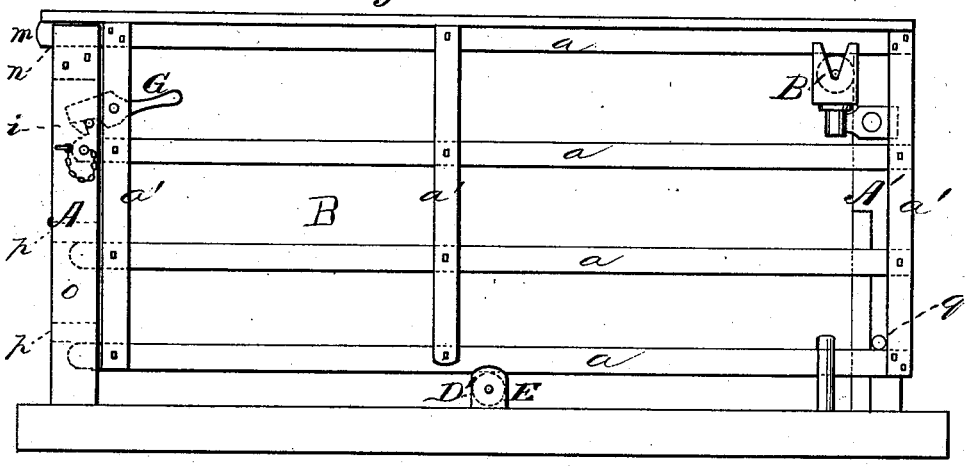
D. McCURDY.

Gates.

No. 199,847. Patented Jan. 29, 1878.

Fig 1



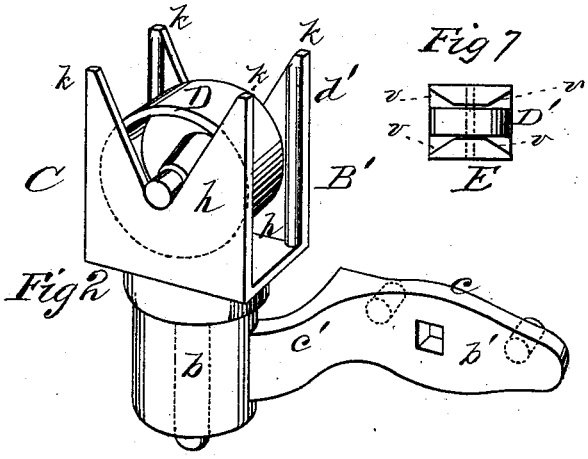


Fig 2

Fig 7

Fig 3

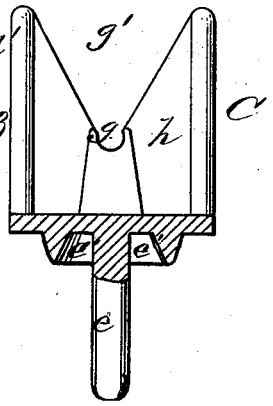


Fig 4

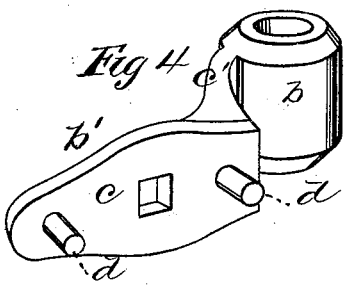
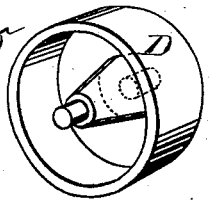


Fig 5



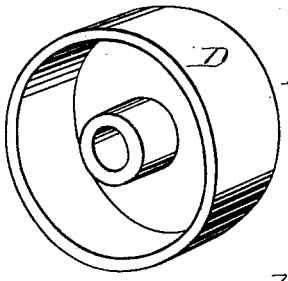


Fig 6

WITNESSES

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INVENTOR

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ATTORNEY

UNITED STATES PATENT OFFICE.

DAVID McCURDY, OF OTTAWA, OHIO.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **199,847**, dated January 29, 1878; application filed July 14, 1877.

