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E. COOK.

GATE.

(Application filed Sept. 14, 1899.)

(No Model.)

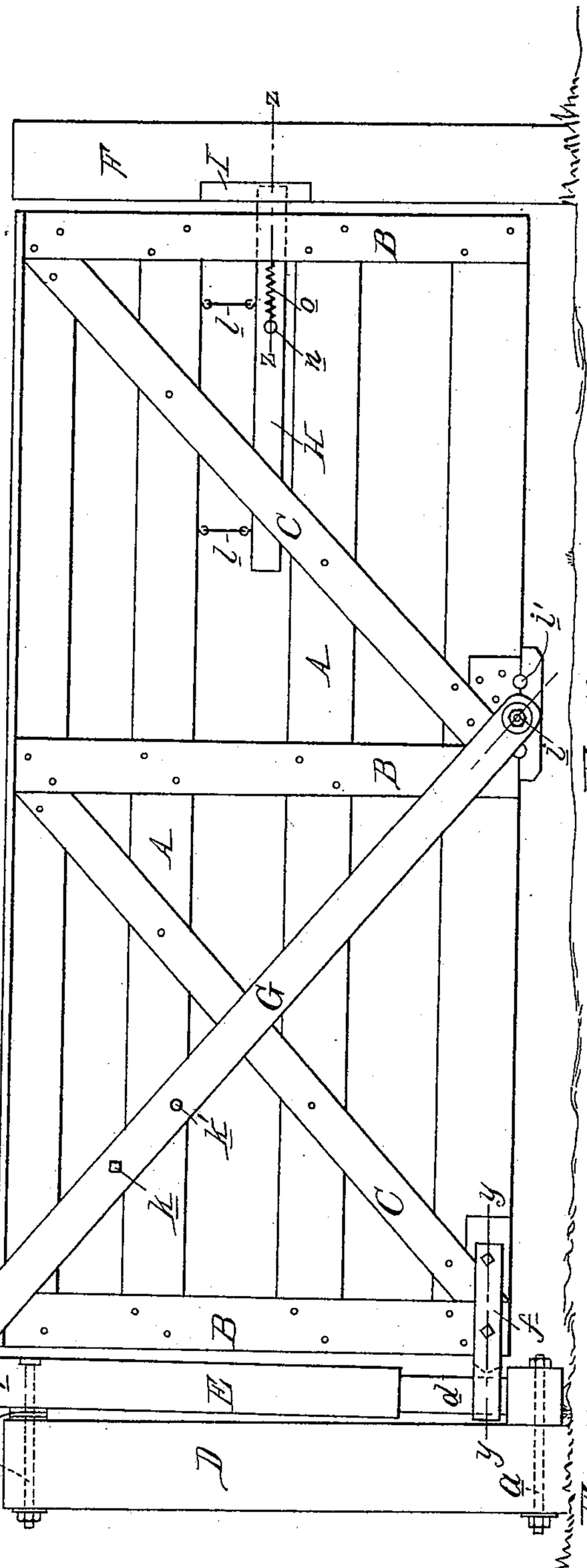

Fig. 1.

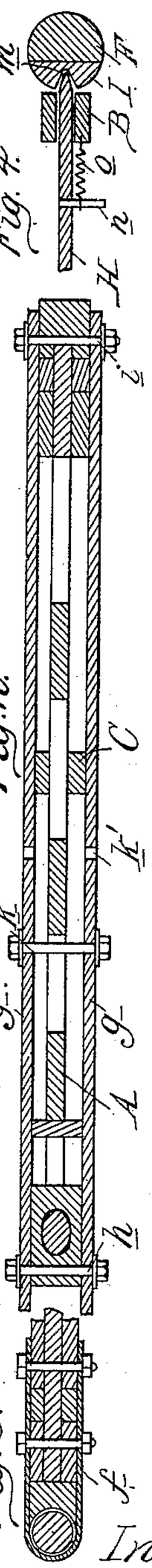

Fig. 2.

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

EMON COOK, OF IMLAY CITY, MICHIGAN.

