

U. L. MOORS.

Farm Gate.

No 85,674.

Patented Jan. 5, 1869.

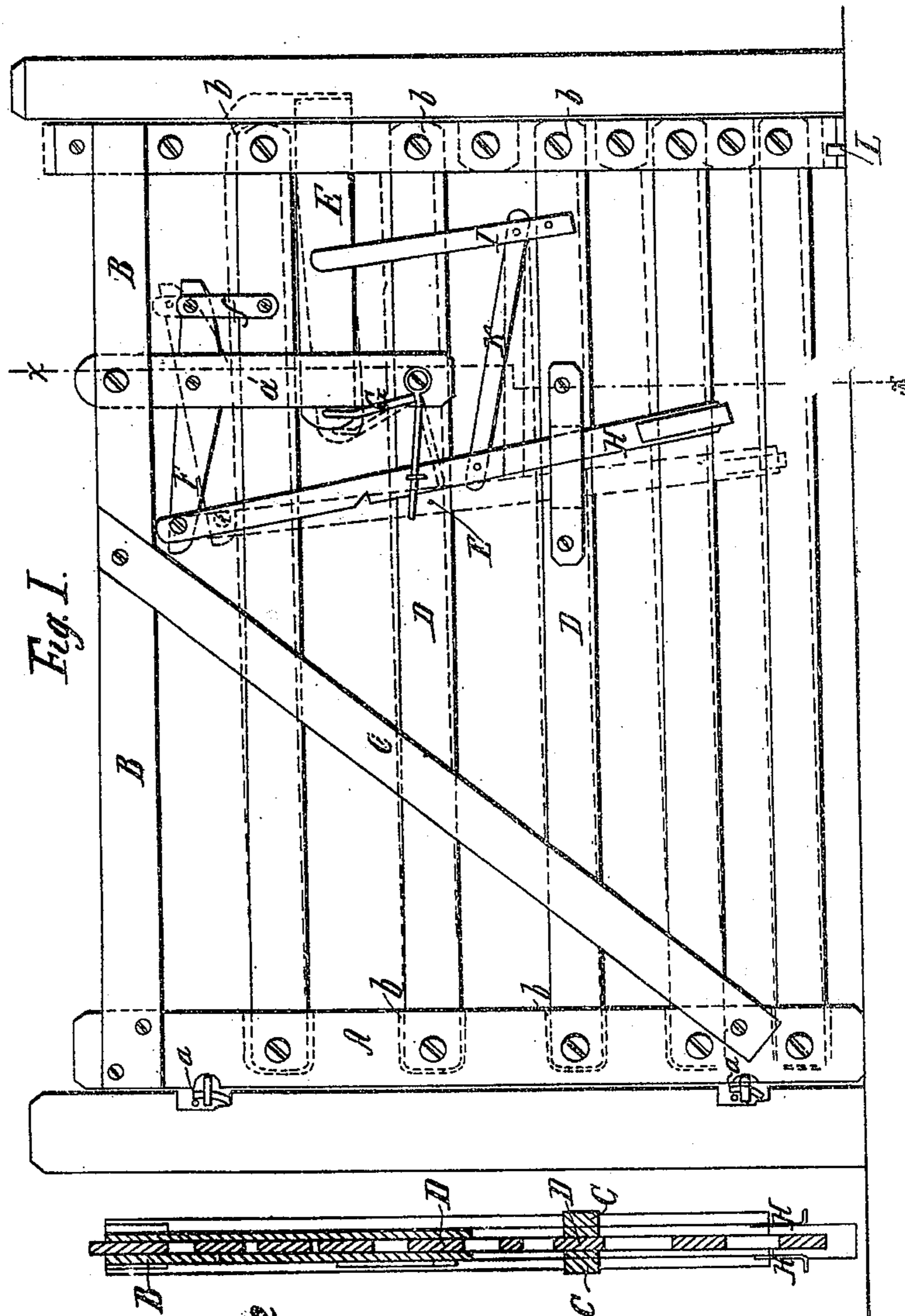


Fig. 1.

Fig. 2.

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# United States Patent Office.

D. L. KOONS, OF TRIMBLE, OHIO.

Letters Patent No. 85,674, dated January 5, 1869.

## IMPROVEMENT IN FARM-GATES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, D. L. KOONS, of Trimble, county of Athens, and State of Ohio, have invented a new and improved Gate; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation.

Figure 2 is a transverse vertical section through line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to swinging gates; and

It consists in so constructing a gate, in combination with a system of levers, that the latch may be withdrawn and the front stile of the gate elevated from its natural position by means of such levers, as will be hereinafter fully described.

A, in the drawings, are the stiles. The rear stile is hinged to the gate-post at *a*. They are slotted vertically, at *b*, to receive the ends of the panels and the latch.

B are parallel beams, which are secured in recesses on the sides of the rear stile, near its top. The upright, A', is carried between them.

C are braces, fitting into diagonal recesses on the sides of the rear stile, and of the beam.

D are the panels, pivoted in the slots *b* of the stiles.

E is the latch, one end of which passes through one of the slots *b* into a socket in the gate-post. The other end is secured to an arm of bell-crank lever G.

F is a lever, pivoted to the upright, A'. A link, *f*, connects it with one of the panels of the gate.

G is a bell-crank lever, also pivoting on the upright, A'. The extremity of its upper arm has a hooked portion, which fits into the latch. The other arm passes across the face of the treadle H, and is secured thereon by means of an eye-bolt.

H are the treadles, pivoted to the long arm of the lever F.

Cap-pieces are fitted to one of the panels, as shown, to secure them in place, and to regulate them in their vibratory motion. Notches are cut in their sides, at a proper height, which embrace pins, located so as to be reached, when the front stile is elevated and the latch withdrawn. By this means the stile and latch are secured when elevated and withdrawn. Foot-pieces, made, in this instance, of sheet-iron, are secured to the lower ends of the treadles.

I is a swinging fulcrum, pivoted to a panel of the gate. It is connected with treadles H by means of rod K.

K is the rod, just referred to.

L are pins, between which the lower end of the front stile of the gate rests.

The operation of my invention is as follows:

The gate being closed, to open it, place the foot on the piece at the lower end of the treadle. A slight downward pressure lowers the long arm of lever F and elevates the short arm. The short arm, being connected with one of the panels by link *f*, carries the panel upward with it. This it is enabled to do, in consequence of all the panels being pivoted at each end to the stiles. The same operation passes the top of the front stile upward, and through the opening in the beams. When the treadle has been lowered until the notch will engage on the pins, secure it thereon, and the gate is ready to swing open.

When the gate is closed, disengage the treadle, and the front stile will fall into its natural position by its own gravity. The latch, being governed by the motion of the head C, regains its socket.

It will be observed that the treadle and levers may be placed higher or lower, as may be desired.

It is evident that a gate of this kind may be held very firm in its closed position, as its front stile is secured in a socket, or between pins, as well as by means of the latch; that it cannot sag, as is usual, and that it can be opened easily during the prevalence of snow.

Having thus described the nature and operation of my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the lever F, treadle-lever H, lever G, and latch E, substantially as shown and described.

2. The arrangement of the swinging fulcrum I, connecting-link K, treadles H, and pins *h*, for the purpose of securing the gate in its elevated position, substantially as shown and described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

D. L. KOONS.

Witnesses:

J. M. JOHNSON,  
A. H. CRIPPEN.