

(No Model.)

M. E. MYERS.
GATE.

No. 501,526.

Patented July 18, 1893.

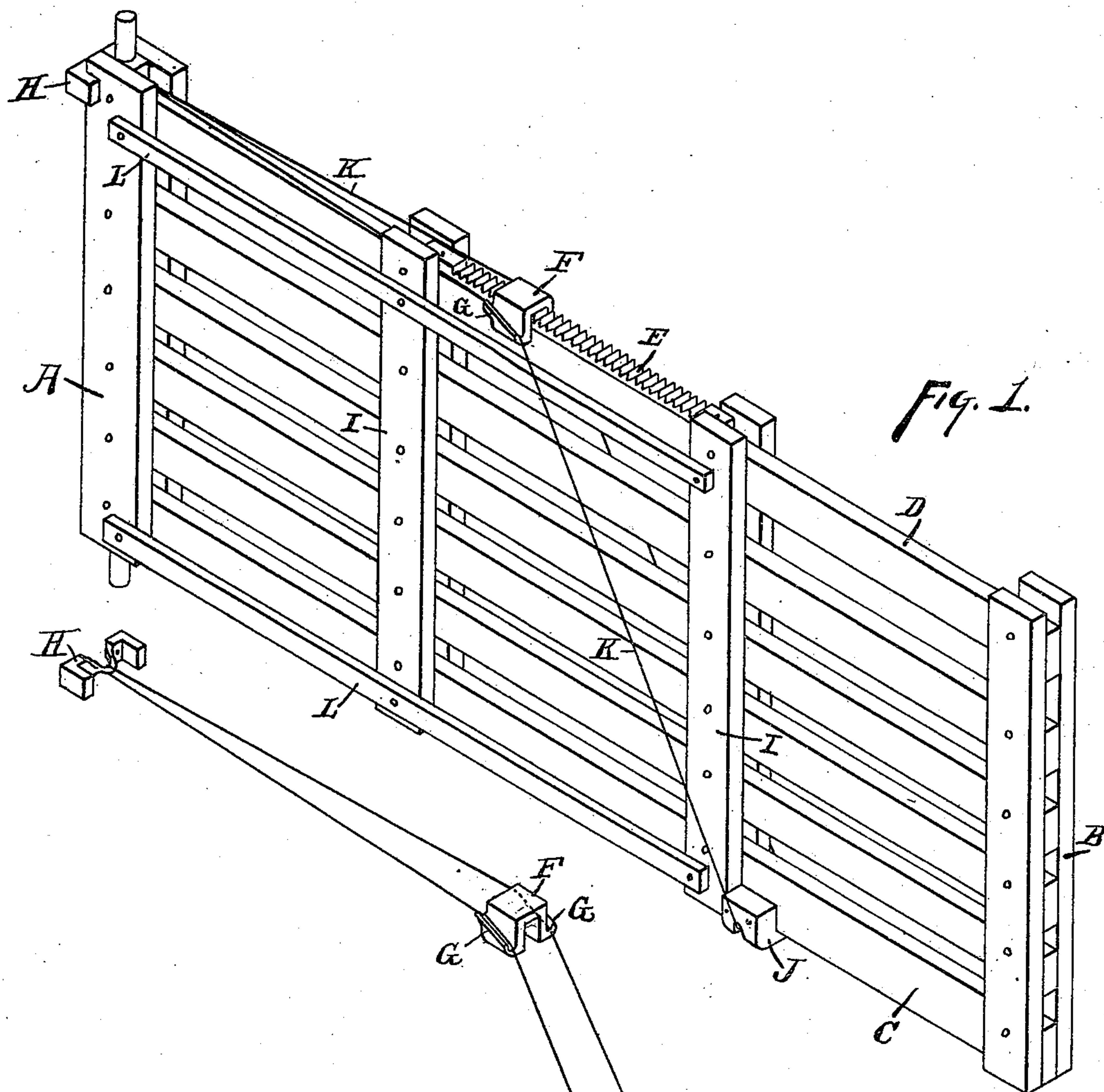


Fig. 1.

Fig. 2.

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GATE.

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To all whom it may concern:

Be it known that I, MOSES E. MYERS, of Cambridge City, Wayne county, Indiana, have invented certain new and useful Improvements in Gates, of which the following is a specification.

This invention pertains to improvements in farm gates, and relates particularly to improved means for trussing and stiffening the gate.

My improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1, is a perspective view of my improved gate, and Fig. 2, a perspective view of the truss shown separately.

