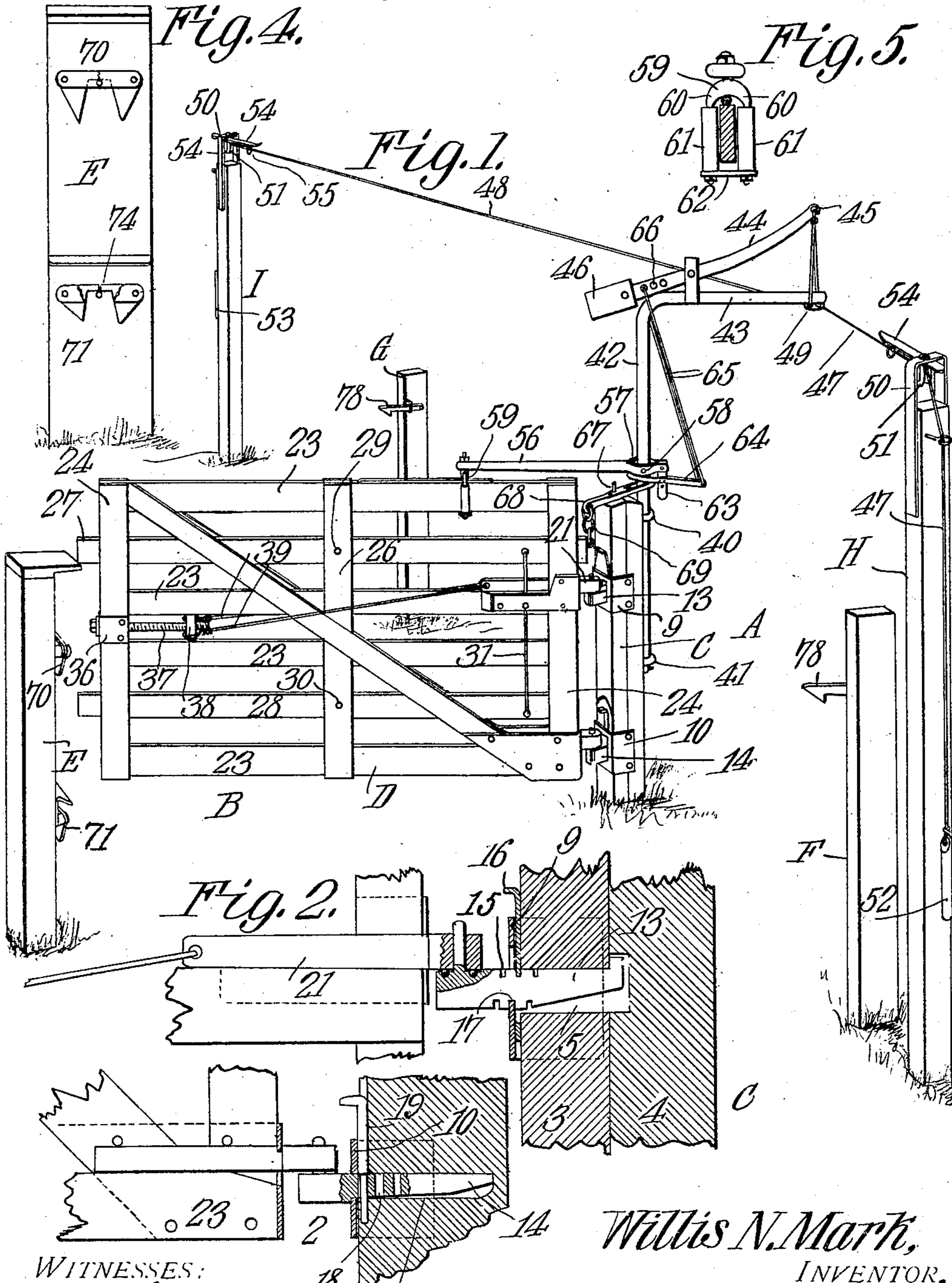


No. 886,383.

