

W. RUBLE.

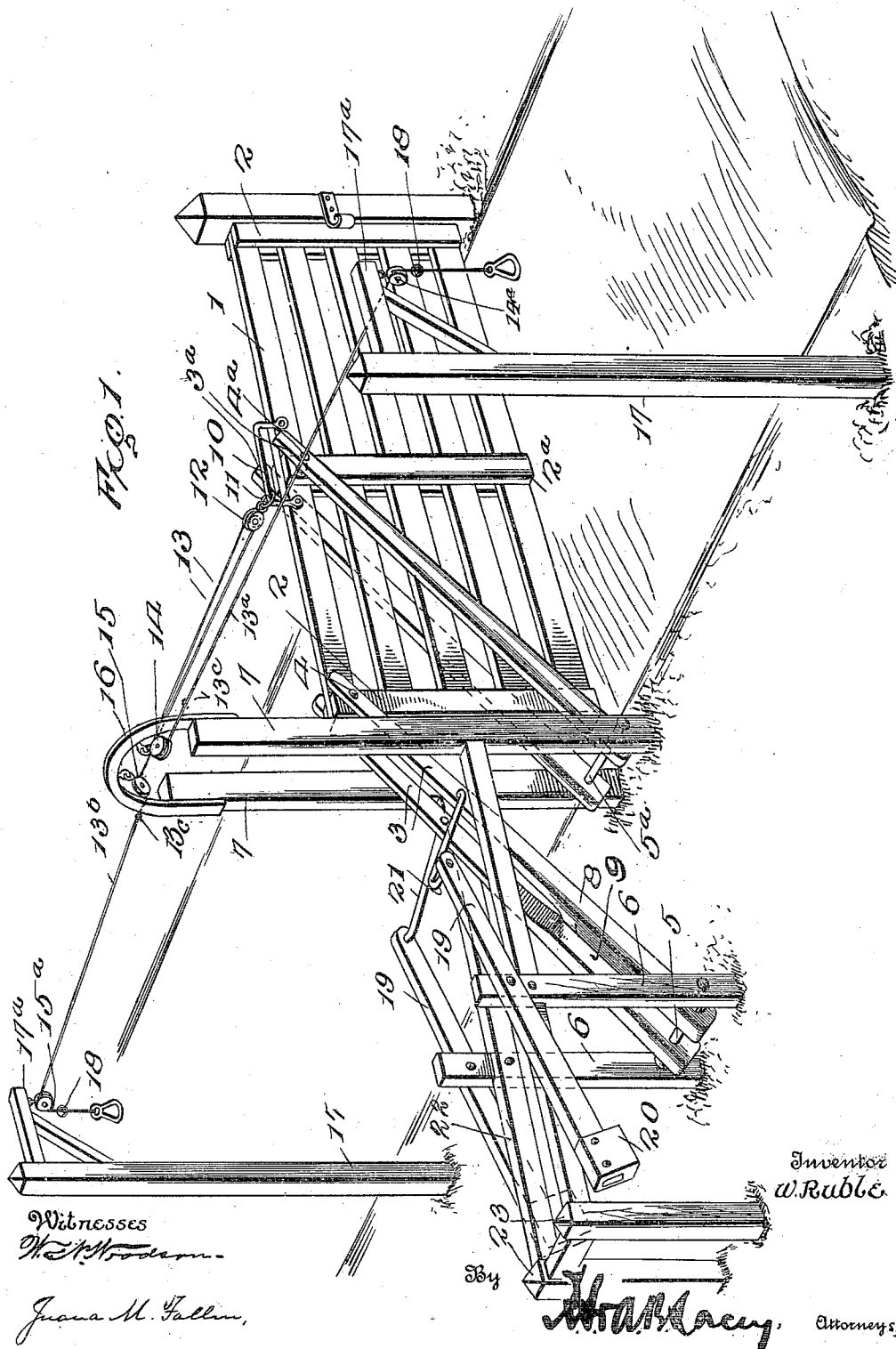
FARM GATE.

APPLICATION FILED MAY 28, 1910.

979,708.

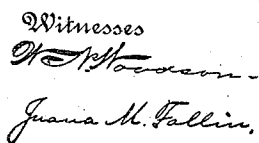
Patented Dec. 27, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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FARM-GATE.

