

R. M. Smith.

Farm Gate.

Nº 88,339.

Fig. 1. Patented Mar. 30, 1869..

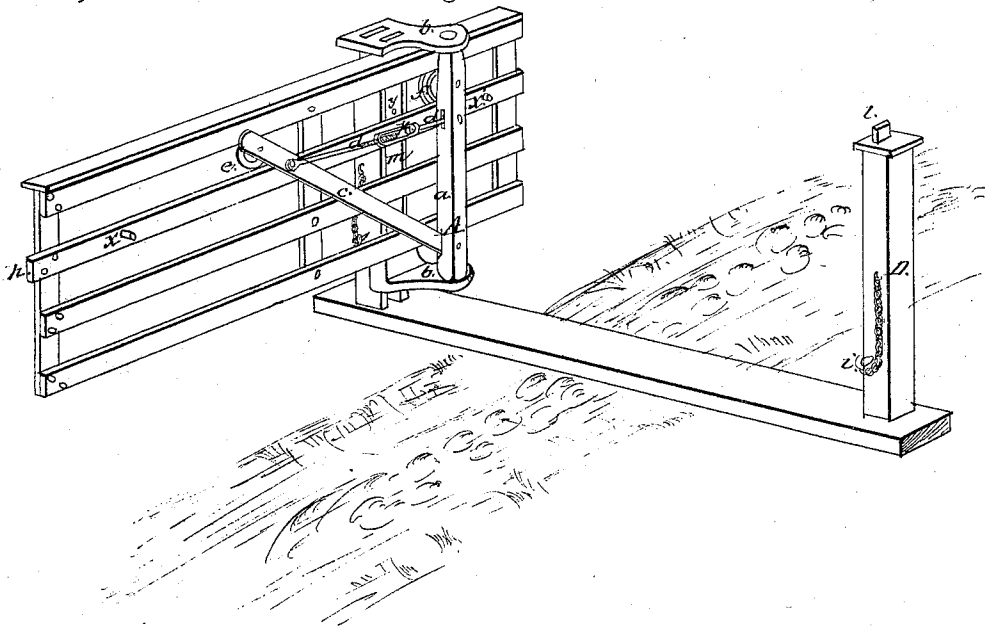
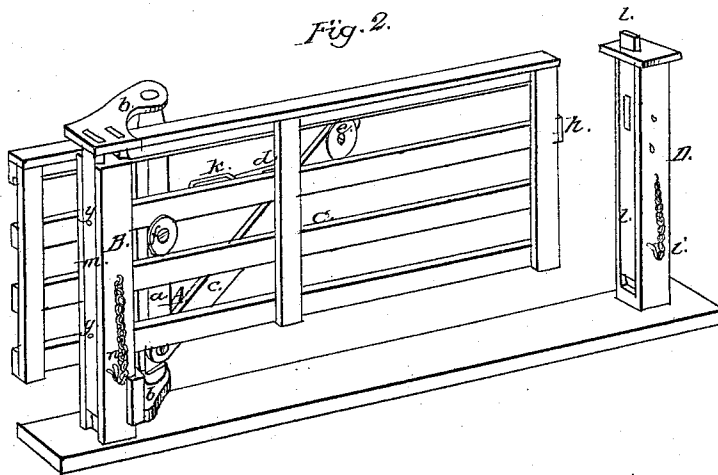


Fig. 2.



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Letters Patent No. 88,339, dated March 30, 1869.

IMPROVEMENT IN FARM-GATES.

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

To whom it may concern:

Be it known that I, RUFUS M. SMITH, of Lafargeville, in the county of Jefferson, and State of New York, have invented certain new and useful Improvements in Farm-Gates; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which

Figure 1 represents a gate, made in accordance with my invention, and swung open.

Figure 2 represents the same, partly closed.

The object of my invention is to combine, in one gate, the advantages which attach to the use of both sliding and swinging gates, and further, to produce a gate which can be more readily manipulated and either adjusted in position or removed entirely from the frame, or posts that support it, than has heretofore been found practicable. To this end,

My invention may be stated to consist—

First, in the combination, with an upright swinging, or hinged extensible frame, or crane, of a gate, which, while moving with said frame, is also capable of a sliding movement back and forth upon the same.

Second, in the combination of the hinged, or swinging gate-carrying frame, or crane, with an extension-supporting post, substantially in the manner herein-after described, whereby the said frame, together with its gate, can be raised a greater or less distance above the ground, as desired.

Third, in the combination, with the parts specified in the preceding clause, of an extension-post, which receives and secures the forward, or free end of the sliding, swinging, and adjustable gate.

Fourth, in the construction of the gate-carrying crane, or frame with a hinged arm, which carries the forward roller and a pivoted or hinged adjusting-brace, or bar, for raising and lowering, or effecting the adjustment of said arm.

Fifth, in the combination of the sliding gate, adjustable crane, or frame, and extension-post, to which the same is hinged, constructed and arranged for joint operation, as hereinafter described.

To enable those skilled in the art to understand and use my invention, I will now proceed to describe, by reference to the accompanying drawings, the manner in which the same is or may be carried into effect.

