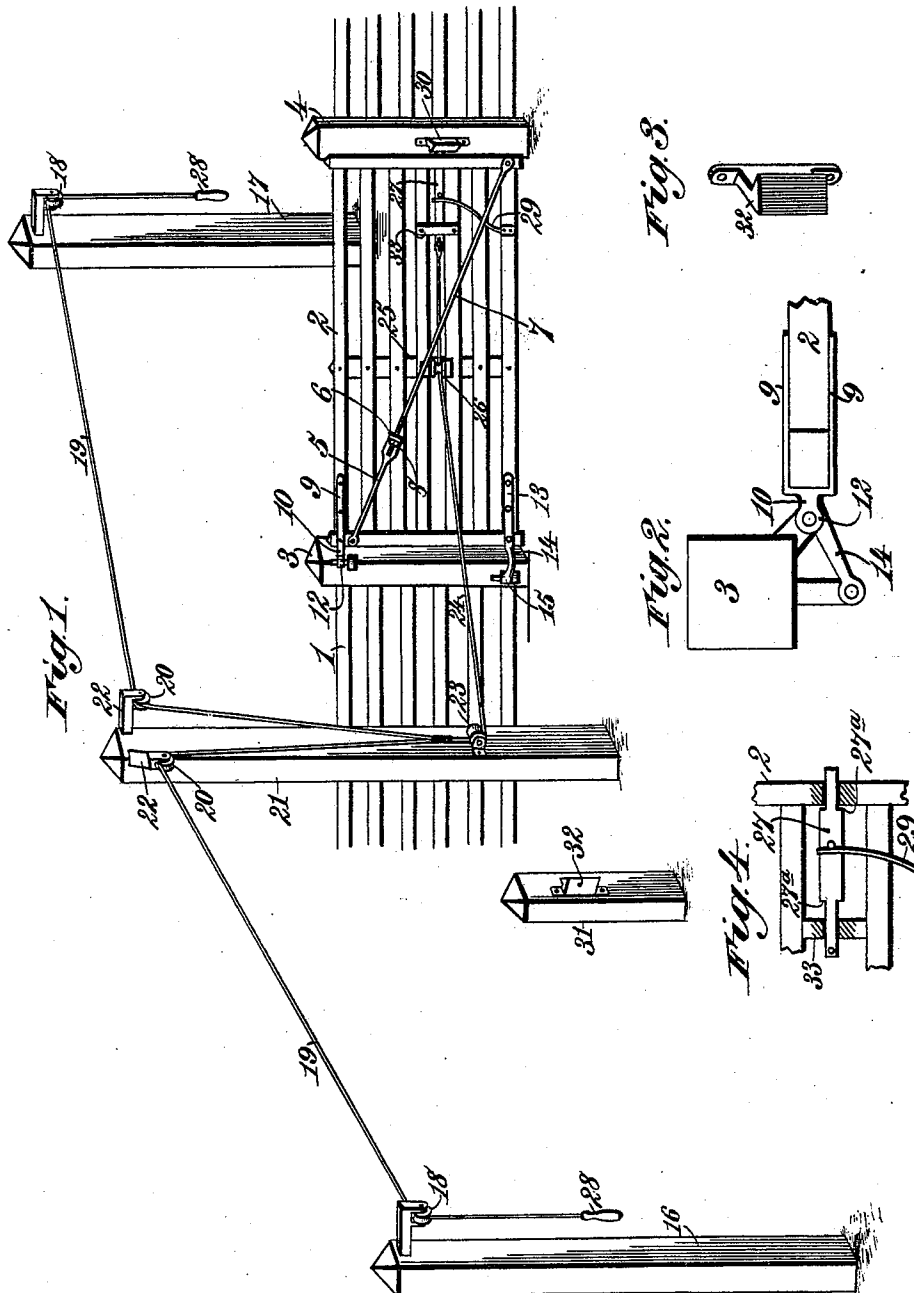


(No Model.)

J. D. PINE.
FARM GATE.

No. 525,230.

Patented Aug. 28, 1894.



