

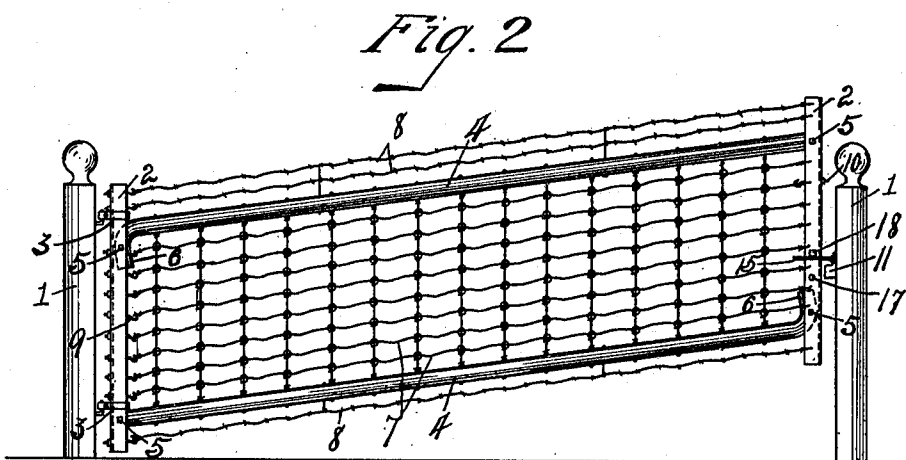
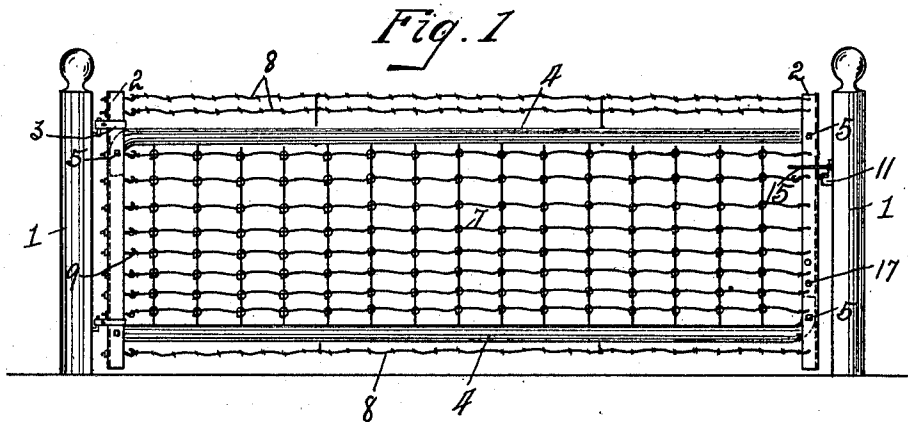
V. HOXIE.  
GATE.

APPLICATION FILED OCT. 24, 1910.

990,134.

Patented Apr. 18, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3

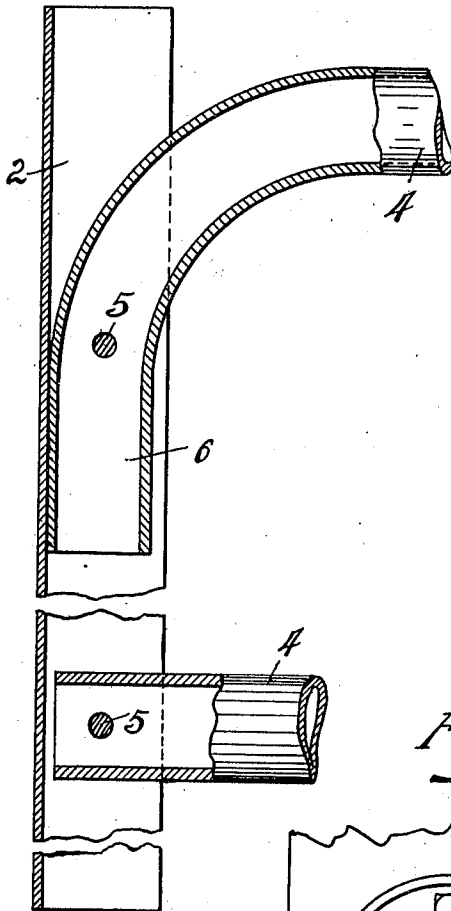


Fig. 4

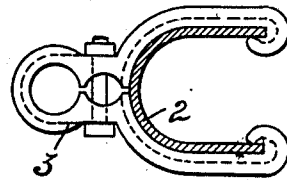


Fig. 5

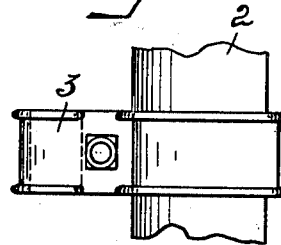


Fig. 6

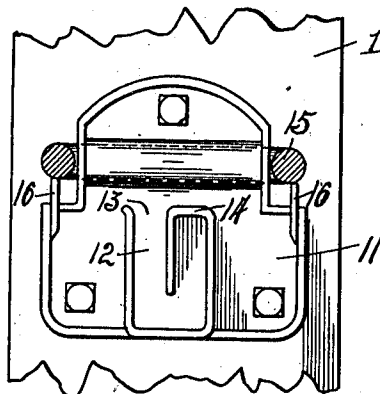
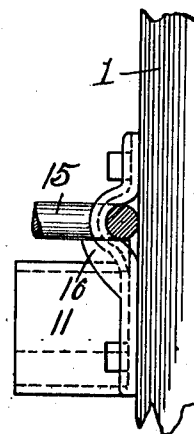


