

No. 649,369.

Patented May 8, 1900.

M. B. SMITH.
GATE.

(Application filed Sept. 11, 1899.)

(No Model.)

Fig. 1.

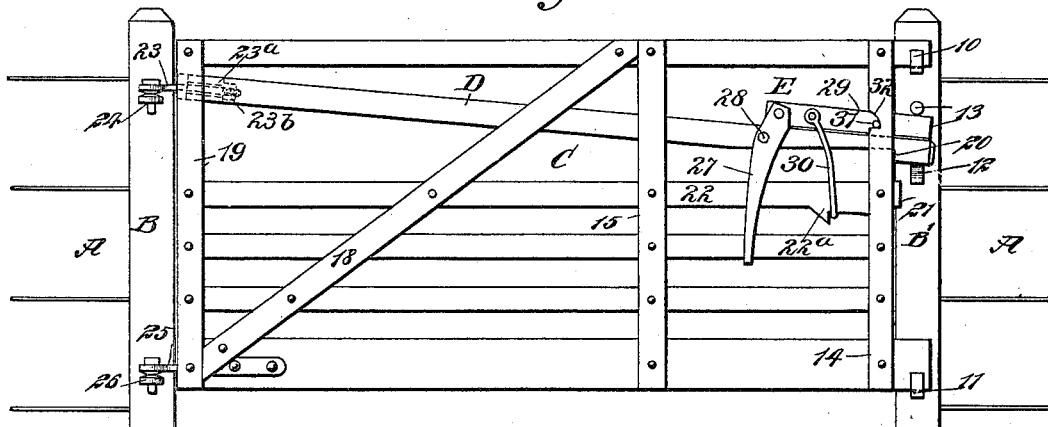


Fig. 2.

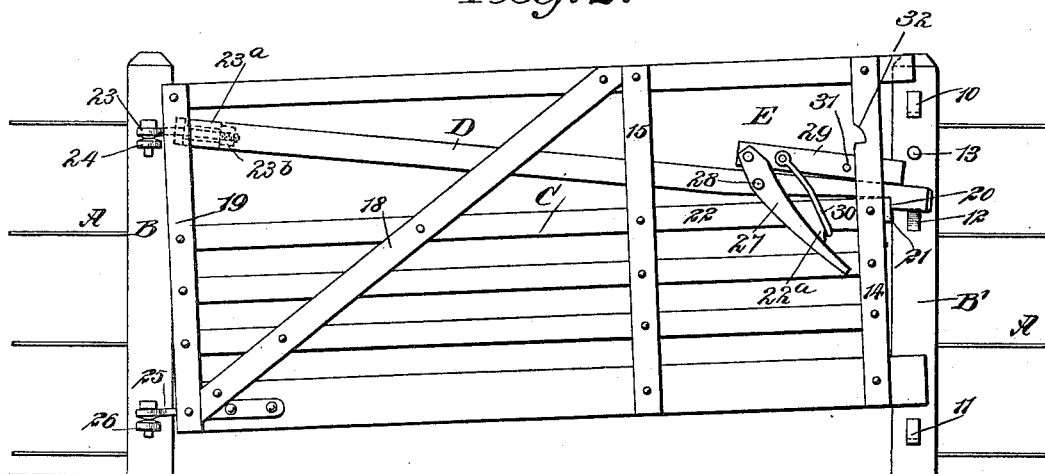
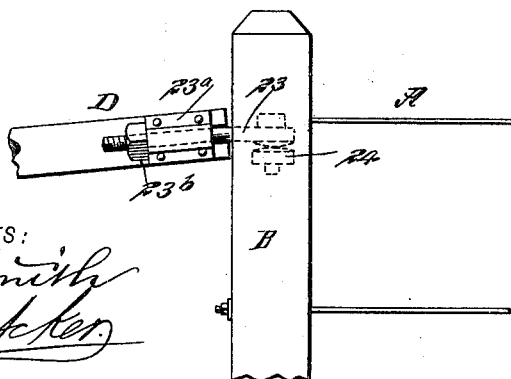


Fig. 3.



