

L. W. Sibley,

2, Streets, Street, 1.

Gate.

No. 111,266.

Patented Jan. 24. 1871.

Fig:1.

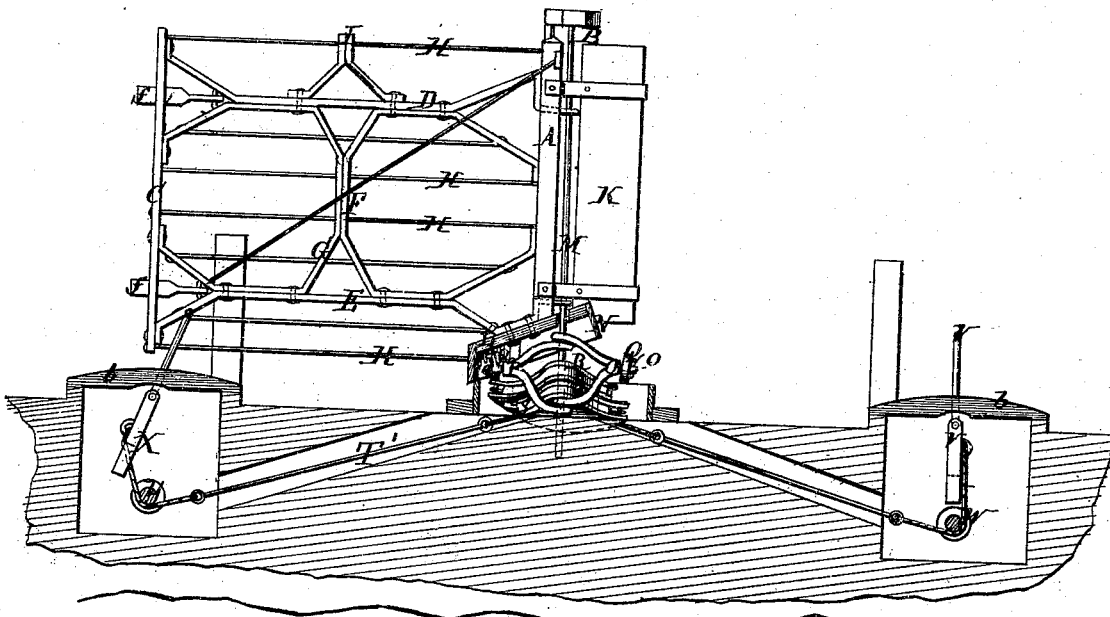


Fig:2.

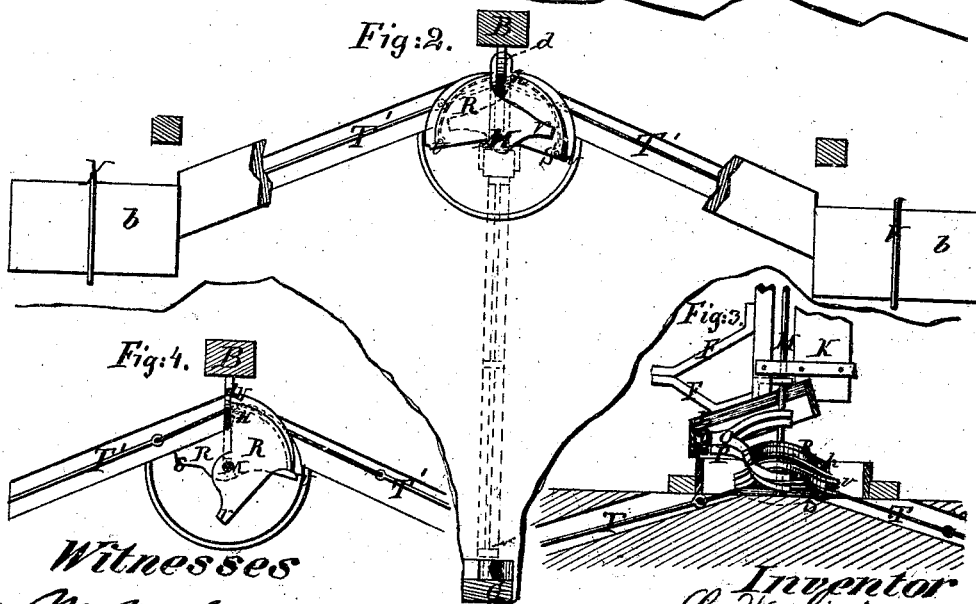
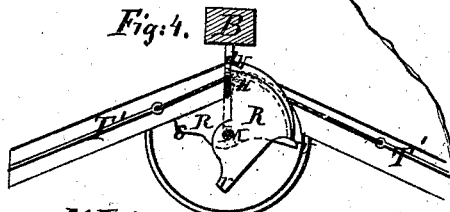
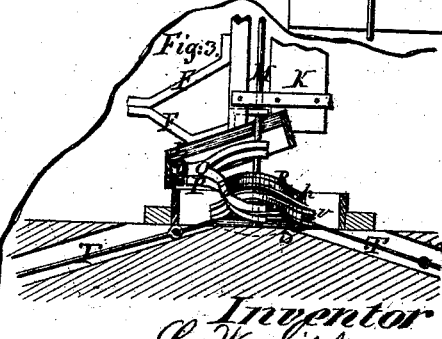


