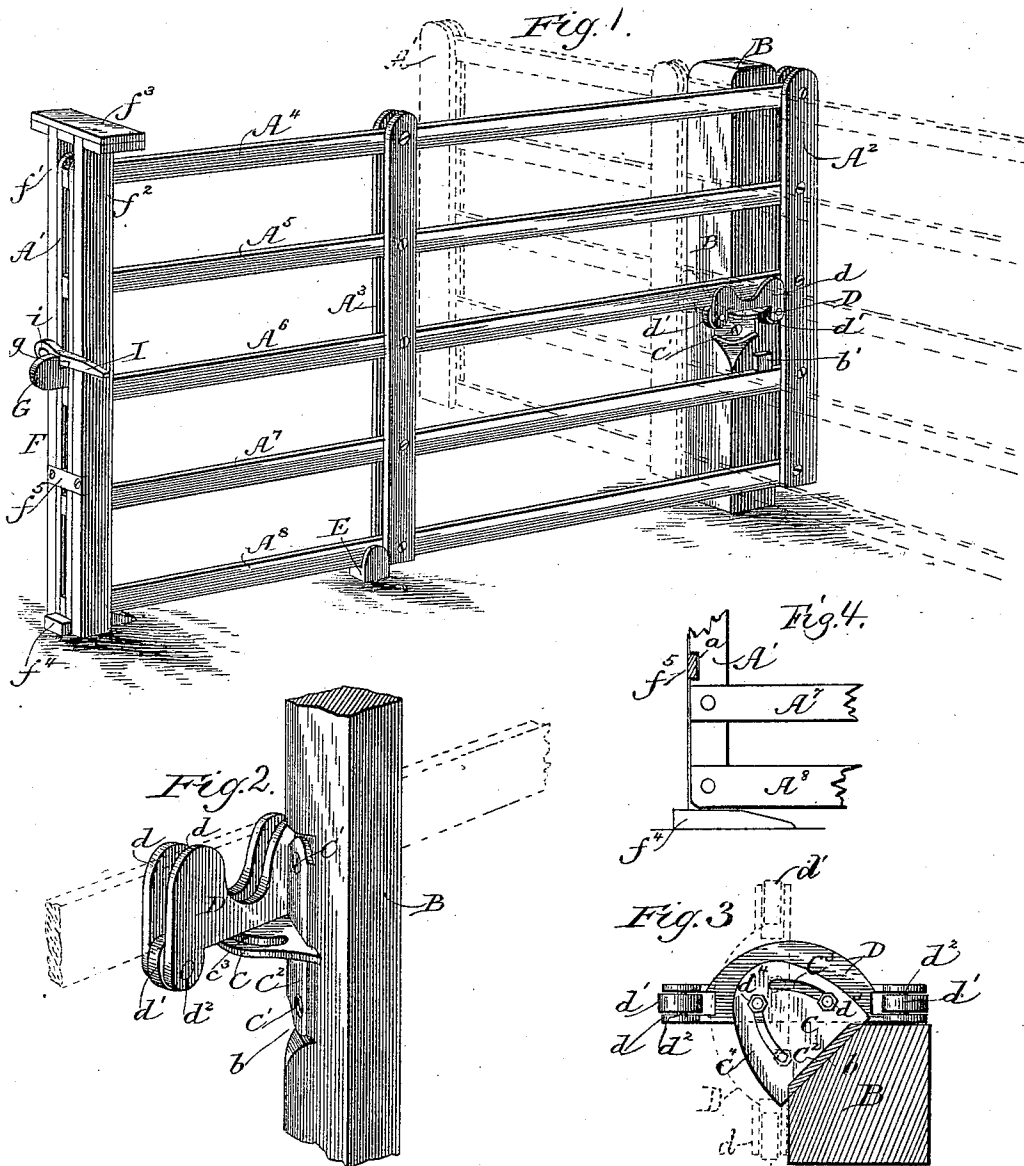


(No Model.)

J. W. CRAIG.
FARM GATE.

No. 346,806.

Patented Aug. 3, 1886.