PATENTED MAY 5, 1908.

W. N. MARK.  
FARM GATE.

APPLICATION FILED FEB. 15, 1907.



WITNESSES:

*E. H. Stewart*  
*J. H. Hollingsworth*  
**Fig. 3.**

*Willis N. Mark,*  
INVENTOR.

By *C. A. Snow & Co.*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

WILLIS NELSON MARK, OF CLOVERDALE, INDIANA.

## FARM-GATE.

No. 886,383.

Specification of Letters Patent.

Patented May 5, 1908

Application filed February 15, 1907. Serial No. 357,557.

*To all whom it may concern:*

Be it known that I, WILLIS NELSON MARK, a citizen of the United States, residing at Cloverdale, in the county of Putnam and State of Indiana, have invented a new and useful Farm-Gate, of which the following is a specification.

This invention relates to that type of gates which can be unlatched, opened and closed on either side by persons riding or driving without descending from horse or vehicle. The gate may also be readily opened by persons on foot as they approach the gate or after they have reached it.

Among the objects of the invention, beside that of enabling persons to open and close the gate while riding or driving, are means for preventing the gate from sagging or dropping to the ground at its free end, thereby interfering with the operation of the gate both with respect to opening and closing the same and for latching the gate when closed. These and other objects of the invention, will be more fully described in the attached specification and pointed out specifically in the claims.

In the accompanying drawing, Figure 1 is a perspective view of a farm gate shown partly open with my invention applied thereto. Fig. 2 is a detail view, partly in section, of the upper hinge on which the gate is hung. Fig. 3 is a similar view of the lower hinge. Fig. 4 is an inside view of the post to which the latch keepers are attached. Fig. 5 is a cross sectional view of the upper rail of the gate, on the line 5—5 of Fig. 1.

Similar reference characters indicate the same parts in the several figures.

The letter A indicates a fence provided with a gate opening B on one side of which is a post C to which the gate D is hinged, the opening B being guarded on the other side by the post E to which the latch keepers are attached.

F and G are posts on opposite sides of the fence A in line with the hinge post C against which the gate D strikes when opened to its full width, and held in contact therewith by suitable hooks, or other fastening means, until released by the latch operating device to be described hereinafter.

The post C, to which the hinges 1, 2 are attached, is preferably made in two parts, 3, 4, firmly secured together. Through the part

3 is made a mortise 5 for the upper hinge 1 and a similar mortise 6 for the lower hinge 2.

Reinforcing bands 9 and 10 of sheet metal embrace the part 3 of the post C opposite the mortises 5 and 6 to coact with the hinges for raising and lowering the swinging end of the gate. This is accomplished by causing the outer members 13 and 14 of the hinges to be adjustable into and out of the mortises 5 and 6. The member 13 is provided with a series of cross notches 15 on its upper side and an equal number of similar notches 17 on its lower side. Between the band 9 and the post C is a sliding plate 16 adapted to engage one of the notches 15 when pushed down. The front end of the gate is raised or lowered by raising the plate 16, disengaging the notch 17 in the hinge member 13 from the plate 9, then moving said hinge member into or out of the mortise 5 until the gate is raised to the correct height, whereupon a notch 17 may be once more engaged with the band 9 and the plate 16 pushed down into a notch 15. If desired the lower hinge may be adjusted to correct the set of the gate, but in this case a pin 19 is arranged to slide between the band 10 and the post C into one of a series of perforations 18 extending vertically through the hinge member 14.

