

W. D. CLEVELAND & H. BEAL.
Railway Cattle-Guards.

No. 148,874.

Patented March 24, 1874.

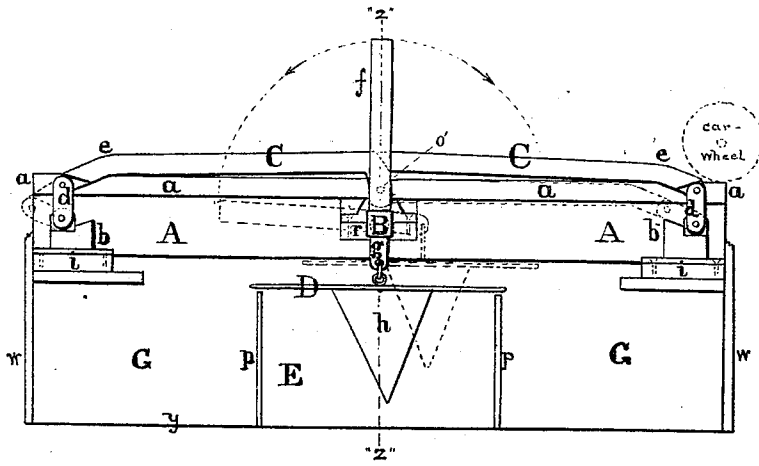


Fig. 1.

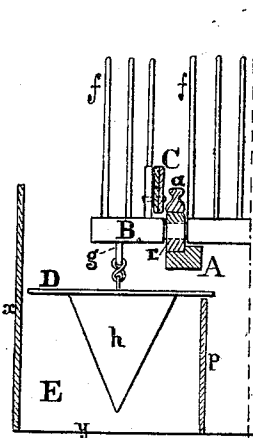


Fig. 2.

(Vert. sec. on line "z z" fig 1.)

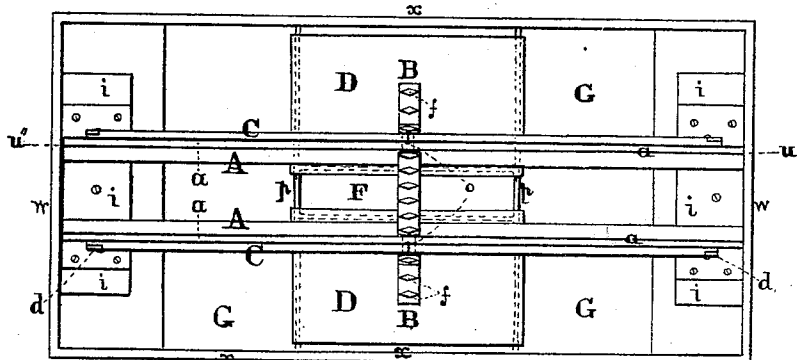
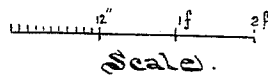


Fig. 3.

Witnesses.
John Marion
Martin Maldon



William D. Cleveland,
by Edmund Thurston his
attorney at law
Henry Beal,
by Edmund Thurston,
his attorney at law

UNITED STATES PATENT OFFICE.

WILLIAM D. CLEVELAND AND HENRY BEAL, OF GREEN VALLEY, ILLINOIS.

IMPROVEMENT IN RAILWAY CATTLE-GUARDS.

Specification forming part of Letters Patent No. 148,874, dated March 24, 1874; application filed November 26, 1873.

To all whom it may concern:

Be it known that we, WILLIAM D. CLEVELAND and HENRY BEAL, both of Green Valley, in the county of Tazewell and in the State of Illinois, have invented a Self-Adjusting Cattle-Guard for Railways; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a longitudinal elevation; Fig. 2, a vertical cross-section along line *z z*, Fig. 1; Fig. 3, a plan or superficial view.

This invention relates to a self-adjusting railway cattle-guard, having plates provided with conical weights, in combination with the walls of a recess formed under the guard, so that, in case of an accidental drift of snow, the weights will pierce the snow, the plates being designed to act as covers to keep the snow out of the recess, as will be hereinafter more fully explained, and pointed out in the claim.

In the drawings, A represents the sleeper or beam which carries the rails *a a* above the usual excavation and under the guard B *f*, resting upon cross-beams *i i*; *a*, the rail or track. B represents a horizontally-pivoted bar, hung transversely of the track *a a* in bearings *r r* in the sleeper A, carrying the vertical fence-bars *f f* or guard of similar construction. To a short arm, *g*, below each end of the bar B, is linked a horizontal plate or recess-cover, D, with its weight, *h*, which may be made in a conical shape, point downward, to pierce any accidental drift of snow within the weight-recess E, this plate being designed to cover such recess for this purpose. The walls of the recess are shown at *x x*, *p p*. The plates D D need be of no great size, but should cover the top of the walls of their recesses E E, and the outer spaces G G, &c., are left open on each side of the weight-recesses to obviate the drift of snow into the latter. C C are four horizontal bars, pivoted, in pairs,

conjointly end to end, close to the outside of the separate rails *a a* to the nearest fence-bar *f*, or to an erect lug in place thereof, so that their upper surfaces lie horizontally several inches above the surface of their respective adjoining rail *a*. A pin, *o'*, confines the spliced joints of the bars (which descend to the pivot at a large angle) to the fence-bar *f*, said pivot *o'* being near the level of the rail *a*. The outer ends of each bar C are curved downward at *e* to the level of the rail *a*, that a car-wheel may strike them at the least possible angle. This end is pivoted below the surface of the rail to the upper end of a short erect link, *b'*, which, in turn, is pivoted below to a block, *d*, rising from a plate fastened to cross-beam *i* or other point below.

The operation of this cattle-guard is as follows: The wheels of a passing train, striking the incline *e* at either end of the bars C, depress both conjoined bars and guard *f f* by the pressure forward of the bar, throwing the guard down below the level of the track, to rise again when the train has passed, by means of the weighted axle or bar B.

We do not claim the construction of the guard or gate, as herein described, as we are aware the same is not new; but

What we do claim, and desire to secure by Letters Patent, is—

In a railroad-gate consisting of the hinged bars C C and pivot-bar B, provided with the fence or guard *f*, the plates D D, provided with conical weights *h h*, in combination with the walls *p p* and *x x* of a recess formed under the guard, substantially as and for the purpose set forth.

In testimony that we claim the foregoing railroad cattle-guard we have hereunto set our hands this 14th day of November, 1873.

WILLIAM D. CLEVELAND.

HENRY BEAL.

Witnesses:

JAMES THURLOW,
JAMES M. MORSE.