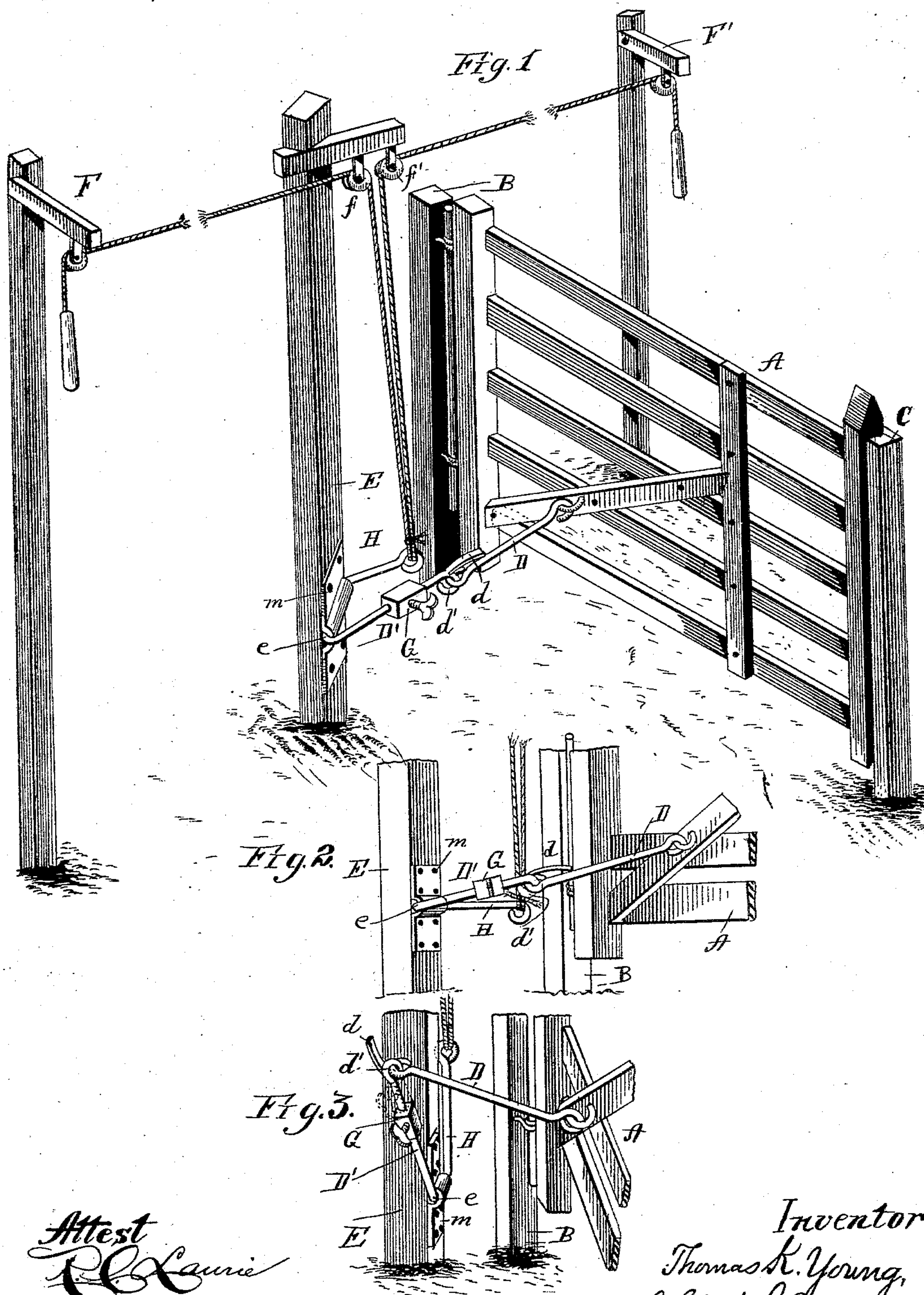


(No Model.)

T. K. YOUNG.  
GATE.

No. 414,472.

Patented Nov. 5, 1889.



Attest  
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# UNITED STATES PATENT OFFICE.

THOMAS KIRTLAND YOUNG, OF WHITE HALL, ILLINOIS.

## GATE.

SPECIFICATION forming part of Letters Patent No. 414,472, dated November 5, 1889.

Application filed August 17, 1887. Serial No. 247,184. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS KIRTLAND YOUNG, a citizen of the United States, residing at White Hall, in the county of Greene and State of Illinois, have invented certain new and useful Improvements in Gates; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The improvement consists in the novel and peculiar construction and arrangement of parts, which will be more fully hereinafter set forth and claimed, and shown in the annexed drawings, in which—

Figure 1 is a perspective view of a gate embodying my invention; Fig. 2, a detail perspective view of my invention; Fig. 3, a detail perspective view showing the gate open.

The gate A, extended across the roadway, is hinged to the post B and closes against the post C. The toggle-joint, composed of the parts D and D', is interposed between the gate and the post or support E, placed to one side of the plane of the gate and about in line with the post B and the posts F and F', located on each side of the post B. The end of one of the parts of the toggle-joint is extended to form a stop, which projects across the joint and overlaps the approximate end of the other part to stiffen said joint and prevent its sagging when the gate is closed. This stop or extension d is an integral portion of said part, and is formed, preferably, by projecting the end of the part D' beyond the loop or eye d', within which the end of the part D is looped. When the gate is closed, the parts D and D' are in a straight line, and are held in this position by the stop d overlapping the joint, as shown. The gate is held closed by the weight G, which is mounted on the shaft D' of the toggle-joint and adjustable thereon to regulate the force necessary to close and open the gate automatically when partially started in either direction. The supplemental arm or lever H is connected at its inner end with the part D', and is arranged at an angle relatively thereto, so that when the arm H is in a vertical line the part D' is at an incline to said

vertical line, and vice versa. The operating-cords, after passing over pulleys on the posts F and F', pass over the pulleys f and f', and thence down to the arm or lever H.

Normally the gate rests against the post C, and the toggle-joint extends in a nearly-horizontal line. A pull on either cord will open the gate, and when the gate is open a pull on either cord will close it. A slow and steady pull will open the gate fully without causing it to stop on a dead-center, because when the lever or arm H is in a vertical line the weight G is to one side of the plane of said arm by reason of the inclination of the part D' relatively thereto. The outer end of the part D' is connected with the inner end of the arm H by the short rod e, which is journaled in the boxing m, fastened to the post E.

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

In a swinging gate, the combination of the gate A, extended between posts B C and hinged to the former, the post E, located adjacent to said post B and to one side thereof, the toggle-joint composed of the parts D D', said part D being hooked at one end to the gate A and at its other end to the hook d' on the part D', said part D' being integral with the short rod e and the supplemental arm H, the latter being arranged at an angle to said part D', as described, the arm d, integral with said part D' and overlapping the part D, as described, the box m, attached to the post E, through which box said rod e passes, the operating-ropes attached at one end to the outer end of the arm H, the pulleys f f', supported by an extended arm on the upper end of post E, over which pulleys said ropes pass, the posts F F', carrying pulleys, over which, also, said ropes pass, and a weight G, adjustably mounted on the part D', whereby the gate is automatically opened and closed when said gate is partially opened or closed, in the manner described, and the degree of force with which said gate is opened and closed regulated as described.

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

THOS. KIRTLAND YOUNG.

Witnesses:

A. F. VEDDER,  
A. GEERY.