(No Model.)

W. L. HOWIE.

METHOD OF AND MEANS FOR PREVENTING ACCUMULATION OF SNOW IN RAILWAY CUTTINGS.

No. 347,107. Patented Aug. 10, 1886.

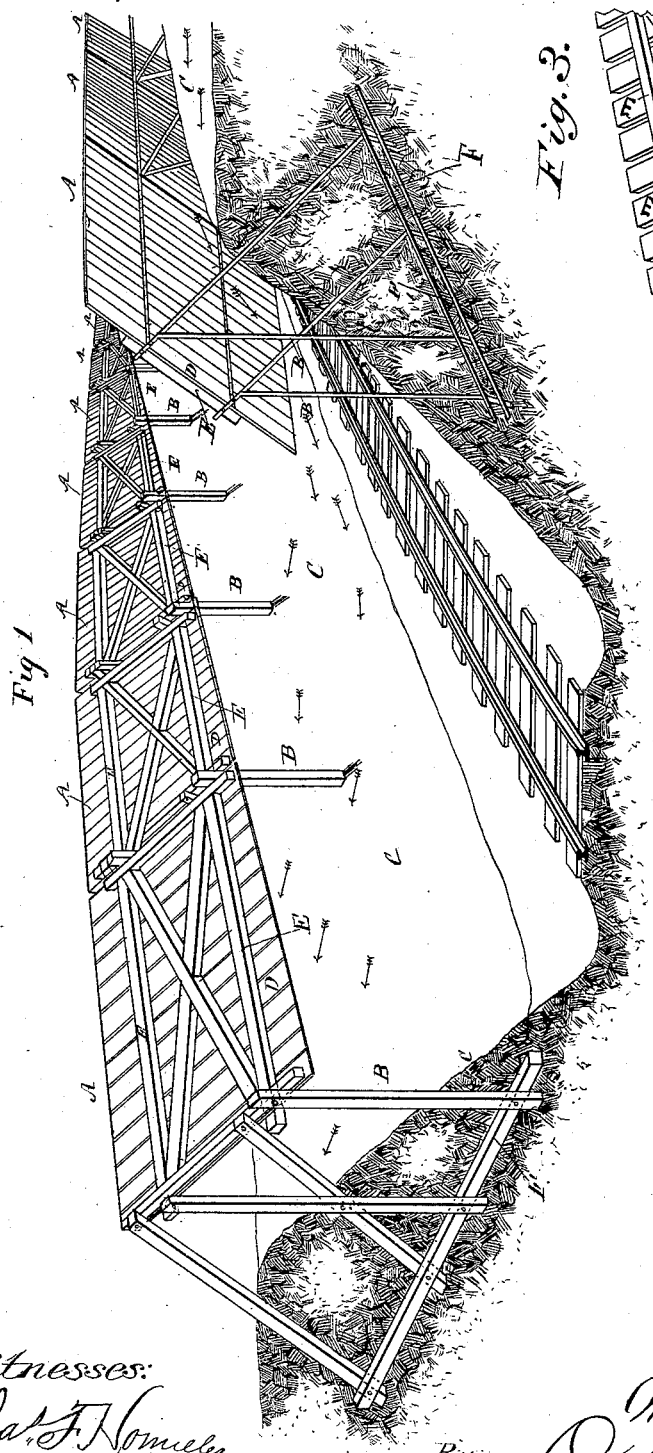

Fig. 1

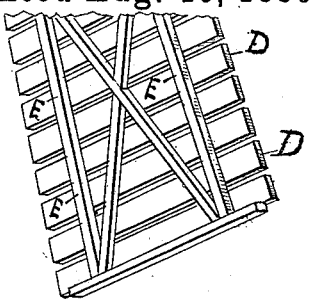

Fig. 3.

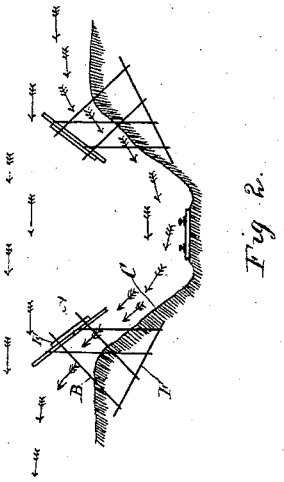

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM LAMOND HOWIE, OF ECCLES, ENGLAND.

