

(No Model.)

S. B. PRATT.
Gate Roller and Hinge.

No. 236,254.

Patented Jan. 4, 1881.

Fig. 1.

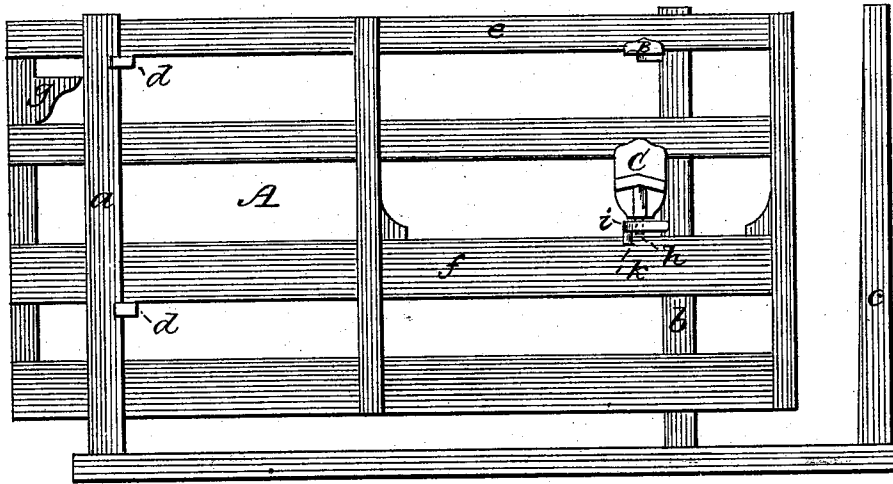


Fig. 2.

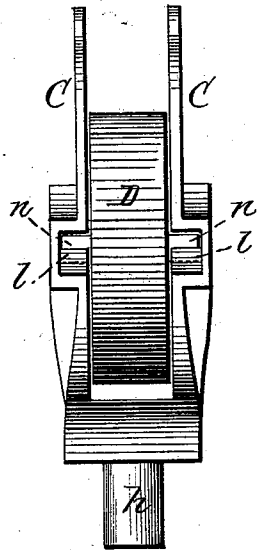
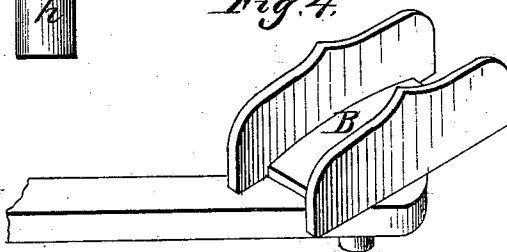


Fig. 3.



Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

SELWIN B. PRATT, OF CANANDAIGUA, NEW YORK, ASSIGNOR TO IRA E. MARTIN, OF SAME PLACE.

GATE ROLLER AND HINGE.

SPECIFICATION forming part of Letters Patent No. 236,254, dated January 4, 1881.

Application filed October 13, 1880. (No model.)

To all whom it may concern:

Be it known that I, SELWIN B. PRATT, a citizen of the United States, residing at Canandaigua, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Gate Rollers and Hinges; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side elevation of a farm-gate embodying my invention. Fig. 2 is a front elevation, on an enlarged scale, of the pivotal hinge with roller attached. Fig. 3 is an inner side view of one of the standards of the hinge; and Fig. 4 a detail view, in perspective, of the pivotal hanger for supporting the upper rail of the gate.

This invention has relation to certain new and useful improvements in hanging that class of farm and other gates which have a sliding motion and at the same time capable of being swung around at right angles to open the passage-way.

Previous to my invention the pivotal hinges for supporting the gate consisted of two standards, to which was journaled a roller, upon which one of the rails of the gate rested to facilitate the sliding motion thereof in opening and closing the same. The rollers in this class of hinges were connected thereto by forming the standards upon their inner sides with vertical grooves, into which the journals of the roller were inserted and had their bearings, the roller being raised above the upper ends of the grooves when desired to be removed.

The object of the present invention is to form these grooves in the standards longitudinal or crosswise of the standards, in place of lengthwise or vertical, as heretofore, whereby the journals of the roller are held more securely in their bearings, also being more readily inserted or withdrawn from the hinge without disconnecting the rail of the gate from the standards, as would be the case were the grooves vertical. These objects I attain by the construction shown in the drawings, and hereinafter described.

In the accompanying drawings, A represents the gate, and $a b c$ the gate-posts. The

space between the posts $b c$ is the narrow passage-way for pedestrians, or where a larger or wider way is not required, and the space between the posts $a b$ is the carriage-way, or for other purposes where the narrow passage-way cannot be used. In the first instance the gate is simply required to slide forward upon its bearings; but when the carriage-way is opened the gate should be swung around at right angles.

The post a has catches d to receive the rails $e f$ of the gate, and the end rail or upright of the gate has a keeper, g , so that when the gate is closed the keeper will prevent it from being raised to disengage the rails from the catches until the gate is brought in position, as shown in Fig. 1, when it may be raised off the catches and swung around at right angles to open the carriage-way, as previously stated.

The upper rail, e , of the gate A is supported upon a pivoted hanger, B, which holds the gate from being swung out away from the post b , thereby removing any danger of strain upon the hinge, hereinafter described. The hanger B being pivoted, in place of stationary, prevents friction and consequent wear upon the wooden rail e , thereby insuring the more perfect operation of the gate and rendering it less liable to become injured.

The pivotal hinge, which I consider the essential and important feature of my invention, consists of two standards, C, sufficient distance apart to admit of the roller D being inserted between the same, said standards being cast with a pivot, h , which rests in a step, i , secured to the post b at an acute angle with the gate A when in a closed position.

The step i at its outer end is formed with a guide-pin, k , projecting down below the step, and at right angles therewith, said pin passing over the rail f . This pin, like the hanger B, prevents the gate from being swung away from the post b , and prevents strain upon the pivotal hinge. The hanger B, in addition to the advantages hereinbefore described, holds the gate up and prevents the entire weight thereof from resting on the roller D, which would tend to wear the wooden rail of the gate by the constant friction caused by the sliding of the gate.

The standards C are sufficiently high, or pro-

ject above the periphery of the roller D, to form guides for the rail of the gate while resting upon said roller.

Upon the inner sides or faces of the standards C is cast or otherwise formed a groove, *l*, running longitudinally or crosswise of the standards, and having a bearing, *m*, for the journal *n* of the roller D. The grooves *l* upon each side of the bearing *m* incline in a downward direction, so that the removal of the roller D is facilitated, as it is only required to raise the journals above the bearings *m*, when the roller will, of its own weight, ride down the inclined grooves *l*. In removing the roller it is not necessary to remove the gate or raise it up on its end, as would be the case were the grooves vertical, it being taken out at the top of the standards, while in my invention the roller is taken out or removed from the sides, the removal of both the roller and standards being frequently necessary for adjustment, repairs, cleaning, or for other purposes.

A further and important advantage in having the grooves longitudinal or crosswise of

the standards is the exclusion of dirt, dust, snow, or sleet from the bearings and journals, which would tend to bind them and render the gate difficult of operation.

My invention may be applied to any form of sliding and swinging gates in which it is found effective, as I do not desire to be understood as limiting my invention to the form and style of gate shown.

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

The combination, with the gate A, of the pivotal hinge consisting of the standards C, roller D, guide-pin *k*, and step *i*, and the pivoted hanger B, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SELWIN BOSWELL PRATT.

Witnesses:

L. C. HALL,

JOHN CALLISTER.