Fig:4.



Witnesses
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Fig:3.



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L. W. Sibley,

2. Sheets, Sheet, 2.

Gate.

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Fig 5

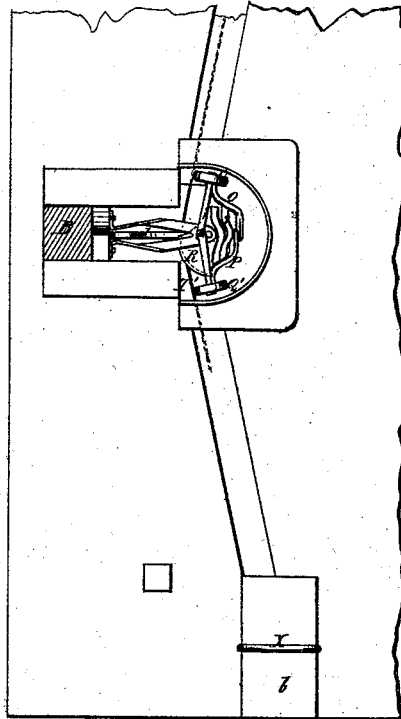
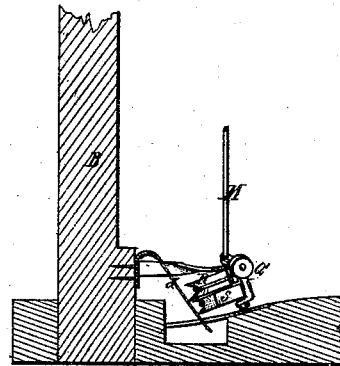


Fig 7



Fig 6



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United States Patent Office.

LYMAN W. SIBLEY, OF AMES, IOWA.

Letters Patent No. 111,266, dated January-24, 1871.

IMPROVEMENT IN GATES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, LYMAN W. SIBLEY, of Ames, in the county of Story and State of Iowa, have invented a new and useful Improvement in Gates; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in gates, and consists in an improved arrangement of means for opening and closing the gate by the action of the wheels of a vehicle coming in contact with levers at the side of the gate, all as hereinafter described.

Figure 1 is a longitudinal section through the operating parts, along the road-bed and side elevation of the open gate;

Figure 2 is a view partly in section and partly in plan;

Figure 3 is a detail section, showing the position of the pushers and the operating rollers when the gate is opened; and

Figure 4 is a horizontal sectional detail.

Figure 5, Sheet II, is a plan view of the levers for moving the gate, and the swinging arms on which it rests.

Figure 6, Sheet II, is a view, partly in cross-section, of said levers and swinging rollers.

Figure 7, Sheet II, is a sectional view, in perspective, of the plate attached to the gate, and by which it is supported on the swinging arms.

