(No Model.) 2 Sheets—Sheet 1.

W. F. C. STANBROUGH.

SLIDING AND SWINGING GATE.

No. 457,230. Patented Aug. 4, 1891.

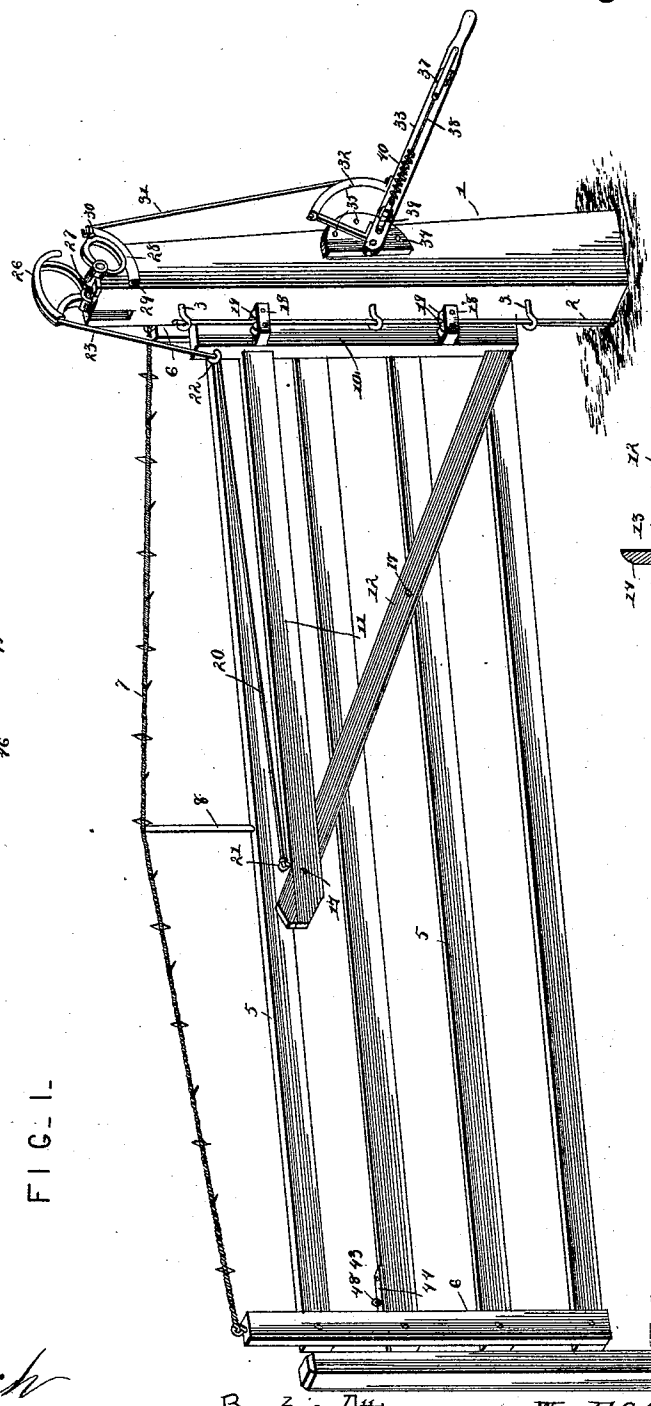


FIG. 1.

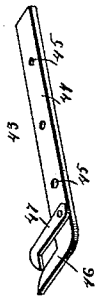


FIG. 5.

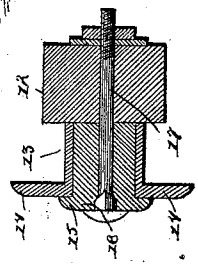


FIG. 6.

Witnesses

Geo. E. Frech

H. J. Riley

Inventor

By his Attorneys, Wm. F. C. Stanbrough

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.)

2 Sheets—Sheet 2.

W. F. C. STANBROUGH.

SLIDING AND SWINGING GATE.

No. 457,230. Patented Aug. 4, 1891.

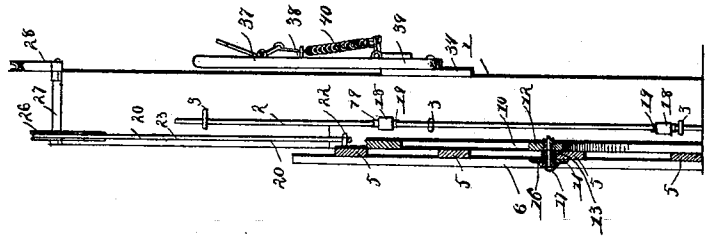


FIG. 3.