The gate D, may be any one of the forms now in use, the invention having no reference *per se* to the gate, but for the sake of illustration one construction has been shown, wherein will be found a series of parallel rails 23, horizontally disposed, bolted or otherwise secured to vertical bars 24 at the front and rear ends of the gate. A diagonal brace 25 is also secured to the horizontal rails 23 on each side of the gate to stay it and increase its rigidity. Vertical bars 26 further connect the rails 23 on each side of the gate near its center, extending from the diagonal brace 25 to the top and bottom of the gate. Near the top and bottom of the gate are two horizontal rails 27, 28 pivoted to the central brace or vertical bars 26 by bolts 29, 30, respectively. These rails project beyond the bars 24 at the front of the gate and serve as latches to fasten the gate when closed. The rear ends of the rails 27, 28 are heavier than the forward ends for the purpose of keeping the forward ends in raised position for engagement with their respective keepers when the gate is closed. Links 31 which may be cords or wires, con-

nect the rear ends of the rails 27, 28, so that when one rail is raised at its rear end by the gate operating means for the purpose of unlatching the gate before it can be opened, both rails will be sure to operate.

Embracing the vertical bars 24 at the front of the gate midway of their height is a reinforcing strip 36 through which passes, in a horizontal direction between two of the rails 23, a screw 37, the head of which is on the outside of the gate. Threaded on the screw is a nut 38 having lateral projections to which are attached connecting rods, wires or cords 39, passing rearwardly to the upper hinge member 21 and secured thereto. On turning the screw 37 in the proper direction, the nut 38 will be drawn up on said screw, tightening the connections 39, which causes the front end of the gate to be elevated. The reverse movement of the screw lowers the front of the gate. By this means, it is readily seen how the gate is adjusted in a slight degree as to height, and to its proper relation with the latch keepers on the post E.

Journalled vertically in a through bearing 40, attached to the post C at its rear near the top and a step bearing 41 near the ground, is a shaft 42 extending some distance above the post C where it turns rearwardly at a right angle to form an arm 43 on which is pivoted a lever 44 perforated at its outer end 45 and carrying an adjustable weight 46 upon its inner end. Two cords, rope or other flexible connections, are attached to the perforated end 45 of the lever 44 and, passing under the arm 43 of the shaft 42 through a loop 49, extend in opposite directions to posts H and I planted in the ground beyond the posts F and G. A bearing 50 on the upper end of each post H and I carries a pulley 51 over which the flexible connections 47, 48 pass, the extreme ends of said connections having attached thereto weights 52, 53, sufficiently heavy to keep the connections extended without operating the gate mechanism. Above each pulley 51 is pivoted a finger 54 lying parallel with the flexible connections, each finger having an eye 55 at its end through which said flexible connections pass and by which they are guided to the pulleys 51.

Above the gate post C is a horizontal arm 56 enlarged at one end through which an opening 57 is made for the passage of the shaft 42. A pin 58, or a bolt, if preferred, connects the arm 56 to the shaft 42, loosely, so that the arm has a slightly vertical movement with respect to the shaft. On the end of the arm 56 which overlies the gate D is pivoted a yoke 59, the fingers 60 of which project downwardly upon opposite sides of the top rail 23 of the gate and are provided with rollers 61 which bear against said rail. The lower ends of said fingers 60 are connected beneath the rail by a plate 62. The opposite or shorter end of the arm 56 has

attached thereto a downwardly extending link 63 provided with a series of holes, in any one of which may be pivoted a lever 64 having an elongated slot through its inner end for the passage of the vertical shaft 42, while its outer end is connected by cords, wires or rods 65 with the lever 44 on the weighted side of its fulcrum. A series of holes 66 in the lever 44 permits the adjustment of the rods 65 to change the leverage.

Pivoted on a vertical pin 67 projecting upwardly from the top of the gate post C is a latch operating lever 68 having a slotted opening in its outer end through which passes the vertical shaft 42, while its inner end is attached to the upper latch rail 27 through the medium of a flexible connection 69, here shown as a short chain. The vertical pivot pin 67 passes freely through a hole in the lever 68 so that it may swing without difficulty in both a vertical and horizontal direction.

Secured to the post E in position to engage the latch rails 27, 28 of the gate D are two keepers 70 and 71, the upper one of which, 70, is placed to engage the latch 27, while the latter, 71, holds the latch 28.

