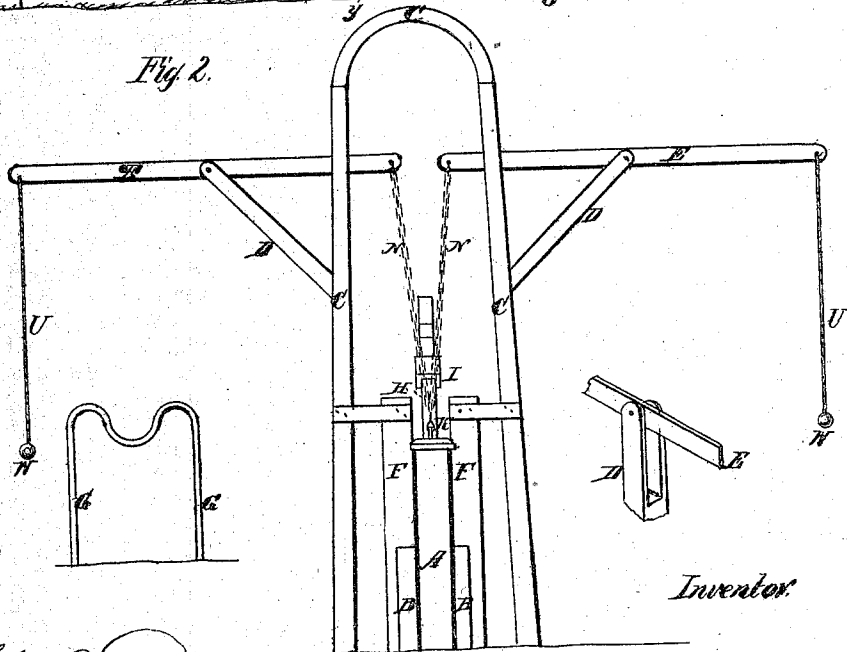
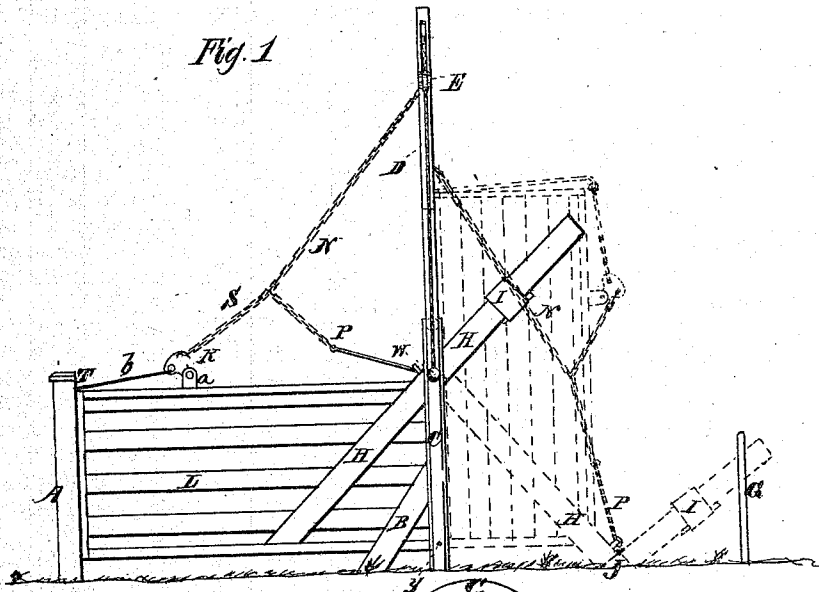


G. HUNGERFORD.

Improvement in Gates.

No. 129,733.

Patented July 23, 1872.



Witnesses.

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IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. 129,733, dated July 23, 1872.

To all whom it may concern:

Be it known that I, GEORGE HUNGERFORD, of Union, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Gates; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to that class of gates which are thrown upon their ends to be opened; and it consists, first, in the devices for balancing the gate; and, second, in the devices for operating the gate to open and close the same, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a side view, showing the gate closed, with dotted lines representing the same open; and Fig. 2 is an end view of the same.

L represents a gate constructed in any suitable manner, and pivoted at its inner lower corner between two posts, F F, which are braced by inclined braces B B. The gate swings up and down on its pivot *y* between the posts F F. The outer end of the gate is provided with a spring-latch, T, which springs to its place under a cap on the post A when the gate drops to its place in closing, said post A being located on the other side of the road or carriage-way. To the gate L is secured an inclined lever, H, projecting inward and upward from the inner upper corner of the gate. This lever is jointed at J, and the outer hinged part is provided with an adjustable weight, I, which may be moved to any point on the lever, as the weight of the gate may require. Upon each side of the gate, at the inner end, is an upright post, C, to which the post F is connected, as shown in Fig. 2. From each of these posts C, at a suitable height, extends an inclined arm, D, the outer end of which is forked, and in the same is pivoted a lever, E, having at its outer end a cord, U, with weight W hanging down. The inner ends of the levers E E pass through slots in their respective posts C C, and have chains N N attached to them. These two chains or ropes are attached

to another rope or chain, S, one end of which, by a rod, P, connects with the lever H at or immediately below the joint J. The other end of the chain or rope S is attached to an angular plate, K, which is pivoted in the upper end of an iron pin, *a*, fastened in the top bar of the gate. The plate K is, by a rod or wire *b*, connected with the spring-latch T at the outer end of the gate.

This mode of constructing a gate admits of its being easily opened and closed by a person on horseback or in a vehicle without moving from his seat, simply by giving a downward pull on the rope U on either side. If closed, the gate is thrown up with a little momentum, and with the balancing power of the lever H and the weight I the gate rises or turns on its pivot until the outer end of a lever strikes a post, G, located a suitable distance from the inner end of the gate, when, from its own weight, the gate falls fully open, the lever H breaking its joint at J, as shown by the dotted lines in Fig. 1. If the gate is open when the downward pull is made on the rope U the gate is thrown down and closed, the lever H and weight I serving as a balance as soon as required, causing the gate to drop easily to its place.

The wire *b*, connecting the plate K and latch T, should be made of proper length, so as to liberate the latch from its fastening in the post A before the gate is pulled up.

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

1. The arrangement of the slotted posts C C, inclined forked arms D D, and levers E E, the levers pivoted in the arms and their inner ends working in the slotted posts, all substantially as herein set forth.

2. The arrangement of the levers E E, chains or ropes N N and S, and the rod P, this rod being attached to the lever H at or near the joint J, substantially as herein set forth.

3. The combination of the spring-latch T, rod *b*, pivoted plate K, pin *a*, and chain S, all substantially as and for the purposes herein forth.

GEORGE HUNGERFORD.

Witnesses:

G. V. WELLS,
L. R. ELLIOTT.