

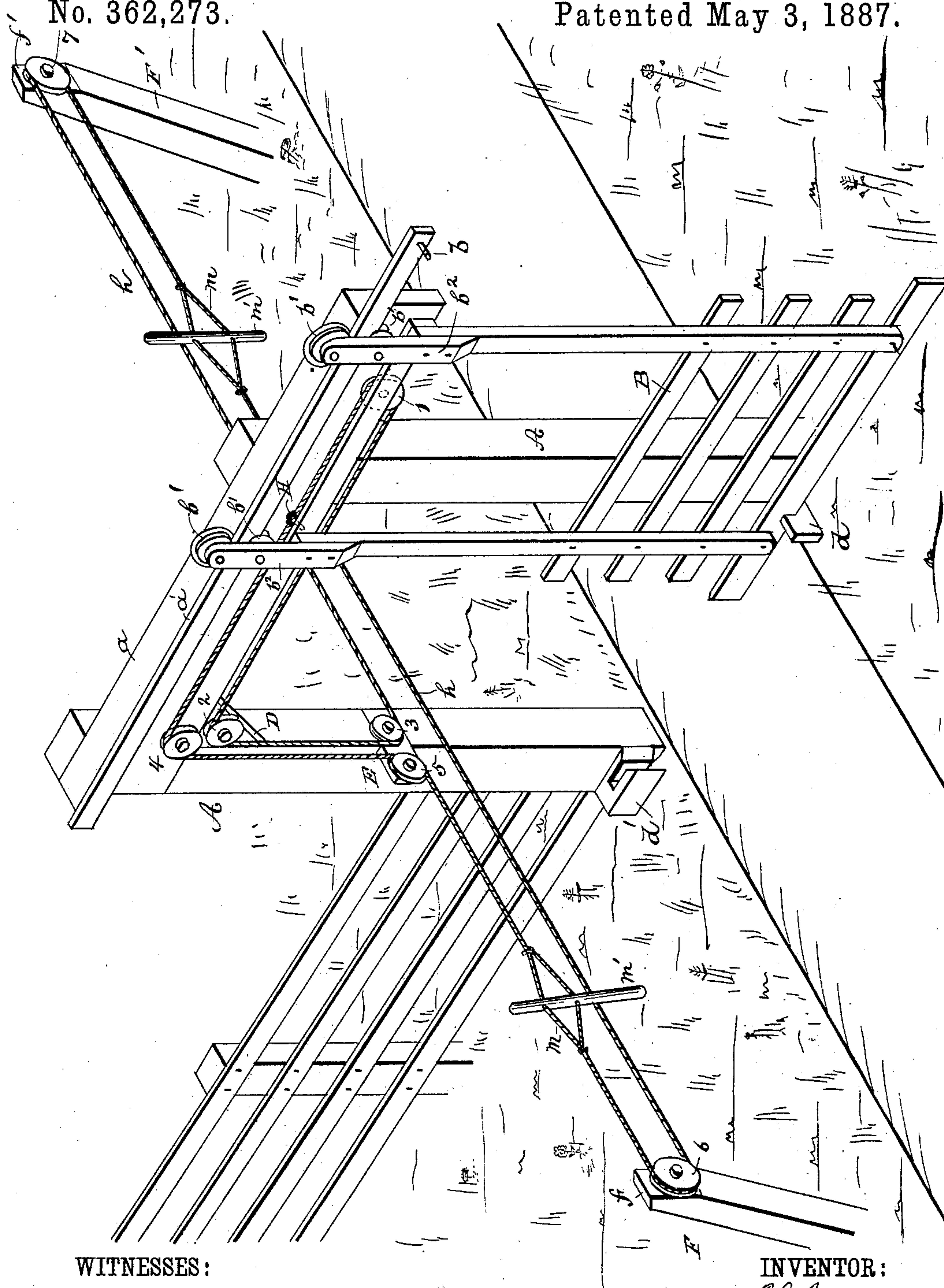
(No Model.)

T. J. GROSS.

GATE.

No. 362,273.

Patented May 3, 1887.



WITNESSES:

*D. W. Mott*  
*C. Sedgwick*

INVENTOR:

*T. J. Gross*

BY

*Munn & Co*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

THOMAS J. GROSS, OF MAPLE, MISSOURI.

## GATE.

SPECIFICATION forming part of Letters Patent No. 362,273, dated May 3, 1887.

Application filed January 18, 1887. Serial No. 224,681. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. GROSS, of Maple, in the county of Macon and State of Missouri, have invented a new and useful Improvement in Gates, of which the following is a full, clear, and exact description.

My invention relates to an improvement in gates, and has for its object to provide a gate not liable to be blocked by snow and ice, and which may be readily operated from either side of a fence or wall with equal ease.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawing, forming a part of this specification, which is a perspective view of my gate.

In carrying my invention into effect I provide two vertical posts, A, a given distance apart, uniting them at the top by a transverse beam, *a*, extending beyond one of the said posts, and attach to said transverse beam *a* upon its face, at the upper edge, a track, *a'*, provided at its end with a stop-pin, *b*.

Upon the track *a'*, I hang a gate, B, of any ordinary construction, the attachment being effected by grooved rollers *b'*, journaled upon extensions *b''*, secured to the vertical standards of the gate, which rollers engage the track *a'* above and below in the same vertical plane.