The operation of the gate is as follows:— Assuming that the gate is closed, a person approaching it in either direction on horseback, in a carriage, or on foot, and desiring to open the gate, grasps the flexible connection 47 or 48, on the side of the gate on which the person happens to be, where it hangs down beside the post H or I, and draws it downward. The first result will be to tilt the lever 44, raising its weighted end and, through the cords, wires or rods 65, cause the lever 64 to depress the outer end of the lever 68. This will cause the inner end of lever 68 to rise and, through the flexible connection 69, rock the latch bars 27, 28, depressing their forward ends. The said bars, be it remembered, are caused to move together because of the connecting links 31 extending from one to the other. By the time the outer end of the lever 44 completes its movement and rests on the arm 43 extending from the vertical shaft 42, the latch rails 27, 28 will have been lowered sufficiently to pass beneath the keepers 70 and 71. Further pulling on the flexible connection 47 or 48 will cause the shaft 42 to turn and, through the connection of the arm 56 and yoke 59 with the gate D, the latter will be swung away from the person operating the flexible connection until the gate strikes one of the posts F or G, raising the latch 78 thereon which hooks over the latch bar 27 and holds the gate in open position.

After passing through the gate and reaching the flexible connection on the other side, by pulling down this connection, the latch rails 27 and 28 will be operated as before, disengaging the former from the latch 78 and

swinging the gate closed. Just before the gate closes, the flexible connections will be released to permit the latch rails 27, 28 to resume their normal positions and engage the keepers or dogs 70 and 71 on the post E.

What is claimed is:—

1. A swinging gate having a pivoted latch rail extending longitudinally thereof and projecting beyond each end of the gate; a gate post, a lever pivoted to said gate post and arranged to swing in horizontal and vertical planes, the inner end of said lever flexibly connected to the rear projecting end of said latch rail, a keeper for engaging the opposite ends of the latch rail, and means for operating said lever to disengage the latch rail from its keeper.

2. Combined with a swinging gate, a gate post to which said gate is hinged, a vertical shaft pivoted on said post, an arm pivotally connected to said shaft and extending horizontally above said gate and flexibly attached thereto, an arm projecting rearwardly at the top of said shaft, and means connected to said arm and extending beyond the gate on each side for turning said shaft and swinging the gate in either direction.

3. A swinging gate, a pivoted latch rail thereon, and rearwardly projecting hinge members, combined with a gate post provided with coacting hinge members and a shaft vertically pivoted thereto, a horizontal arm pivoted to said shaft and flexibly connected to said gate, a latch bar operating lever pivoted to said gate post, a second lever pivoted to said horizontal arm and adapted to operate said latch bar operating lever, a rearward extending arm on the upper end of

said shaft, a lever pivoted thereto, a link extending between said lever and the lever pivoted to said horizontal arm, and flexible cords attached to the lever mounted on said rearwardly extending arm and carried to each side of the gate post and suitably supported, whereby on pulling either of said cords the gate is first unlatched and then thrown open if the gate be shut or closed if the gate be open.

4. A swinging gate, a gate post to which the gate is hinged, a shaft journaled in vertical position on said gate post, a horizontal arm pivoted to said shaft and extending over said gate, and a yoke trunnioned to the end of said horizontal arm and straddling the top rail of said gate.

5. A swinging gate, a gate post to which said gate is hinged, hinges for said gate the outer member of each hinge adapted to be moved longitudinally for raising or lowering the front end of said gate, and means on the front end of said gate for sliding the inner member of the upper hinge longitudinally.

6. A swinging gate, a gate post to which said gate is hinged, the inner member of the upper hinge adapted to slide on the gate, a horizontal screw bolt at the front of the gate adapted to be turned, a nonrotatable nut thereon and connections between said nut and said inner hinge member.

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

WILLIS NELSON MARK.

Witnesses:

A. R. YORK,  
C. B. O'CONNELL.