The hinged gate-carrying frame, or crane is represented at A.

It consists, in this instance, of the upright, *a*, whose ends turn in ears, or socket-pieces *b*, connected with the supporting-post B, the diagonal arm *c*, and the cross-bar, or brace *d*.

The gate moves on the two rollers *e f*, the one pivoted to the upper end of the arm *c*, the other pivoted to the upright, *a*, at any point intermediate between the top and bottom of the gate. In fig. 1, the latter roller is represented as arranged between the upper bars of the gate; in fig. 2, it is located between the second and third bars. This arrangement of the rollers effectually supports the gate, which, at the same time, is free to slide easily, and without binding.

The post D is placed so as to be opposite the free end of the gate, when the latter is closed, a recess, *g*, in its face, being made to receive a corresponding projection, *h*, on the gate.

When the gate is closed, it can be locked by a pin, *i*, which passes through the post, into the projecting piece *h*. On withdrawing the pin, the gate is free to slide, and it may be either moved back, and then swung open by means of its hinged crane A, or, for the passage of small vehicles, it can be pushed back, without moving on its hinge.

The construction of the gate is such, that when pushed back, it is balanced upon its frame, being assured in such position by means of the front pin, or stop *x*, the rear stop *x'* being intended to prevent it from being pushed forward too far, so that it is not liable to sag, and can be swung back with the greatest ease. When it is desired to detach the gate from the frame, all that is required is to remove either of the pins *x x'*.

The frame, or crane A is made adjustable by hinging the arm *c* to the upright, *a*, and by dividing the brace *d* into two parts, whose outer ends are pivoted to the arm *c* and upright, *a*, respectively, and whose contiguous ends are screw-threaded, and connected by the adjusting-nut, or link *k*, as represented in fig. 1; so that, by turning the said nut in one direction or the other, the brace *d* will be lengthened or shortened, and the arm *c* correspondingly elevated or depressed, whereby the gate can be raised from or lowered toward the ground, as may be desired, the rear roller *f* being of course adjusted so as to maintain the gate in its horizontal position. The upper socket-piece, *b*, also should be a sufficient distance above the top of the gate, not to interfere with this movement. By this means, even without an extension-post, the gate can be raised or lowered whenever circumstances require it.

In order to adapt the post D to any such change, its inner face, *l*, is made separate from the other parts, as shown clearly in fig. 2, so as to be capable of sliding up and down in a groove formed in the post, so that its recess *g* can be brought opposite the projecting piece *h*, whatever may be the position of the gate, the piece *l* being held in the required position by a pin, *i*, which passes into it through the post.

I find it advantageous, in some respects, however, to combine, with the sliding gate and swinging crane, or frame, an extension-post. To this end, the post B is made extensible by fitting, between its two side faces, the sliding pieces *m m*, which are held together by means of pins *y*, which pass through vertical slots formed in the post, the length of the slots being sufficient to admit of the free up-and-down movement of the sliding pieces, which are held in any desired position by means of a pin, *n*, or other suitable fastening-device.

The pieces *m* carry, on their upper ends, the upper socket, or hinge-piece *b*, while the lower socket-piece *b* is united with the inner piece *m*, at or near its lower end, so that, by raising or lowering the sliding pieces,

the hinged frame and sliding gate will be correspondingly elevated or lowered. By fitting the pieces *m* in between the side faces of the post, the square and compact form of the latter is preserved, and the slide pieces are protected from injury, or danger of being displaced.

It will be noticed, that from the arrangement of the rollers, the gate, when moved forward to its full extent, is, to all intents and purposes, balanced on the forward roller, so that it will not sag, unless the frame should yield; and, when pushed back, it is, as hereinbefore stated, also balanced, and can be turned, or swung readily, and without great effort.

Having now described my invention, and the manner in which the same is or may be carried into effect,

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

1. The combination, with the hinged, or swinging extensible frame, or crane and rollers, of the gate, which while mounted upon and moving with said frame, is also capable of an independent sliding movement back and forth upon the same, substantially as herein shown and set forth.

2. The combination, with the parts specified in the preceding clause, of an extension-post, connected with and supporting the hinged gate-frame, under the ar-

rangement described, whereby said frame, together with the gate which it carries, may be raised or lowered, as set forth.

3. The employment, with a gate such as described, of an extension-post, constructed substantially as herein specified, so as to be adjusted to and receive the free end of the said gate, whether the same be raised or lowered, as set forth.

4. The construction of the gate-carrying frame, or crane with a hinged arm, which carries the forward roller, and a pivoted extensible brace, or bar, for raising and lowering, or effecting the adjustment of said arm, substantially as and for the purposes shown and set forth.

5. The combination of the sliding gate, its frame, or crane, and the extension-post, to which said frame is hinged, the said parts being constructed and arranged for joint operation, as herein shown and specified.

In testimony whereof, I have signed my name to this specification, before two subscribing witnesses.

RUFUS M. SMITH.

Witnesses:

M. BAILEY,

EDM. F. BROWN.