WITNESSES:

M. B. Smith
Wm. H. Smith

INVENTOR

M. B. Smith

BY

M. B. Smith

ATTORNEYS

UNITED STATES PATENT OFFICE.

MARION B. SMITH, OF PLAIN CITY, OHIO.

GATE.

SPECIFICATION forming part of Letters Patent No. 649,369, dated May 8, 1900.

Application filed September 11, 1899. Serial No. 730,103. (No model.)

To all whom it may concern:

Be it known that I, MARION B. SMITH, of Plain City, in the county of Madison and State of Ohio, have invented a new and Improved Gate, of which the following is a full, clear, and exact description.

My invention relates particularly to a farm-gate, and has for one object to provide an economic and durable construction which will prevent strain upon the posts when the gate is closed, and, furthermore, to provide a means so that when a gate is closed it cannot be pushed out at the top or bottom and may be held against vertical movement or permitted to move up and down to a limited extent for the passage of small stock.

Another object of the invention is to so construct the gate that it must be raised before it can be opened, thus enabling the gate to clear obstructions that would otherwise have a detrimental action upon it, and, furthermore, to provide means for dropping the gate whenever desired, so that when the gate is partially opened it may be so held by causing the front end of the gate to engage with the ground.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the gate, representing it in a closed and locked position. Fig. 2 is a side elevation of the gate, illustrating it elevated or in position to be opened; and Fig. 3 is an enlarged detail view representing the adjustable manner in which a combined hinge and latch-bar employed is connected with the swing-post.

A represents panels of a fence, B the swing-post, and B' the keeper-post for the improved gate C. The keeper-post B' is provided with an upwardly-facing hook 10 near its upper end and with a corresponding hook 11 near its lower end, and between these two hooks 10 and 11 on the same side of the keeper-post a downwardly-curved guide-bar 12 is located, and a stop-pin 13 is placed above the said guide-bar. The gate C may be of any suit-

able material. Preferably, however, the top and the bottom rails or members of the gate extend beyond its forward or free edge to such an extent that they may rest upon the hook-keepers 10 and 11 when the gate is closed. Also the gate is preferably provided with parallel and spaced front double bars 14, parallel and spaced double intermediate bars 15, and spaced double rear bars 19.

A combined hinge and latch-bar D is employed in connection with this gate, and said hinge and latch-bar extends from the upper rear portion of the gate at its end between double diagonal braces 18 and between the double intermediate bars 15 and front bars 14 of the gate out beyond the front end of said gate. The said combined hinge and latch-bar terminates in a head having a shoulder 20, adapted to engage with an end 21 of a horizontal slat 22 of the gate, which end 21 of the slat extends beyond the front end of the gate, such engagement taking place in the elevated position of the gate to be hereinafter described. A spur 22^a is produced at the underside of the slat 22 near its projecting end.

The combined hinge and latch-bar D is unattached to the gate throughout its length, and the head end of the said hinge and latch-bar D is adapted to rest upon the curved bar 12 of the keeper-post B'. The bar D is utilized to hinge the upper portion of the gate to the swing-post B, and to that end the upper end portion of the latch-bar D is provided with an adjustable hinged member 23, (shown best in Fig. 3,) having pivotal engagement with a member 24, which is secured to the swing-post, and the said hinged member 23 is passed through a suitable guide 23^a, secured to the bar D. The inner end of the hinged member 23 is threaded, and a nut 23^b is placed upon said threaded end and brought to an engagement with the guide 23^a. This hinge is made adjustable in order that any slack caused by wear at the hinge portion of the gate may be readily taken up. A hinge member 25 is secured firmly to the lower rear end portion of the gate, and this hinge member 25 is pivotally connected with a member 26, secured to the swing-post B, as shown in Figs. 1 and 2.