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Specification of Letters Patent.

Patented Dec. 27, 1910.

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To all whom it may concern:

Be it known that I, WALTER RUBLE, citizen of the United States, residing at Culdesac, in the county of Nez Perce and State of Idaho, have invented certain new and useful Improvements in Farm-Gates, of which the following is a specification.

This invention comprehends certain new and useful improvements in farm or road gates of the type that are designed to be operated at a distance, without dismounting from a horse, and without alighting from a vehicle as the gate is approached or departed from, and the invention has for its primary object an improved construction of gate of this character which will be durable and not liable to sag or otherwise get out of order and which will be effective in operation and capable of being easily manipulated.

The invention also has for its object an improved gate arranged to move backwardly or to open position while held in substantially horizontal position and in a direction at right angles to the road, the parts being so constructed and arranged that the gate will be prevented from oscillating and vibrating laterally and capable of being easily opened or closed even when the wind is blowing at right angles to the direction of movement of the gate and under any conditions which would prevent, or at least seriously impair the operation and usefulness of a swinging gate.

The invention also has for its object an operating mechanism which may be easily applied to any ordinary gate and the operation of which is not retarded by any sagging of any of the posts. And the invention has for a further object to generally improve this class of devices and produce a farm gate which will possess to a marked degree, the characteristics of simplicity, and effectiveness and ease of operation.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a perspective view of a gate embodying the improvements of my inven-

tion; the gate being shown in closed position; Fig. 2 is an end elevation of the gate, showing it in open position in full lines and in closed position in dotted lines; and Fig. 3 is a top plan view of the gate in open position, the main posts being shown in horizontal section.

Corresponding and like parts are referred to in the following description and accompanying drawings by the same reference characters.

In carrying out my invention, the gate itself may be of any desired size, construction, or design, and in the present instance is of the rail type, designated 1 and embodying any desired number of horizontally extending rails, connected at their ends and if desired, at intermediate portions also to the vertical stiles or battens 2 which are preferably arranged in pairs on opposite sides of the rail, as shown.

The gate 1 is pivotally connected at or near its upper rear corner to the upper ends of a rear pair of supporting bars 3, being connected to said bars in the present embodiment of the invention by a transverse bolt or pin 4 which passes through the bars and the rear stile 2 and interposed top rail 1, the supporting bars embracing the gate, as clearly illustrated in the drawing. The lower ends of the rear supporting bars 3 are pivotally mounted upon a cross rod 5 which is secured to the uprights or standards 6 mounted at the required distance, say one half the length of the gate 1, in the rear of the main posts 7 between which the upper portions of the bars 3 are adapted to pass. The lower end of the bars 3 are mounted between the standards 6 sufficiently close thereto to prevent any lateral oscillation of the bars in their pivotal or rocking movement. The gate 1 is also supported by a front pair of bars 3^a, said last named bars straddling or embracing the sides of the gate and being pivotally connected thereto near their upper ends, as by a cross pin 4^a. The bars 3^a are pivotally mounted at their lower ends upon a cross rod 5^a which is secured to the main post 7, the bars 3^a being mounted between the posts as shown, and sufficiently close thereto to avoid any lateral oscillation. It is also to be noted that the supporting bars 3 are somewhat transversely thickened near their lower ends as indicated at 8 so as to provide guiding edges 9 which are relatively close together and

which are so designed to guide the lower edge of the gate in its opening and closing movements and prevent lateral vibrations.

In order to move the gate to a closed position if it be open and to an open position if it be closed, I have provided the following mechanism: A rod 10 is secured at its ends to the topmost rail extending over the upper edge thereof longitudinally of the rail, and a link 11 is mounted for movement on the said rod, said link being secured to the block of a pulley 12. The intermediate portion of a single actuating cable is run freely through or around the pulley 12, the said two runs designated 13 being passed respectively around the pulleys 14 and 15 that are suspended from an arched brace bar 16 connecting the upper ends of the posts 7 and serve to brace the same as well as serve as a support for the pulleys 14 and 15. The cable is then run in opposite directions as indicated at 13^a and 13^b any required distance away from the gate at right angles thereto and these last named runs are passed over pulleys 14^a and 15^a that are supported by arms 17^a which project forwardly from the post 17. Weights 18 are secured to the downwardly extending end of the stretchers or runs 13^a and 13^b below the pulleys 14^a and 15^a the weight being merely sufficient to hold the strips 13^a and 13^b taut. The free ends of the last two named stretches of cable may be used as handles or any desired form of separate handle may be attached to the end as desired. The stretches 13^a and 13^b are each knotted or otherwise provided with protuberances 13^c to limit their movement in one direction through the pulleys 14 and 15.