Fig. 7



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# UNITED STATES PATENT OFFICE.

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## GATE.

990,134.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed October 24, 1910. Serial No. 588,862.

*To all whom it may concern:*

Be it known that I, VERNON HOXIE, a citizen of the United States, and a resident of Adrian, in the county of Lenawee and State of Michigan, have invented a certain new and useful Gate; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to gates, and particularly to farm gates of the class adapted to be vertically tilted to raise one end thereof for the passage of pigs or other small animals thereunder.

The object of my invention is the provision of an improved and highly efficient gate of this character, which is simple, strong and durable in its construction, inexpensive of manufacture, and adapted to have the free or swinging end thereof automatically rise when released from means holding the same in lowered position, thus causing such end to normally stand in elevated position.

The invention is fully described in the following specification and a preferred embodiment thereof illustrated in the accompanying drawings, in which,—

Figures 1 and 2 are elevations of a gate embodying my invention, with the free end of the same respectively in lowered and raised position. Fig. 3 is an enlarged sectional detail of the frame of one end portion thereof. Figs. 4 and 5 are enlarged details of a form of hinge member used in connection with the gate, and Figs. 6 and 7 are enlarged details of a latch member for use in connection with the gate.

Referring to the drawings, 1, 1 designate two posts between which a gate comprising my invention is hung. This gate comprises the end frame pieces 2, 2 which are preferably, but not necessarily, of channel-iron form, and one is shown as carrying hinge lugs 3 of any suitable form which pivotally attach to one of the posts 1 in a convenient manner.

The horizontal or longitudinal frame bars of the gate comprise the upper and lower bars 4 which have their ends fitting within the channels of the end bars 2 and pivoted

thereto by bolts or pins 5. The rear end of the upper bar 4, or the end thereof which is disposed adjacent the pivot-post 1, and the forward end of the lower bar 4 are given right angled bends toward each other, as shown at 6, and the pivots 5 at such ends of the bars project through the angled portions of the bars so that they are offset from the axes of the respective bars 4, or, in other words, stand with the pivots at the opposite ends of the bars 4 in planes which are out of parallel with the bar axes. The bending of the ends of the bars 4 in this manner enables the forward end of the gate to be raised from horizontal position, as indicated in Fig. 2, and stops a lowering movement of the gate at substantially horizontal position due to the angled ends of the bars coacting without their pivots with the inner side of the channel bars 2, 2, as indicated in Figs. 1 and 3.

A wire fabric 7 is carried by the frame and has its vertical or stay wires attached to and connecting the horizontal bars 4 while its horizontal or longitudinal wires attach to and connect the end bars 2, 2. The end bars 2, 2 are also shown as being connected above the upper frame-bar 4 and below the lower frame-bar 4 by one or more barbed wires 8. The barbed wires 8 and at least the longitudinal wires of the fabric 7 are crimped, as is usual in wire fabrics for use in fences or the like, and are so stretched relative to the gate frame that they will exert a contracting stress of considerable force upon the end bars 2, 2 when the gate is in lowered or horizontal position, as indicated in Fig. 1. This stress acting upon the end bars 2 in cooperation with the offsetting of the rear pivot of the upper bar 4 and the front pivot of the lower bar 4 from the axes of the respective bars will cause the forward or free end of the gate to normally rise until the tension of the wires and the weight of the forward end of the gate become equal so that one counterbalances the other, due to the lessening of the distance between the end bars 2 upon a rising of the forward end of the gate. It will now be apparent that to lower the elevated end of the gate requires a lowering stress to be applied thereto in order to stretch the horizontal wires to the extent necessary to place the gate in lowered or horizontal position.

For the purpose of adjustment the wires connecting the end bars 2, 2 are attached at

one end to adjusting bolts 9 projecting through one of said bars.

The forward end of the gate when lowered is held in such position by a stud 10, which projects from the forward bar 2 thereof, engaging with a latch-member 11 fixed to the adjacent side of the associated post 1. The latch member 11 is provided with a U-shaped slot or recess 12, the upper end of one leg of which is open as at 13 to permit the lug 10 to enter the slot at such end and then pass downwardly and laterally into the other leg of the slot, its upward movement when in said latter leg of the slot being limited by the closed end 14 thereof, as is apparent.