To all whom it may concern:

Be it known that I, DAVID McCURDY, of Ottawa, in the county of Putnam and State of Ohio, have invented a new and valuable Improvement in Gates and Hinges; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation 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 representation of a side view of my improved gate, and Figs. 2, 3, 4, 5, 6, and 7 are detail views.

This invention has relation to improvements in gates which slide endwise half their length and then rotate at right angles to their former position, thereby completely opening the gap.

The nature of my invention consists in combining, with a bracket rigidly secured to a gate-post, a horizontally-vibrating support journaled therein, and provided with a roller, upon which the top bar of the gate traverses, whereby the sliding and rotating movements of the gate are readily and expeditiously produced, as will be hereinafter more fully set forth.

In the annexed drawing, the letters A A′ represent the gate-posts, and B an ordinary barred gate, composed of longitudinal bars *a* and transverse posts *a′*. B′ indicates a strong metallic bracket consisting of a socket, *b*, and a tongue, *b′*, having a flattened bearing-plate, *c*, connected to said socket by an oblique arm, *c′*. As shown in Fig. 4, the upper end of the socket is beveled, and the bearing-plate provided with dowels *d* and perforations, by means of which the bracket is screwed, bolted, or otherwise secured to the post.

C represents the vibrating portion of the gate-support, having a tang, *e*, adapted to be received into the socket, and a recess, *e′*, upon its under side, in which the beveled head of said socket snugly fits. The head *d′* of this section of the hinge is deeply recessed, being, as it were, bifurcated, and in the side walls thereof are cut or formed deep angular slots *g′*, terminating at their lower ends in bearings *g*, in which is journaled a roller, D. This latter is completely shut in upon its sides by the slotted walls *h*, and its highest part is below the upper ends of said walls, so that the points *k* thereof serve as guides for the top rail *a* of the gate, and prevent it from slipping off of said roller.

The bottom rail *a* of the gate travels upon a roller, D′, journaled in a preferably metallic post, E, arranged about midway between the gate-posts A A′. This post is bifurcated at its upper end, and the said roller is journaled in the recess thus formed, with its highest part below the top of the said stub or post. The arms of the latter contain the lower rail of the gate, and hold it in contact with the roller.

As shown in Fig. 1, the standards in which the roller D′ is journaled are double-beveled upon their inner edges, by which means the frictional surfaces thereof are greatly diminished and the roller is made self-clearing. The upper rail of the gate has a prolongation, *m*, that is received, when the gate is closed, in a notch, *n*, in the post A.

As aforesaid, the upper rail of the gate passes between the side walls of the movable part of the hinge, and bears upon the roller D, while the lower rail rests upon the roller D′. It is consequently adequately supported.

To open the gate a pivoted latch, G, is disengaged from a catch in post A, and the said gate is then thrust toward post A until it clears the roller D′. It is then swung around at right angles to its former position, when the entire gap between the posts will be exposed.

By reversing these movements the gate may be easily and expeditiously closed, and the latch aforesaid will engage its catch *i* in the post A automatically. The said latch is pivoted between the boards that constitute the end post *a′*, and its hooked end being the heavier, is always in position to engage its catch. This is preferably a metallic bolt, extending across the space between post A and a facing-strip, *o*. In the closed position the gate has the ends of its rails *a* engaged between said strip and the post, and it is thereby held upright. The prolongations of the rails *a* also pass under spacing-blocks *p*, and thereby serve as a lock to prevent the gate from being raised when not required. The other end of the gate is prevented from being raised by means of a pin, *q*, passed into post A′ just above the lowest rail of the gate.

By disengaging the latch and removing the pin, the gate may be detached from the hinge, and, being raised, reapplied thereto with its second rail *a* bearing upon the roller, and the prolongation thereof in the notch of the post A, thereby forming a gap under the gate for the passage of small stock and for clearing the surface of the snow.

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

A hinge for sliding and swinging gates consisting of the bracket B′ having a socket, *b*, with beveled upper end, and the rotating support C having a tang, *e*, and a recess, *e′*, on its under side, around said tang, adapted to receive the socket, in combination with the roller D, journaled in said bracket, substantially as specified.

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

DAVID McCURDY.

Witnesses:
C. J. SWAN,
J. P. EWING.