METHOD OF AND MEANS FOR PREVENTING ACCUMULATION OF SNOW IN RAILWAY-CUTTINGS.

SPECIFICATION forming part of Letters Patent No. 347,107, dated August 10, 1886.

Application filed February 24, 1886. Serial No. 192,997. (No model.) Patented in England December 10, 1884, No. 16,245, and in Canada November 30, 1885, No. 22,916.

To all whom it may concern:

Be it known that I, WILLIAM LAMOND HOWIE, a subject of the Queen of England, residing at Eccles, England, have invented a new and Improved Method and Means for Preventing the Accumulation of Snow in Railway-Cuttings, of which the following is a specification.

The object of my invention is to keep railway-cuttings free from drifts during snow-storms. For this purpose I erect a screen or deflector in or near the cutting, commencing at or near the point where it begins to slope away from the original level, and so fix it on supports that some space shall be left between the under side of the deflector and the slope of the cutting. This screen is placed with its upper edge leaning outward from the cutting, and at such an angle and at such height above the level of the surrounding country that it may intercept and deflect the wind carrying the drift snow and direct it through the opening between the deflector and the slopes of the cutting, across the rails and up the opposite slope, and so beyond and away from the cutting. The deflector may be made continuous or in sections, and constructed of wood or other suitable materials, much like an ordinary close fence or shed, but preferably with a small space between each board, so that the wind passing through at these slits may modify the destructive force of very high winds and prevent the accumulation of snow on the sloping upper surface. The supports of the deflector may be so made as to be capable of fixing it at different angles, as may be necessary for slopes of varying steepness and cuttings of greater or less width or depth, and it will be necessary so to fix or anchor the supports as to sufficiently resist the wind-pressure, which will be exerted chiefly in an upward or uprooting direction. The deflectors may be made in sections, and may be removed from the supports in the summer months, and again fixed to the permanent supports on the approach of winter. The deflector will act with a wind blowing more or less at right angles to the line; but it is not calculated to interfere with the natural clearing action of a wind which blows parallel to or in the same direction as the rails, nor, although both slopes of a cutting (as is usually necessary) may be furnished with the deflectors, one is likely to interfere with the action of the other.

In the accompanying drawings, Figure 1 is a general view of a portion of a cutting fitted with this improved appliance, and Fig. 2 is a cross-section of a cutting upon a smaller scale. Fig. 3 is a detail view of a section of the structure.

A are the deflectors, by preference formed in sections, as shown. These are securely fixed by any convenient means to the supports B, which are firmly embedded in the banks C of the cutting. The angle of inclination of these deflectors may vary according to circumstances; but it will generally approximate to the parallel with the banks of the cutting. The upper edge of the deflectors A is carried well above the top of the slope C, so as to collect the wind and deflect it down the face of the slope, (beetwen the deflector and the slope.) When it escapes from the first deflector, it sweeps across the track, and, striking the opposite slope, rises up it, conveying the snow away from the track and onto the country beyond. The deflector upon the second or farther slope, being more or less parallel with the face of the slope, offers no appreciable check to the passage of the wind and snow.

The direction of the wind is shown by the arrows; but should it come from the opposite side the process would be reversed.

The deflectors are preferably made of boards D, held together by battens and bracings E, and a space may be left between the boards preferably of two or three inches. In Fig. 1 the deflector upon the left bank is shown supported by wooden posts B, while for that upon the right bank iron is employed. The posts or rods are secured to an anchor beam or frame, F, upon which stones or earth may be placed to hold them firmly down. Fig. 3 clearly shows a section with boards D secured to bracings E with sufficient space between each board for the free passage of snow and air.

I claim—

1. The herein-described means for preventing the accumulation of snow in railway-cuttings, consisting of the deflector A, supported

above the windward slope of the cut upon poles or standards secured to and anchored by beams F, buried or otherwise anchored, as set forth.

2. The herein-described preventer of snow accumulations in railway-cuts, consisting of deflector A, the boards of which are set a small distance apart, in combination with supports and the anchor-beam F, as set forth.

In testimony whereof I have hereto set my hand in the presence of the two subscribing witnesses.

W. L. HOWIE

Witnesses:
W. WARDLE,
GEO. W. BROWN.