WITNESSES
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JOHN W. CRAIG, OF KIRKWOOD, ILLINOIS.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 346,806, dated August 3, 1886.

Application filed September 23, 1885. Serial No. 178,393. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. CRAIG, a citizen of the United States, residing at Kirkwood, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Farm-Gates, of which the following is a specification.

My invention relates to farm-gates of the class which are operated by sliding the gate to about midway of its length upon a hinged connection, or until it is properly balanced thereon, and then swinging the gate around the post upon said hinged connection to provide a clear unobstructed opening between the posts. Gates of this class possess many advantages over gates which have a support at one end only. One of these advantages is, that the gate may be constructed in a simple manner and have sufficient strength to resist all strains brought upon it without the employment of diagonal braces, tie-rods, struts, or other elements employed to form a truss capable of being supported at one end only.

Heretofore gates of the class to which my invention relates have been suspended upon joints or hinged connections which provide a weak and unsteady support, and which admit of a teetering, unbalanced movement.

The object of my invention is primarily to provide a simple and effective jointed support which will permit the gate to rest firmly upon an extended base, and allow it both to travel or slide freely upon the support in its endwise movement and to swing steadily upon extended solid bearing-surfaces firmly supported and maintained in a fixed position upon the post.

To these ends my invention consists in an extended track-plate, on which the gate is supported, which track-plate is provided with segmental slots, that receive each a bolt from the base-plate, which bolts act, when the gate is swung round to open or close it, alternately as pivots and as stays to hold the track-plate and gate steady, as hereinafter more fully described, and specifically indicated in the claims.

In the accompanying drawings, Figure 1 is a perspective of a gate embodying my invention, shown by full lines in its closed position, and by dotted lines in its open posi-

tion; Fig. 2, an enlarged perspective of the gate-post and hinged support, shown by full lines, and of a single rail of the gate by dotted lines; Fig. 3, a plan of the hinged support inverted, with the post shown in section and the movable section of the hinged support shown by dotted lines in its open position; Fig. 4, an elevation of a fragmental part of the lower corner of the latch end of the gate and latch-post.

I will now describe more specifically, and indicate by letters of reference, the parts illustrated in the accompanying drawings, the same letter indicating the same part in the different figures.

The gate A is formed of vertical end rails, A¹ A², vertical intermediate rails, A³, and horizontal bars A⁴ A⁵ A⁶ A⁷ A⁸, securely united together in any well-known or preferred manner. A fixed post, B, supports a hanger-plate, C, secured thereto by bolts C¹, which pass through a butt-plate, C², cast upon and forming part of said hanger-plate. The post B is chamfered or mortised diagonally across one of its corners *b*, to provide a solid seat, against which the butt-plate C² is bolted, and thus serves to hold the hanger-plate C projecting horizontally and diagonally from the inner corner of the post B. Arc-shaped slots C³ C⁴ are formed in the hanger-plate C, each of which slots is concentric to that end of the other which is next the post B.

The roller track-plate D is provided with vertical parallel flanges *d* *d*, which project from its upper face, and with friction-rollers *d'* *d'*, journaled to lugs *d''* *d''*, depending from the flanges *d*, and extended beyond the plate D, to provide an expanded base upon which one of the bars of the gate rests and may be freely moved. The axes of the friction-rollers are in line with the contact or bearing surfaces between the plates C D, and thus insure a more evenly-balanced support. The plate D is provided with stud-bolts *d³* *d⁴*, which pass, respectively, through the slots C³ and C⁴, and are provided with nuts or heads, which hold the plates C and D loosely together. The bolt *d³* is free to traverse the slot C³ from end to end, and the bolt *d⁴* is free to traverse the slot C⁴ in the same manner.

