrumed, as hereinafter described, and a cord, rope, or chain attached to the latch and so disposed with relation to the lever that a pull upon the cord will first raise the latch to unlatch the gate when closed, and will then turn the lever to swing the gate.

In the accompanying drawings, which illustrate my invention and form a part of this specification, Figure 1 represents a side elevation, and Fig. 2 a plan view, of a gate with my invention applied thereto. Fig. 3 represents a modification in the manner of attaching the operating-lever, and Fig. 4 is a face view of the catch.

A designates the gate, which is hinged to the post C so as to swing in either direction. D is a base-timber, upon which the post C is set, and E is a brace or stay between the base-timber and post, the parts C D E forming a portable frame, which is adapted to be set up at any desirable point and secured in place by staking to the ground.

c designates a lever, which is fulcrumed on the top of post C, and is connected at its forward end with a vertical stud or pin, a' , which is attached to and projects above the top bar of the gate. The other end of the lever projects back far enough beyond the post to give the necessary leverage for opening and closing the gate.

b designates a cord, rope, or chain, one end of which is attached to the latch a, passing thence over a guide pin or pulley, a^2 , at the

top of the gate and back through a suitable guide or keeper at the free end of the lever c. Before it reaches the said guide or keeper the cord b is divided into two strands or branches, b' b^2 , which, after passing through the guide or keeper, are led off in opposite directions through guides d d' on posts or supports C' C'', the latter standing on opposite sides of the posts C, and at a distance therefrom equal at least to the length of the projecting end of the lever c, so that the latter may be drawn around far enough to fully open the gate. When set, as indicated in Fig. 2, other guides should be provided to guide and support the cords b' b^2 at points beyond the reach of the gate when open, so that the operator may stand beyond the end of the same and be out of the way in closing it.

It is not absolutely necessary that the cords pass through intermediate guides between the lever c and the points at which they are grasped by the operator, such guides serving merely as supports to prevent sagging.

The operation is as follows: Suppose the person desiring to open the gate to approach from the right-hand side—that upon which the post C' stands. He grasps the cord b^2 and pulls upon the same, the first effect of which is to raise the latch a out of its keeper or catch on the post B and unlatch the gate. As soon as the latch is raised to the limit of its movement, the continued pull upon the cord draws the lever c around, whereby the gate is caused to swing in the opposite direction, as indicated by broken lines in Fig. 2. After passing through, the operator pulls upon the cord b' , whereby the lever is turned back and the gate is swung back to the closed position. The fulcrum of the lever c and the hinges of the gate being in different vertical planes, it follows that as the gate swings in either direction from its closed position, the stud or pin a' approaches the fulcrum of the lever c, and again recedes as the gate closes. In order to compensate for this movement, the lever c is so mounted on the post C as to be capable of moving back and forth as the gate is swung to open or close it. For this purpose I provide a plate, c' , which is pivoted on the top of post C, and has on its upper face two anti-friction wheels or rollers, c^2 c^3 , a sufficient distance

apart to receive between them the lever *c*. These wheels form the fulera upon which the lever turns when opening or closing the gate, and at the same time enable the lever to reciprocate freely without wear. A simpler arrangement is shown in Fig. 3, in which the lever *c* is fulcrumed on a pin, *c'*, projecting from the top of post C. As represented in Fig. 3, the lever has an elongated opening, *c''*, which receives the pin *c'* and permits the necessary movement of the lever.

To insure the latching of the gate when closed, and to prevent its swinging past the central position, I provide a catch for the latch, constructed, as represented in Fig. 5, with a projection, *e*, vertically above the notch *f*, into which the latch drops to latch the gate. When the gate is closed from either direction, the latch rides up on the curved guide-flange *g*, from which it drops into the notch *f*, to latch the gate. The projection *e* prevents the latch from passing over the notch and arrests the gate at the proper point to permit the latch to drop into engagement with the catch. The lower edge of the projection *e* is sharpened, the sides of the notch *f* are inclined, and the latch is sharpened or beveled at both edges, as indicated in broken lines, Fig. 5, to enable the latch to drop into the notch and to rise therefrom past the projection *e*. This prevents such widening of the notch as would permit unnecessary and objectionable movement of the gate when latched.

If the latch be made heavy enough or be held down by a spring, the initial pull upon the cord will swing the gate till the latch strikes the side of the notch *f*. Being then unable to swing farther, the latch will be raised out of the notch on the farther side of the projection *e*, and the gate will then be free to swing open.

While I have described only the post C as portable, it is to be understood that both posts may be either portable or set in the ground, as may be preferred.

Having thus described my invention, I claim as new—

1. The combination, with a hinged or swinging gate, of a lever fulcrumed on the top of the post to which the gate is hinged and capable of moving back and forth on its fulcrum, one end of said lever being connected to the top of the gate forward of the hinges and the other end projecting back beyond the said post, substantially as shown and described.

2. The combination, with a hinged or swinging gate, of a lever fulcrumed on the top of the post to which the gate is hinged and capable of moving back and forth on its fulcrum, one end of said lever being connected to the gate forward of the hinges and the other end projecting back beyond the post, and a cord attached to the latch and passing thence through a guide or keeper at the free end of the lever, substantially as shown and described.

3. The combination, with a hinged or swinging gate, of a plate, *c'*, pivoted on the top of the post to which the gate is hinged and carrying guide-rollers *c''*, *c'''*, and a lever passing between said guide-rollers and connected at one of its ends to the top of the gate forward of the hinges and the other end projecting back beyond the said post, the said guide-rollers forming fulera for said lever, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. AYLWORTH.

Witnesses:

W. H. GOODELL,
G. D. AYLWORTH.