As a guide for the gate, a slotted horizontal bar, *d*, is fastened to the inner face of the rear gate-post, in which slot the lower slat or bar of the said gate is made to travel, while the front edge of said slat or bar, when the gate is closed, is adapted to enter a recess in a block, *d'*, secured to that side of the front post, A, upon which the gate is hung, the purpose of the said block being to prevent lateral play of the gate when closed.

As a means for operating the gate, a pulley, 1, is journaled in the front of the transverse upper beam, *a*, near the bottom and rear end thereof, while upon a diagonal bracket, D, secured in the corner formed by the intersection of the said transverse beam *a* and the forward post, A, a second pulley, 2, is journaled, and upon the inner face of the forward post, A,

above the center thereof, another pulley, 3, is journaled.

Above the pulley 2 upon the bracket D, in the same vertical plane therewith, a pulley, 4, is attached to revolve upon the upper transverse beam, *a*, which pulley 4 is in horizontal alignment with the aforesaid pulley 1 upon the opposite end of said transverse beam. To the inner face of the forward post, A, in horizontal alignment with the pulley 3, journaled in said inner face, a horizontal bracket, E, is secured flush with said face, upon which bracket a pulley, 5, is journaled. Thus in connection with the forward posts, A, and the transverse beam *a*, I employ five pulleys, as shown in the drawing and described above.

At either side of the forward gate-post, a distance therefrom, I secure standards F F', which standards have an inclination in the direction of the rear gate-post, the upper ends thereof being cut upon the inner side, so as to present beveled surfaces *f f'*, which said beveled surfaces of each standard F F', by means of the forward inclination of the standards, are in horizontal alignment with the inner face of the forward gate post, A. Upon the beveled surfaces of the standards F F' pulleys 6 and 7 are respectively journaled in horizontal alignment with the pulleys 3 and 5 upon the gate-post.

An apertured pin or screw-eye, H, is inserted in the cross-piece connecting the vertical standards of the gate at the top in alignment with the forward standard, or in the inner side of the forward standard itself, and to the said pin or screw-eye I secure one end of a cord, chain, or wire rope, *h*, which chain or cord is carried rearward over the pulley 1, then forward in parallel line over the pulley 2 upon the inclined bracket D, from thence downward under the pulley 3 upon the inner face of the forward gate-post, A, and over the pulley 7 upon the beveled face of the rear standard, F'. After passing over the latter pulley, 7, the chain or cord is carried horizontally and over the pulley 6 upon the inner or forward standard, F, thence under the pulley 5 upon the horizontal bracket E, and up over pulley 4, upon the transverse beam *a* to an engagement with the aforesaid pin or screw-eye H.



When the gate B is closed or in its normal position, a loop, *m*, is formed in the upper line of rope or chain *h*, near the inclined standard F, in which loop a bar, *m'*, is secured, forming a handle whereby the gate is operated from the inside. A similar loop, *m*, carrying a similar handle, *m'*, is formed in the lower line of cord or chain *h*, near the other inclined standard, F', whereby the gate is operated from the outside.

In the operation of my invention the gate may be opened and closed from either side by means of the handles *m'*. To open and close from the same side, the handle is grasped and carried forward by the person as he approaches the gate, and when said gate is reached it will be found opened wide. In closing the gate from the same side the handle is carried back as the party leaves the gate, the gate being fully closed when the inclined standard is reached. When it is desired to open the gate from one side and close it from the other, the operation is very convenient. When the handle is grasped upon the outside—for instance, as the party approaches the gate—the said gate is freely opened when reached, as aforesaid. The handle upon the other side has meanwhile traveled up toward the gate-post. Thus after the party has passed through the gate he has simply to grasp the handle upon that side and carry it as he passes on to the inclined post, whereupon the gate is tightly closed.

It will be observed that the operation of opening and closing in every event is in the direction that the operator would naturally walk, ride, or drive, and that the operation is accomplished simultaneously with the approach to or departure from the gate.

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

1. The combination, with a swinging rolling gate provided with an apertured pin, H, of the gate-posts A and transverse connecting-beam *a*, the diagonal bracket D, and horizontal bracket E, the pulleys 1 and 4, journaled in the transverse beam *a*, the pulley 2, journaled in the diagonal bracket D, pulley 3, journaled in the face of the forward standard, A, and pulley 5 upon the bracket E, together with an endless belt, *h*, attached to the gate-pin H and passing over said pulleys and also over pulleys 6 and 7, journaled upon beveled inclined standards at each side of the forward gate-post, A, as set forth.

2. The combination, with the gate-post A, upper transverse beam, *a*, attached track *a'*, the slotted guide *d*, and block *d'*, attached to said posts, and inwardly-inclined standards F F', erected at each side of the gate, having beveled faces *f f'* in horizontal alignment with the inner face of one standard A, of a gate, B, provided with extensions upon its vertical standards *b<sup>2</sup>* and grooved rollers *b'*, journaled to said extensions, a pin, H, attached to said gate at the top, and an endless rope attached to said pin adapted to pass over pulleys upon the gate-frame and inclined standards, and means for operating said rope, substantially as shown and described, and for the purposes herein set forth.

THOMAS J. GROSS.

Witnesses:

REUBEN N. LEYDE,

JOHN M. BUNCH.