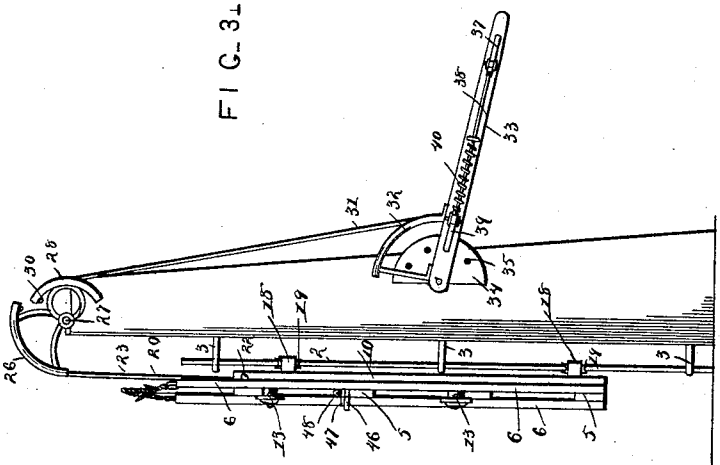


FIG. 2.

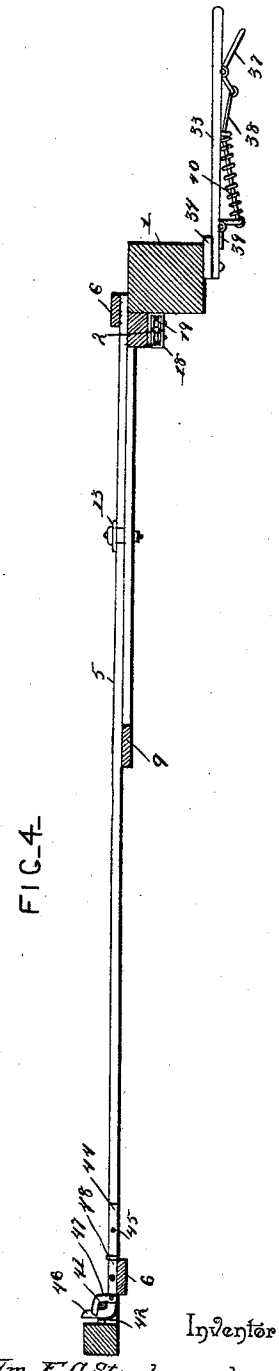


FIG. 4.

Witnesses

Geo. E. Frech.

Inventor

Wm. F. C. Stanbrough

By his Attorneys,

F. P. Riley

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM FRANCIS CARY STANBROUGH, OF WEST PLAINS, MISSOURI.

SLIDING AND SWINGING GATE.

SPECIFICATION forming part of Letters Patent No. 457,230, dated August 4, 1891.

Application filed August 29, 1890. Serial No. 363,428. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FRANCIS CARY STANBROUGH, a citizen of the United States, residing at West Plains, in the county of Howell and State of Missouri, have invented a new and useful Sliding and Swinging Gate, of which the following is a specification.

The invention relates to improvements in sliding and swinging gates.

The object of the present invention is to improve the construction of sliding and swinging gates, and to provide means whereby the same can be readily elevated to permit the passage of small animals and for the purpose of separating stock and passing snow drifts.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with this invention, the gate being partially elevated. Fig. 2 is a side elevation of the gate in its open position. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a horizontal sectional view. Fig. 5 is a detail perspective view of the latch. Fig. 6 is a section of the roller and its supports.

Referring to the accompanying drawings, 1 designates a hinge-post provided at its inner face with a vertical guide-rod 2, which is secured to the posts by eyebolts or screw-eyes 3, and forms a way for a vertically-movable gate composed of horizontal rails 5 and end bars 6, secured to the ends of the rails and projecting above the uppermost one and having secured to their upper ends by staples or the like the ends of a barb-wire 7, which is centrally supported by a rod 8, secured to the top rail and extending vertically therefrom.