The gate C is raised and lowered through the medium of a lifting device E. This lifting device E consists, preferably, of a lever 27,

usually made in two parallel members, one at each side of the gate structure, and both members of the lever are pivoted near their upper ends by a suitable pin 28 to the combined hinge and latch-bar D. A lift-bar 29 projects forwardly from the lever 27 above its fulcrum, being pivoted to the said lever and mounted to slide upon the combined hinge and latch-bar D. A link 30 is pivoted to the sliding lift-bar 29, and the said link engages with the front portion of the spur 22^a of the slot 22, as shown in Figs. 1 and 2. The sliding lift-bar is provided near its forward end with a pin 31, and the said pin, when the gate is lowered and in its closed position, enters recesses 32 produced in the front bars 14 of the gate structure. The bottoms of the recesses 32 are preferably straight and the upper walls more or less curved.

When the gate is in its closed position, the upper and lower portions of the gate at its free end, which portions project, rest upon the hook-keepers 10 and 11, as shown in Fig. 1. When the gate is to be opened, the lower end of the lever 27 is carried in direction of the keeper-post B', whereupon the sliding lift-bar 29 is drawn from engagement with the pin 13 on the keeper-post B', said sliding lift-bar being in engagement with the pin 13 when the gate is closed, as shown in Fig. 1, and as the sliding lift-bar is slid from engagement with the pin 13 the link 30 will draw upward and rearward or in direction of the swing-post B, carrying the front end of the gate upward to the position shown in Fig. 2 as the said link 30 engages with the slot 22 of the gate, and when the gate is thus raised it can be readily swung open. When the gate has been closed, it may be readily locked in its closed position by carrying the lever 27 in direction of the swing-post B, thus bringing the lift-bar 29 beneath the pin 13 and carrying the pin 31 into the recesses 32 of the bars 14, as shown in Fig. 1. It will be understood that the pin 31 is carried out from the recesses 32 simultaneously with the lift-bar 29, leaving the pin 13 on the keeper-post B'. When the gate is partially opened and it is desired to hold it in such position, it is simply necessary to permit the gate to drop, whereupon its forward end at the bottom will engage with the ground.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination, with a gate, of a bar adapted for hinged connection with the swing-post at one end and adapted to be supported on a keeper-post at its opposite end, a gate through which the said bar passes, the bar being unattached to the gate throughout its length, a lever fulcrumed upon the said bar, a lift-bar connected with the lever at a point above its fulcrum, and a connection between said lift-bar and said gate, as described.

2. The combination, with a swing-post and a keeper-post, the keeper-post being provided with upper and lower upwardly-facing hooks and a support between said hooks, of a gate hinged at its lower end to the swing-post, a bar loosely passed through the said gate, having a hinged connection at one end with the said swing-post, the other end being arranged for engagement with the said support on the keeper-post, a lever fulcrumed upon the said bar, a projection from the lever at a point above its fulcrum, and a lift-bar pivotally attached to the said projection and having sliding and pivotal connection with the gate, as and for the purpose described.

3. The combination, with a swing-post, a keeper-post having upwardly-facing hook-keepers at its top and bottom, and a support intermediate of the keepers, of a gate hinged to the swing-post at its lower rear end, a bar passed diagonally through the gate unattached throughout its length, the upper rear end of which bar is adjustably hinged to the swing-post the forward end of which terminates in a shouldered head extended beyond the front of the gate for engagement with a support on the keeper-post, projections from the upper and lower portions of the gate at its forward or free end, adapted for engagement with the hook-keepers, a projection from the free end of the gate, adapted when the gate is lifted to engage with the shouldered portion of the hinge-bar, a lever fulcrumed on the hinge-bar, and a lift-bar pivotally connected with said lever, having sliding and pivotal engagement with said gate, for the purpose described.

MARION B. SMITH.

Witnesses:

O. K. HOWLAND,
JESSE HOWLAND.