Witnesses.
Robert G. Smith.
G. W. Rea.

Inventor.
Jackson D. Pine.
By *James L. Norris.*
Atty.

UNITED STATES PATENT OFFICE.

JACKSON D. PINE, OF NEAR LAKE VIEW, VIRGINIA.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 525,230, dated August 28, 1894.

Application filed May 19, 1894. Serial No. 511,844. (No model.)

To all whom it may concern:

Be it known that I, JACKSON D. PINE, a citizen of the United States, residing near Lake View P. O., in the county of Clarke and State of Virginia, have invented new and useful Improvements in Farm-Gates, of which the following is a specification.

My invention relates to that class of farm-gates operated by a person in a vehicle, or on a horse, who approaches the gate in either direction:

It is the object of my invention to provide a gate of this kind which shall be adapted to swing in one direction, only, and which may be opened from either side without drawing on the pulling-rope on the other side of the gate, and to combine with the latter an improved and simplified form of keeper, by which it may be temporarily held open or closed, its construction permitting considerable sag of the gate without preventing the latch from operating in either position of the gate.

It is one object of my invention, also, to provide a gate of this kind with a simple, and improved combination of pulling-ropes and supports therefor; whereby the operation is rendered much easier, the length of rope required is decreased, and the cost of construction materially lessened.

The invention consists in the parts and combinations of parts hereinafter fully described, and then particularly pointed out and defined in the claims.

To enable others to fully understand my invention I will describe the same in detail, reference being had, for this purpose, to the accompanying drawings, in which—

Figure 1 is a perspective view showing my invention. Fig. 2 is a detail view showing the construction of the displacing-hinge. Fig. 3 is the detent by which the gate is held open. Fig. 4 is a detail view showing a construction of the latch by which it is supported and guided in parts of the gate structure.

The reference-numeral 1, in said drawings, indicates the line of fence of which a farm-gate 2 constitutes a portion, its support being a post 3, upon which it is hinged, and a post 4, to which the free end of the gate is latched. I have shown in the drawings the ordinary construction of gate, consisting of a series of

horizontal strips, or bars, secured at their ends to vertical bars.

When using a gate of this construction, I provide means for diagonally bracing the same to prevent the sagging which ordinarily occurs in all gates of this class. This consists of a rod, or bar 5, suitably secured at one end to the top of the vertical bar at the hinged end of the gate and extending toward the corner of the latter which is diagonally opposite, the length of the bar 5 being preferably less than half the length of the entire brace. Upon its end is formed, or mounted, a lug 6, having an aperture which receives the threaded end of a second bar, or rod 7, which extends to and is secured to the lower end of the vertical bar at the free end of the gate. A nut 8 is turned on the threaded end of the rod 7 and bears against the lug 6 and by adjusting this nut any required tension may be imparted to the brace. A similar brace is arranged upon the opposite side of the gate, to equalize the strain and prevent springing, or warping the structure.

The gate is hung upon hinges secured to the post 3, the upper hinge consisting of two parallel straps 9, which lie upon opposite sides of the gate to which they are bolted. These straps, or plates, are bent at a right angle to partly cross the outer face of the vertical bar at the hinged end of the gate, and are then bent outward, forming a projecting arm 10, which is substantially central, as regards the straps 9, its extremity having an eye or bearing 12 for the pintle. The lower hinge is provided with arms 13 of substantially similar form, and is provided with a bar 14 which extends at an angle with the arm 10 to the side of the post 3 on which the gate opens. The end of said arm 14 is provided with a suitable bearing for the pintle. The latter I place upon the side of the post 4 upon which the gate is to open.