In order to prevent the gate from swinging open when its forward end is elevated and the lug 10 is out of engagement with the cooperating latch member 11, a U-shaped latch member 15 is hinged for vertical swinging movements in the present instance to the upper portion of the latch member 11 and is adapted to have its legs swung into horizontal position with the adjacent end-bar 2 of the gate therebetween. The member 15 is supported in horizontal position by lugs 16 carried by the latch member 11.

If it is desired to positively lock the forward end of the gate in elevated position or to raise and hold the same at a greater height than the spring action of the fabric will draw it, the forward end-bar 2 may be provided with a series of apertures 17 for receiving a bolt 18, which may be inserted above the latch member 15 in position to rest thereon.

It is apparent that I have provided a simple, strong and durable farm gate which is inexpensive of manufacture and adapted to have its forward end automatically rise, when released for such purpose, to permit the passage of pigs or other small animals thereunder.

I wish it understood that my invention is not limited to any specific construction or arrangement of the parts except in so far as such limitations are specified in the claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is,—

1. A gate having pivotally connected end and horizontal bars with a pivot of each horizontal bar offset therefrom, and an elastic filling connecting the end bars and cooperating with the bars to effect a normal raising of the forward end of the gate from lowered position.

2. A gate having pivotally connected end and horizontal bars, the pivot at an end of each horizontal bar being offset from the axis of its bar whereby a line connecting the pivots at opposite ends of a bar is out of

parallel with the bar axis, and means exerting a relative contracting stress upon the end bars to cooperate with the several bars and the pivotal points of connection thereof to effect a normal elevating of the forward end of the gate from horizontal position.

3. A gate having pivotally connected end and horizontal bars, the horizontal bars each having one end only thereof angled toward the other bar and pivoted to the associated end bar at a point which is offset from the axis of its horizontal bar, and spring means connecting the end bars and exerting a relative contracting stress upon said end bars and cooperating with the bars and the points of pivotal connection thereof to effect a normal raising of the forward end of the gate from horizontal position.

4. A gate having pivotally connected top, bottom and end frame-bars, the top bar having its rear end angled downwardly, and the bottom bar having its forward end angled upwardly, with the pivots at such ends of said bars projecting through said angled portions and offset from the axes of the respective bars, crimped wires connecting the end bars and adapted when the gate is in horizontal position to exert a contracting stress upon said end bars, said wires and manner of pivoting the frame-bars causing the forward end of the gate to normally raise from lowered position.

5. A gate having pivotally connected top, bottom and end bars, the rear end of the top bar being angled downwardly and having its pivot offset from its axis and the forward end of the bottom bar being angled upwardly and having its pivot offset from its axis, the angled ends of said bars cooperating with the end bars to limit a lowering of the forward end of the gate and spring means exerting a contracting stress upon the end bars and cooperating with the manner of connecting the frame bars to cause the forward end of the gate to normally rise from lowered position.

6. A gate having pivotally connected top, bottom and end bars, the pivots of the respective top and bottom bars being in a line which is out of parallel with the axis of the associated bar, and a wire fabric having at least its longitudinal wires crimped to exert a relative contracting stress upon the end bars when the gate is standing in substantially horizontal position and cooperating with the manner of pivoting the frame bars to effect a normal raising of the forward end of the gate from lowered position.

7. A gate having pivotally connected end and horizontal frame-bars, one of the pivots of each of the horizontal bars being offset from the axis of its bar, yielding means exerting a contracting stress upon the end bars and cooperating with the frame-bars and the manner of pivoting the same to effect a nor-

mal raising of the forward end of the gate from lowered position, a stud projecting from the forward end of the gate, and a fixed latch member having an angled slot with which said stud coöperates to hold the gate in lowered position.

8. A gate having pivotally connected end and horizontal bars, the horizontal bars each having one of the pivots at opposite ends thereof offset from the axis of its bar, and elastic means acting on the end bars to coöperate therewith and with the manner of pivoting the bars to effect a normal raising of the forward end of the gate.

9. A gate having pivotally connected end and horizontal bars, the upper bar having one end and the lower bar having the other end angled with such angled portions pivoted to the respective end bars, and elastic means forming a filling for the gate and coöperating with the end and horizontal bars to effect a normal raising of the forward end of the gate from lowered position.

10. A gate having pivotally connected end

and horizontal bars, the horizontal bars each having one of opposite ends thereof angled with the pivots of such ends disposed in said angled portions, elastic wires connecting the end bars and acting as a filling for the gate, said wires, and bars coöperating to effect a normal raising of the forward end of the gate.

11. A gate having pivotally connected end and horizontal bars, the horizontal bars each having one of opposite ends thereof angled toward the other bar with the pivots of such ends disposed in such angled portions, and an elastic fabric connecting said end bars and coöperating therewith and with the horizontal bars to effect a normal raising of the forward end of the gate.

In testimony whereof, I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

VERNON HOXIE.

Witnesses:

HOMER J. SOLEAU,  
W. F. TRUMAN.