GATE.

SPECIFICATION forming part of Letters Patent No. 641,272, dated January 16, 1900.

Application filed September 14, 1899. Serial No. 730,521. (No model.)

To all whom it may concern:

Be it known that I, EMON COOK, a citizen of the United States of America, residing at Imlay City, in the county of Lapeer and State of Michigan, have invented certain new and useful Improvements in Gates, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates more specifically to a self-closing farm-gate; and the invention consists in an improved construction involving novel means for hanging the gate whereby it will swing inward or outward, while at the same time the construction permits of various adjustments, such as raising or lowering it, tilting it, or causing it to swing more or less freely, all of which adjustments are obtained by a very simple construction, as more fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is an elevation of my improved gate, showing it in its closed condition. Fig. 2 is a section on line *x x* in Fig. 1. Fig. 3 is a section on line *y y* in Fig. 1. Fig. 4 is a section on line *z z* in Fig. 1.

The gate itself is composed of horizontal rails A, vertical stiles B, secured thereto in pairs on opposite sides at the ends and in the middle, and angle-braces C, all rigidly secured together. Any other suitable construction may be used, however.

The hanging of the gate is accomplished in the following manner: To the usual vertical gate-post D is secured a pintle-post E by means of bolts *a b* passing through the posts D and E, with one or more washers *c* upon the bolt *b* interposed between the two, so as to incline the pintle-post, with its upper end, away from the gate-post in the direction toward the latch-post F. On the lower portion of the pintle-post is formed an extended pintle-bearing *d*, and the upper end, which extends above the gate, terminates in a pintle *e*, upon which is pivoted, by means of a socket formed therein, a top member E′. To the lower inner corner of the gate is secured an eye-strap or other suitable hinge-eye *f*, which loosely engages the pintle-bearing *d*, so that the eye of the hinge is capable of being adjusted vertically upon said bearing and also capable of a slight tilting without binding thereon. To the pivotal top member E′ of the pintle-post is secured the upper end of a stirrup G, which extends diagonally downward and supports the gate at or near its middle, preferably a little forward of its center of gravity. This stirrup is preferably made of two boards *g*, which are pivotally connected at their upper ends to the member E′ by the bolt *h*, and their lower ends are connected in like manner by a bolt *i*, which passes through a bearing *i′*, formed on the lower edge of the gate. For purposes of adjustment a series of bearings, as *i′*, are provided along the lower edge, to any one of which the stirrup may be secured. The gate rests loosely between the boards *g* of the stirrup; but by means of a clamping-bolt *k* the two boards may be clamped together, so as to hold the gate firmly between them.

The gate is provided with a latch-bar H, suspended by hangers *l l*, so as to swing freely and lock the gate automatically by gravity by engaging into the vertical slot *m* of a keeper I, secured in the latch-post F. The latch-bar has a suitable handle *n* and preferably a spring *o* for supplementing the action of gravity in closing the gate.

In practice, the parts being constructed and arranged as shown and described, it will be seen that the gate swings upon the axis of the inclined pivot-post E, and is therefore self-closing whether opened inwardly or outwardly, and the force which tends to close it may be increased or reduced by increasing or reducing the number of washers interposed upon the bolt *b*. As the gate closes the latch-bar automatically engages into the keeper and locks the gate. It will further be seen that by loosening the clamping-bolt *k* the gate can be tilted upon the bolt *i* as a pivot, so as to bring either corner farther away from the ground, as might be often desirable to give room to small stock to pass underneath or for the purpose of increasing or reducing within small limits the force with which the gate closes, as it will be understood that by tilting the gate its center of gravity is displaced horizontally.

A further advantage is that the gate may be adjusted vertically—that is, by detaching the lower end of the stirrup from where it is shown attached in Fig. 1 and attaching it to the other bearing *i′* it is obvious that the

gate will be supported farther away from the ground, as might especially be desirable in winter-time to clear the snow. A number of adjusting-holes *i'* may be provided to adjust the gate to any desired height, and the pintle-bearing *d* is accordingly made to allow the eye-fastener *f* to slide up as far as necessary. In connection with this adjustment I provide adjusting-holes *k'* for the clamping-bolt *k*, so that the clamping-bolt can be shifted into other positions where it will not be required to put holes through the rails.