In opening the gate it is first pushed backward, sliding on the rollers of the track-plate D, until balanced or about balanced on the plates C and D, and is then swung round in the manner common with this class of gates. In pushing the gate backward, as last described, the bolts d^2 and d^1 will rest in the ends of their respective slots, as shown at Fig. 3, and when the gate is then swung round to open it the plate D will swing with the gate on the plate C. In swinging the gate as last described, the first half of its movement, the bolt d^3 will rest in the end of the slot C^3 and turn as a pivot therein, on which the gate swings, and the bolt d^1 will pass from one end of the slot C^4 to its other end, and as the gate is further swung to its open position, at right angles to its closed position, the bolt d^1 will rest in the end of its slot and turn therein as a pivot while the bolt d^3 traverses its slot C^3 . While the gate is being swung to open it, both bolts may move short distances in their respective slots at the same time, especially if the gate is pulled slightly endwise toward its closed position as it is swung to open it; but the ordinary operation of the bolts and slots is as before described.

While the bolt d^3 acts as a pivotal point on which the gate swings, the bolt d^1 holds the plate D from any rocking motion on the hanger-plate, and thus prevents strain on the pivot-bolt, makes the movement of the plate D easy on the plate C, strengthens the joint thus formed, and holds the gate more nearly in a horizontal position; and while the bolt d^1 acts as a pivotal point the bolt d^3 in turn holds the plate D and other parts, as did the bolt d^1 while the bolt d^3 acted as a pivotal point.

By the above-described means I completely avoid the use of single spindle-hinges, which are liable to be bent or twisted, and are difficult to place and be maintained truly in a vertical position. The broad base-plate supports the track-plate horizontally at all times, and the track-plate is held securely on the hanger-plate by the dual pivots, which act alternately as pivots and as stays for the track-plate.

The roller extensions provide ample support for the gate both when rolled or moved endwise and when swung thereon, and thus secure therefor a firm support and easy movement.

The lower bar, A^s , of the gate is supported when closed and while being moved endwise in supports by a grooved block, E, securely driven in the road-bed. The post F is also securely planted in the ground, and is preferably formed of parallel pieces $f^1 f^2$, cap-piece f^3 , and base block or shoe f^4 . The end rail, A' , of the gate snugly slides between the pieces $f^1 f^2$, and is lifted slightly to rest upon the base block or shoe f^4 by means of the inclined surface thereof. A tongue, G, is secured to

and projects outwardly from the end post, A' , of the gate, and is provided with a notch, g , in its upper edge, into which a latch, I, hinged at i to the outer side of the upright f^1 of the post F, engages and securely locks the end rail, A' , of the gate between the uprights of the post F.

To provide an additional means for preventing the gate from being opened by animals or lifted out of its supports, a cross-strip, f^5 , secured to the pieces $f^1 f^2$, snugly fits a notch, a , formed in the outer edge of the end post, A' , of the gate, and when the latch I is engaged with the notched tongue G the gate is securely locked at one of its ends and prevented from being either lifted or withdrawn from its position without first lifting the latch. The opposite end of the gate is held down securely between the flanges upon its supporting-plate by means of a pin, b' , driven into the post B below the hanger-plate C, beneath which the bar A' of the gate freely slides. When the gate is closed and latched, it is thus securely held at both ends and prevented from being lifted out of its supports. When, however, the gate is opened, or in the positions shown by dotted lines at Figs. 1 and 2, the gate may be easily lifted off from its supports or placed thereon.

While I have shown means for holding the gate in which my hanger is used securely in place when closed, I do not claim such means *per se*, as they are well known; but

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

1. The combination, with the gate-post, of the hanger-plate C, secured thereto and provided with curved slots $C^3 C^4$, a flanged or channeled roller track-plate, D, provided with bolts which pass through the curved slots of the base-plate, and a gate provided with a rail supported upon the rollers and between the flanges of the track-plate, substantially as described.

2. In combination, a hanger-plate, C, provided with a butt, C^2 , and with segmental slots $C^3 C^4$, and a roller track-plate, D, provided with bolts $d^3 d^4$ to pass through said slots, and with flanges and friction-rollers extending, respectively, above and beyond said base-plate, substantially as and for the purpose specified.

3. In combination, in a sliding and swinging gate, a post, a hanger, C, having segmental slots $C^3 C^4$, and a track-plate, D, provided with bolts $d^3 d^4$, substantially as and for the purpose specified.

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

JOHN W. CRAIG.

Witnesses:

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