In the drawings:—A, indicates the hinge-stile of the gate: B, the latch-stile of the gate: C, the lower rail of the gate: D, the upper rail of the gate, the gate being of that well known form in which the horizontal rails are in the same vertical plane, the stiles and uprights being secured upon both sides of the rails: E, a rack-bar disposed upon the upper rail intermediate between the hinge-stile and the latch-stile and provided with ratchet-teeth facing toward the latch-stile: F, a shifting saddle resting upon the rack-bar and engaging the teeth thereof and inclined from the horizontal as hereinafter explained: G, wire-supporting ledges projecting from each side of the saddle: H, a wire-fastening secured near the upper end of the hinge-stile and adapted to be centrally engaged by the bend of a double wire: I, uprights disposed against the two faces of the rails intermediate between the two stiles: J, a wire-fastening secured to the lower rail of the gate, forward of the rack-bar, and provided with a notch to engage the bend of a double wire and having a width exceeding that of saddle F: K, a double wire engaging the fastening H and the fastening J, and with intermediate portions engaging the wire-supports G of the saddle, the upper portion of the wires, between the hinge-stile and the saddle, lying along above the top rail, and between the intermediate uprights which it passes, those portions of the wires forward of the saddle being disposed respectively upon the two sides of the gate: and L, stays at the

top and bottom rails extending at each face of the gate, from the hinge-stile to the intermediate upright between the center of the gate and the latch-stile. The wire extending between fastenings H and J and put under strained deflection by the saddle F, serves in trussing the gate vertically. The saddle may be shifted upon the rack for the purpose of adjusting the strain of the wires. Sag will eventually take place, by the stretching of the wires, and when that occurs it is only necessary to pry up the free end of the gate, thus putting extra slack into the wire, and then shift the saddle forward to engage new teeth. When the lifting is relieved the gate will settle down and strain the wire and the strain of the wire will hold the saddle in its position on the rack. The wire does not reach to the latch-stile of the gate, but only for a short distance past the center, thus shortening the wires and largely avoiding the evils due to stretching and to expansion. The rack rests upon the top of the rail and is there appropriately secured by nails or screws. The fastening J abuts against the front of the forward upright I whereby the strain of this fastening is met. The stays L of themselves stiffen the gate sidewise and at the same time meet the side strains due to the presence of the truss wire. The upper end of the truss wire has its strains met by a direct pull against the rear of the hinge-stile. The upper ends of the wire attach centrally to the fastening H and from thence diverge to the saddle F and from thence diverge still farther to straddle the fastening J, the wire thus forming a suspension-truss stiffening the gate sidewise and straining from a point at the top of the hinge-stile. The ledges G of the saddle are at an angle to the horizontal but at a less acute angle than the forward portions of the truss-wires, whereby the deflecting bend of the wires, at the saddle, instead of being concentrated into one comparatively sharp bend is provided for by two easier bends. The lower portion of the truss-wire engages a notch under the fastening J and may when loosened be shifted thereon, across the gate, in order to equalize the strain on the two wires or to correct warpage in the gate, but the frictional bite of the wire on fastening J

is found sufficient to prevent slipping under strain. It will be readily seen that truss-wire K acts as a vertical truss by means of the upward deflection given to the wire, a deflection 5 out of the right line from H to J. Now, disregarding the vertical trussing, each portion of the truss-wire tends to assume position in a vertical plane cutting its two points of end attachment. The saddle deflects the wire- 10 portions inwardly from such normal plane, the wires thus diverging from point H to the saddle and thence diverging at a still greater angle to their points of engagement at fastening J. This inward straining of the wire- 15 portions out of their normal vertical planes causes the wire to form strained side trusses.

I claim as my invention--

1. In a gate, the combination, substantially as set forth, of a wire-receiving attachment 20 directly secured to the upper portion of the hinge-stile and disposed in the vertical central plane of the gate as set forth, a wire-receiving attachment at an intermediate part of the base of the gate and having a width 25 greater than the thickness of the gate, a shifting saddle, mounted upon the upper portion

of the gate between said two wire-receiving attachments and having a width less than the attachment at the base of the gate, and a continuous truss-wire engaging said two attach- 30 ments and said saddle, said saddle deflecting the two side-portions of said wire vertically and horizontally out of direct lines between its points of engagement with said two wire-receiving attachments. 35

2. In a gate, the combination, substantially as set forth, with a continuous truss-wire engaging the gate at the hinge-stile and at a point between the hinge-stile and latch-stile, of a saddle mounted for adjustment on the 40 gate to deflect the two side portions of said truss-wire and provided with wire-receiving ledges extending lengthwise of the saddle in a plane substantially parallel with a line cut- 45 ting said two points of engagement of the wire with the gate, whereby the wire receives two slight bends at its engagement with a saddle-ledge.

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Witnesses:

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