Upon each side of the gate and at a suitable distance therefrom are placed two uprights 16 and 17, arranged substantially in a line passing through the post 3 transversely to the line of fence 1. At the upper end of each post is arranged a pulley 18, over which runs a pulling rope 19, which is carried over a pulley 20, arranged at, or near the upper end of a third post, or upright 21, which is

placed in line, or nearly so with the others and between the gate-post 3 and the upright 16, being thus upon the side toward which the gate swings, when opened. Its distance from the post 3 is less than the length of the gate, so that when thrown wide open the latter will swing against the post 21. The pulleys 20 are preferably mounted on arms 22 which project from the post and the two pulling-ropes, after passing over said pulleys, are carried downward nearly to a pulley 23 and are there united in any suitable manner. A single rope 24 is then attached and led down to and beneath the pulley 23 and thence carried to the gate. Upon the latter between its ends is mounted a rigid vertical slat, or bar 25, on which is mounted a pulley 26, about half way between the top and bottom of the gate and in line with the latch, or nearly so. The rope 24 passes over this pulley and thence to the latch 27 to which its end is attached. The ends of the pulling-ropes hang from the pulleys 18 and are provided with hand-holds 28, which also serve as light weights to retain the ropes upon their pulleys and keep them moderately taut between the posts. The sliding latch 27 is thrown by a suitable spring 29 into engagement with its keeper 30 which is of sufficient length to compensate for any possible sagging of the gate, and is placed upon the side of the post 4.

Near the post 21, is a short post, or other support, 31, upon which is mounted a keeper 32, similar to that upon the gate-post 4. The post 31 is so placed that when the gate is thrown open the latch 27 will engage the keeper 32 and hold the gate, its release being effected by a pull upon the rope after passing through the gate-opening.

A simple and convenient construction for supporting and guiding the latch 27 is shown in Fig. 4, in which the ends of the latch are reduced somewhat and mounted in the vertical end-bar of the gate and in a block 33, secured to the gate-bars at a suitable point. Apertures resembling mortises are formed in said bar and block in which the latch slides freely, its movement in either direction being limited by the shoulders 27^a, which are at the ends of the two reduced portions of the latch. The latch, in this construction, is normally thrown into engagement with the keepers 30, or 32, by a spring 29, similar to that shown in Fig. 1.

By the use of the diagonal braces hereinbefore described, I am able to construct the gate without cutting mortises in its vertical end-bars and forming tenons on the ends of the horizontal gate-bars to fit said mortises. The ends of the latter are fastened in any suitable manner to the vertical end-bars and to the vertical slat, or bar 25, which serves as a brace, and the entire structure is stiffened,

supported, and prevented from sagging and warping by the diagonal braces 5—7, on both sides of the gate. By means of the latter, also, I can raise the gates sufficiently to enable it to swing over snow-drifts, as the location of the point of connection between the two parts 5 and 7, of which each brace is composed, permits the length to be considerably diminished without causing the threaded end of the part 7 to project above the gate, or abut against the post 3, as it would if the joint were located very near the upper end of the part 5, as has been usual heretofore.

By my invention the gate may be opened from either side without dismounting, and without taking up, or shortening, the pulling-rope upon the other side, thus reducing the quantity of rope required and avoiding the necessity of using heavy weights at the ends of the pulling-ropes to draw in the slack produced by closing the gate. The construction is simple and economical, and the operation of opening the gate is extremely simple and requires but little force, while its closing is wholly automatic, as soon as the latch is retracted from the keeper 32, on the post 31.

What I claim is—

1. The combination with a gate adapted to open in one direction only, of uprights arranged one on each side of and in line with the supporting-post, a third post arranged between the latter and one of said uprights, pulling-ropes carried over pulleys on said uprights thence over pulleys on the third post and united below the latter pulleys; and a single rope secured at the point of union and carried beneath a lower pulley on the third post, thence over a pulley on the gate and to the spring-pushed latch, substantially as described.

2. The combination with a gate adapted to open in one direction only, of uprights arranged one on each side of and in line with the supporting-post, a third post arranged between the latter and one of said uprights, pulling-ropes carried over pulleys on said uprights thence over pulleys on the third post and united below the latter pulleys; a single rope attached at the point of union and carried under a lower pulley, thence around a pulley on the gate and secured to the latch, and a separate support so arranged near the third post that the gate latch will engage a keeper thereon when opened, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

JACKSON D. PINE. [L. s.]

Witnesses:

E. G. HOLLIS,
T. C. WINDLE.