L. D. Walrad,

Railroad Gate,

No. 48,464. Patented June 27, 1865.

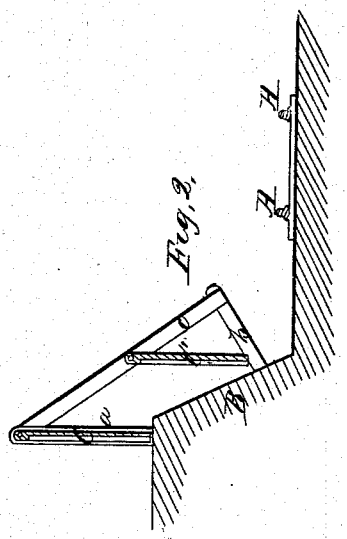

Fig. 2.

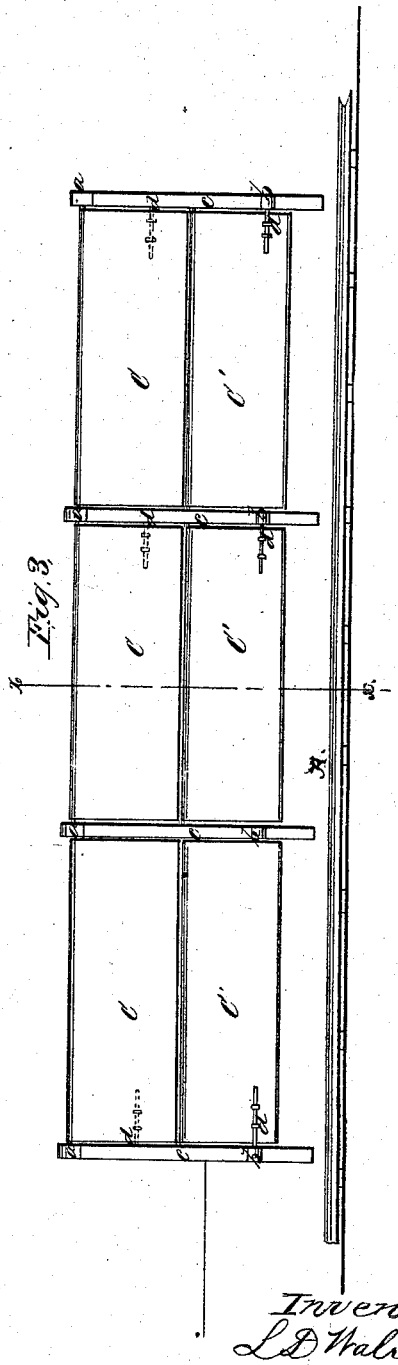

Fig. 3.

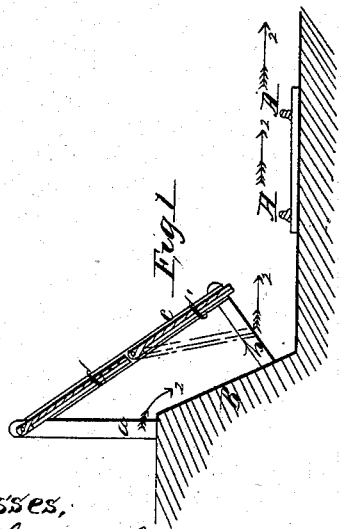

Fig. 1.

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UNITED STATES PATENT OFFICE.

L. D. WALRAD, OF SYCAMORE, ILLINOIS.

IMPROVED DEVICE FOR PREVENTING SNOW-DRIFTS ON RAILROAD-TRACKS.

Specification forming part of Letters Patent No. **48,464**, dated June 27, 1865.

To all whom it may concern:

Be it known that I, L. D. WALRAD, of Sycamore, in the county of De Kalb and State of Illinois, have invented a new and useful Device to Prevent Snow from Drifting on Railroads; 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 drawings, forming part of this specification, in which—

Figures 1 and 2 are transverse vertical sections of my invention, taken in the line *x x*, Fig. 3; Fig. 3, a side or face view of the same.

Similar letters of reference indicate like parts.

The object of this invention is to obtain a means whereby snow will be prevented from drifting and accumulating on railroads, where the latter are by the sides of hills or have an elevation at one side of them.

A A represents a railroad-track, and B a hill or rising ground at one side of the track. When a track passes by the side of a hill in this way the snow is sure to accumulate upon it in drifts, if the wind be blowing over the track at or about at right angles therewith, and in a direction from the hill or embankment, as indicated by the arrow 1 in Fig. 1. This result is due to eddies formed at the lee of the hill or embankment. My invention fully obviates this difficulty, and, when constructed in the most approved way, consists in inserting a series of upright posts, *a*, in the top of the hill or embankment, at its edge, and a series of inclined posts, *b*, inserted in the hill, near its bottom, the posts *a b* being in line with each other and connected by inclined strips *c*, which form supports for doors or shutters C C′, hinged or jointed at their upper ends to the framing formed by the strips and posts. These doors or shutters are provided with bolts or catches *d*, to admit of them being secured in different position. There are two rows of doors or shutters, and when both are secured or fastened so as to be in the same plane with the strips *c*, as shown in Figs. 1 and 3, by this means an inclined plane is formed at the side of the hill, and during snow-storms, with the wind blowing in the direction indicated by arrow 1 the snow, instead of being allowed to accumulate in drifts on the track, will be blown down between the hill and the inclined plane and forced entirely over the track, as indicated by the arrows 2 in Fig. 1. The inclined plane forms a draft-passage at the side of the hill and effectually prevents eddies at that point, and consequently the snow cannot lodge in drifts on the track. The lower part of the draft-passage formed by the inclined plane may be increased or diminished in capacity by adjusting the lower rows of doors or shutters, C′. In Fig. 1 the doors C′ are shown adjusted in red, so as to counteract or diminish the throat of the draft-passage, and the throat, when thus counteracted, increases the velocity of the wind over the track.

It is preferable to have the inclined plane formed of doors or shutters, as described, in order to admit of the varying of the capacity of the throat of the draft-passage, as described, and also to admit of the upper row of doors or shutters being adjusted in a vertical position to serve as a fence in summer at the top or upper edge of the hill, (see Fig. 2;) but an inclined plane may be made in a single piece or without adjustable sections or doors, and still answer a very good purpose.

This invention is only designed to be applied in those cases where the road passes by the side of a hill, and it is of greatest service when applied to a hill at the west side of the road, as the heaviest snow-storms occur when the wind is blowing from the west or northwest.

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

1. The employment or use of inclined planes placed at the side of and in a relative position with the track, to operate in the manner substantially as and for the purpose set forth.

2. The manner, substantially as shown and described, of constructing the inclined planes so that they may be adjusted as and for the purposes specified.

L. D. WALRAD.

Witnesses:

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