It will be seen that the pivotal member E' forms a cap upon the pivot-post, and thus protects the pivot, and if properly oiled makes the gate swing very easily, as the weight of the gate is largely suspended from it, while the lower pintle acts only as a side bearing and is loosely embraced by the eye-fastener, which latter may be of any suitable construction to accomplish the end in view.

It is obvious that the gate may also be adjusted vertically by means of washers beneath the cap, such as the washer *r*, and, if desired, iron bars or rods may be substituted for the wooden bars G.

What I claim as my invention is—

1. In a swinging gate, the combination of a gate-supporting post composed of a lower member fixedly connected to the gate-post, and an upper member pivotally supported on said lower member free to turn on its axis, a gate-body having at its inner lower corner a hinge-eye engaging with a pintle-bearing on the fixed member of the pivot-post, a stirrup formed of bars diagonally embracing the body of the gate and having their upper and lower ends pivotally connected to the upper member of the pivot-post and to the gate at a point along its lower edge at or near the middle thereof and means for adjusting its position in the stirrup.

2. In a swinging gate, the combination of the gate-post, a pivot-post composed of a lower member fixedly connected to the gate-post and an upper member pivotally supported on said lower member free to turn on its axis, a gate-body having at its inner lower corner a hinge-eye, a pintle-bearing on the fixed member of the pintle-post with which said hinge-eye engages, and on which it is vertically adjustable and a stirrup diagonally embracing the body of the gate and having its upper end pivotally secured to the upper member of the pintle-post, its lower end being adjustably pivoted to the lower edge of the gate, which is free to tilt thereon.

3. In a self-closing swinging gate, the combination of a vertical gate-post, a pintle-post composed of a fixed lower member secured to the gate-post with its axis inclined thereto and an upper member pivotally mounted on said lower member free to turn, an extended pintle-bearing on the fixed member of the pintle-post, a gate-body having a hinge-eye at its lower inner corner loosely engaging said pintle-bearing, two bars diagonally embracing the gate-body upon opposite sides and having their upper ends pivotally secured to the upper member of the pintle-post above the top of the gate-body, a pivot-pin through the lower ends of said bars, a plurality of bearings on the lower edge of the gate-body with any one of which said pivot-pin may engage to support the gate-body.

4. In a self-closing gate, the combination of the vertical gate-post, the pivot-post having a lower fixed member adjustably secured to the gate-post with its axis inclined thereto, a pintle-bearing at the foot of said pivot-post, a pintle formed at the upper end of said pintle-post, an upper member or cap mounted upon said pintle, a gate-body having a hinge-eye secured to its lower inner corner engaging with the pintle-bearing on the pivot-post, a stirrup composed of two bars diagonally embracing the gate-body, a pivot-bolt pivotally securing the upper ends of said bars to the cap of the pivot-post, a pivot-bolt passing through the lower ends of said bars, a series of bearings for said pivot-bolt on the lower edge of the gate-body at or near its middle, a clamping-bolt through the bars adjustably securing the gate-body in position in the stirrup, a self-closing latch in the gate-body, and a keeper for said latch in the gate-post.

5. In a swinging gate, the combination with the gate-body and gate-post supporting it, of a pintle-post E, having its lower end in contact with the gate-post and with its upper end inclined away therefrom inwardly, the bolts *a b* passing through said pintle and gate-posts and adjustably securing the former to the gate-post, and the washers *c* upon the bolt *b* interposed between the pintle and gate-post, said pintle-post formed with a pintle-bearing *d* near its foot and a pintle *e* at its upper end provided with an upper extension or cap pivotally mounted thereon and constituting the hinge member at the upper inner corner of the gate-body.

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

his
EMON × COOK.
mark

Witnesses:
OTTO F. BARTHEL,
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