Similar letters of reference indicate corresponding parts.

The post A, by which the gate is hinged to the fixed post B, is preferably made of wood, but the post C is preferably made of iron, say a flat bar, and these two are connected by the upper bar D and the lower one E, the one being bent upward, and the other downward, a short distance from each end, for bracing or strengthening the connection with the posts.

These bars and the posts are further strengthened and braced by the bars F and G, the one F being connected at both ends to the post A, and bent, as shown, to join the bars D E and the other bar G, to all of which it is connected by rivets or bolts, and the one G being in like manner connected by both ends to the post C and to the bars D and E.

This arrangement provides a very strong and durable frame, and one which may be cheaply constructed.

The spaces between these bars may be guarded by small wires H, woven in any approved way, and the upper one may be supported by the braces I on the top bar D.

K is a counterbalancing board or plate, attached to the post A, behind the axis, to be acted on by the wind, to counteract, to some extent, the action of the same on the gate proper.

The hinged post A terminates at the bottom in a connection with a strong board or plate, L, attached so that the edge fronting the post C is the lowest.

This plate is circular for the most part, and the post is attached at about the center.

Immediately behind the post the pivot-rod M, on which the gate swings, passes through it.

For protecting the operating devices below, the said plate is provided with the flanges N, constituting a kind of hood.

O and P represent a pair of arms, carrying at the outer ends friction-rollers Q Q', and hinged at the other ends, which are branched to the pivot-rod M, which is here inclined from the vertical line toward the free end of the gate when closed.

R S represent a pair of pushing-levers, pivoted to the oblique part of the pivot-rod M, so that they and the arms O P swing in a plane oblique to the horizontal plane.

These push-levers are at one end in the form of a quarter section of a circle, or thereabout, and the other ends are shortened and narrowed down, as shown clearly in fig. 2.

The circular parts are grooved on their peripheries for carrying cords T', which are attached to the point U.

The one attached to the lever R extends to the lever V, passing over the guide-roller W, and the one attached to lever S extends to the lever X, passing over a similar roller, Y.

These levers are suspended on pivots *a*, in recesses in the ground, protected by covers *b*, one on each side of the gate, and the upper ends rise above the covers and spring over them, as shown, so that they will be moved by the carriage-wheels striking against them.

d is a spring catch, for holding the levers R S after they have been moved to open the gate.

e is a block hanging from the plate L, to prevent the rollers Q or Q' from passing the center of the plate L at the time the gate arrives at the open position.

When the gate is closed, the levers R S will stand in the position represented in fig. 2.

If a carriage is then driven against one of the levers V or X, say the one V, at the right, it will be moved so as to swing the curved end of the lever R toward it, throwing the end *r* against the arm O, which carries the roller Q; this will cause the roller to move forward under the oblique plate L and raise the gate,

which is capable of rising on the rod M, so that the latches *f* will be disengaged from the notches in the post *g*, and this roller further acting on the plate L will swing the gate around to the open position shown in fig. 1, where it will be retained by the spring *d*, behind which the point of lever R will catch when swung far enough by the action of lever V; at this time the roller Q will strike against the hanging block *e*, which will be confined between rollers Q and Q'.

When the carriage, after passing through the gate, strikes the lever X, the latter will be turned so as to pull the lever S around sufficiently to cause the shoulder at *h* to push the spring *d* back and let the lever R free, then the gate will be closed by the action of gravity, and the wheel Q and its arms will return to the position from which it was first moved by the action of the carriage-wheel on the lever V.

The gate will be similarly opened and closed by a carriage passing the other way, the gate also opening the other way.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The combination, with the gate, of the oblique plate L, the swinging rollers Q Q', levers R S, and the spring *d*, the said swinging rollers and the levers being arranged on an inclined pivot, all substantially as specified.

2. The combination, with the levers R S, of the cords, levers V V', and the guide-rollers W Y, all substantially as specified.

3. The combination, with the oblique plate L and the rollers Q Q', of the hanging block *e*, all substantially as specified.

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Witnesses:

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