In order to avoid any jar to the parts and at the same time insure that the gate will not stick at the center of movement, but will move easily and freely from and to either open or closed position, I have provided counterweighted or balancing levers 19 which are fulcrumed intermediate of their ends on the upper ends of the standards 6 and that carry at one end weights 20 of any desired character and arranged either stationary or adjustable. These levers are connected at their opposite ends to the respective bars 3, as by link rods 21.

22 designates substantially horizontal guides which are in the form of bars connected at their forward ends to the inner or opposing faces of the main posts 7, the said guide bars being also connected intermediate of their ends to the standards 5 as shown and being connected at their rearmost ends to the other standards 23. By means of these guide bars, the rearmost supporting bars 3 will be properly guided in their movements and all tendency to lateral oscillation will be obviated.

From the foregoing description in connection with the accompanying drawings

the operation of my improved gate and actuating mechanism therefor will be apparent. In practical use when a traveler along the road approaches the gate in either direction, say that in which the stretch 13^a of the cable extends he will pull upon the weighted end of said cable (if the gate be closed), and will thereupon rock both pairs of the bars 3, 3^a, the gate being thereby raised and held in a substantially horizontal position as it is moved rearwardly. In this movement of the gate, the bars will manifestly be accompanied by a swinging movement of the levers 19 and there will of course come a time when the levers are in a substantially vertical position, but the momentum of the parts, levers included, will insure that the gate will not stick at one-half open position but will move the gate past the center or one-half position and to fully open position. As the gate nearly reaches the fully open position, the levers will, of course, have their weighted ends swung upwardly and the completion of the opening movement will be effected in a manner to avoid any shock or jars. The reverse movement, that is, a movement to close the gate is obviously performed in a similar manner.

It will thus be seen that I have provided a simple, durable and efficient construction of gate operating mechanism in which the gate is balanced throughout its entire movement in opening and closing, in which all jar is avoided, in which the gate is prevented from sticking in one-half open position and in which the swinging or sagging of the parts is prevented, the gate being braced to the posts by the supporting bars and cross rods, and in which the gate is prevented from oscillating by the guiding function of the edges 9 of the foremost bars 3 and the guide bars 22 in connection with the rear supporting bars 3, the gate being thereby susceptible of free movement in a direct line to both open and closed position even in high winds and in snowy weather.

Among the advantages which may be mentioned for the single operating cable arranged as hereinbefore described, it may be mentioned, that if the operator holds onto the cable keeping it taut the gate will pass through without stopping and by his releasing the pull, the gate will go on down, whereas with separate cables attached at their ends to the gate a continued tension on either cable would tend to stop the gate one half open with the supporting levers in vertical position and the traveler would have to alight from his vehicle or dismount from his horse, and push the gate past the center.

Having thus described the invention, what is claimed as new is:

1. The combination of a gate, main posts between which the gate is adapted to move, an arched brace connected to the upper ends

of said posts, pulleys swiveled on said brace, a pulley carried by said gate, and a single actuating cable the intermediate portion of which has a running connection with the last named pulley and with the two first named pulleys the runs of the cable extending in opposite directions, for the purpose specified.

2. The combination of a gate, supports therefor, a rod connected to the gate, a link having a running connection with the rod, a pulley connected to said link, two other pulleys supported by said last named pulleys, and a single cable having a running connection over the first named pulleys and the respective second named pulleys and extended in opposite directions therefrom,

said cable being provided with protuberances designed to limit the movement in one direction over the last named pulleys. 20

3. The combination of a gate, supports therefor, a rod connected to the gate, a link having a running connection with the rod, pulleys, supports for said pulleys, and a single cable having a running connection with said pulleys and link and extended in opposite direction from the pulleys, for the purpose specified. 25

In testimony whereof, I affix my signature in presence of two witnesses.

WALTER RUBLE. [L. s.]

Witnesses:

E. J. MEIER,
AL FONBURG.