The gate is mounted on a triangular hanger composed of a vertical bar 10, a horizontal bar 11, and an inclined brace-bar 12, having its ends secured to the lower end of the vertical bar and the outer end of the horizontal bar, and a miter-joint is preferably employed for this purpose. The hanger is provided on one of its faces with flanged pulleys 13, which are constructed of cast-iron and arranged beneath the top rail of the gate and above one of the lower rails. The gate is adapted to be moved longitudinally on these pulleys, and their flanges 14 prevent the gates being displaced. The pulleys 13 are mounted on journals 16, provided with flanges 15, and secured to the hanger by bolts 17. The vertical bar 10 is provided a short distance from its ends with hinge-brackets 18, in which are secured grooved rollers 19, arranged upon opposite sides of the vertical rod 2 and adapted to permit the gate to swing and to be moved vertically without friction and without binding upon the rod. A wire 20, which has one end secured to an eye 21 at the outer end of the hanger, is passed through an eye 22 at the upper end of the vertical bar, and then extends upward nearly parallel with the guide-bar, in order to give a direct pull on the hanger and move the same vertically without binding, and has its end 23 secured in a perforation of a sector-frame 26. The said sector-frame 26 has its periphery grooved and is mounted upon a shaft 27, which is journaled in suitable bearings at the top of the hinge-post, and has secured to it a similar sector-frame 28. When the shaft is partially rotated, the wire, cord, or flexible connection 20 is wound on the sector-frame and the hanger and its gate are moved vertically. The sector-frame 28 is provided with a grooved periphery 29 and has a perforation 30, in which is secured an end of a wire or cord 31, which has its other end attached to a sector-frame 32, secured to a lever 33, that operates the gate-elevating mechanism. The lever 33 is fulcrumed on the post, and secured to the post and arranged between the same, and the lever 33 is a segmental plate 34, which is provided with a series of perforations 35, arranged to be engaged by a spring-actuated latch 39, working in a transverse perforation of the lever 33 and connected with one arm of a bell-crank lever 37. The bell-crank lever 37 is fulcrumed on the operating-lever 33 and is connected by a rod 38 with latch 39, and a spring 40 is arranged on the rod and normally holds the pawl in engagement with the segmental plate.

The gate is moved vertically by pressing on the latch-lever and withdrawing the spring-actuated latch from engagement with the plate, depressing the operating-lever, thus winding the cord 31 on the sector-frame 32

and causing a corresponding unwinding of the cord on the frame 28, and thereby partially rotating the shaft 27 and winding the cord 24, which causes the hanger to move vertically on the guide-rod.

The latch-bar is provided with a rod 41, arranged in eyebolts 42 and adapted to be engaged by a latch 43, secured to the upper edge of one of the horizontal rails of the gate and consisting of a metal strip 44, provided with a series of perforations 45, and having at one end a lateral extension 46, adapted to engage the bar.

Pivoted to the plate a short distance from the lateral extension is a hook 47, adapted to engage the vertical rod on the side opposite to that on which the lateral extension engages it, and it will thus be seen that when the gate is latched the rod 41 is embraced by the plate 44 and the pivoted hook, which permits the gate to move vertically, when latched, to permit the passage of small animals and for the purpose of separating stock.

It will be seen that the gate is exceedingly simple in construction and is capable of vertical adjustment besides acting as a sliding and swinging gate.

The latch is secured to the rail of the gate by a pin 48, adapted to engage the perforations of the strip to permit longitudinal adjustment of the latch along the rail.

What I claim is—

1. The combination, with a hinge-post provided with a guide-rod, of the hanger vertically movable on the guide-rod and carrying the gate, the brackets secured to the hanger and receiving the guide-rod and provided with rollers arranged on opposite sides of the rod, the shaft journaled in suitable bearings arranged at the top of the hinged post, the sector-frames mounted on the shaft and oppositely disposed thereon, the operating-lever fulcrumed on the hinge-post, and the cords or the like connecting the sector-frames with the hanger and the operating-lever, substantially as described.

2. The combination, with a hinged post provided with a guide-rod, of the hanger vertically movable on the guide-rod and carrying a gate, the bracket secured to the hanger and receiving the guide-rod and provided with rollers arranged on opposite sides of the rod, the shaft journaled in suitable bearings at the top of the hinged post, the sector-frames mounted on the shaft and oppositely arranged thereon, the operating-lever fulcrumed on the hinged post and provided with a sector-frame, the cords connecting the sector-frames of the shaft with the lever and the hanger, and means for securing the lever, substantially as described.

3. The combination of a hinged post provided with a vertical guide-rod, the hanger, the bracket secured to the hanger and adapted to receive the guide-rod and provided with grooved rollers arranged on opposite sides of the guide-rod, the shaft mounted on the hinged post and carrying the sector-frames 26 and 28, the lever provided with a spring-actuated pawl, the segmental plate secured to the post and provided with a series of perforations adapted to be engaged by the pawl, and the cords connecting the sector-frames and the lever and the hanger, substantially as described.

4. In a gate, a latch comprising the metal strip having a series of perforations and provided with a lateral projection and the hook pivoted to the strip and arranged adjacent to the lateral projection, substantially as described.

5. The combination of the latch-post provided with the vertical rod, the gate capable of vertical adjustment, the latch comprising the perforated strip having the lateral projection and the pivoted hook, and the pin adapted to engage the perforations of the strip to adjust the latch, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM FRANCIS CARY STANBROUGH.

Witnesses:

ISAAC KING,

OTTO A. SHUTLEE.