

No. 702,210.

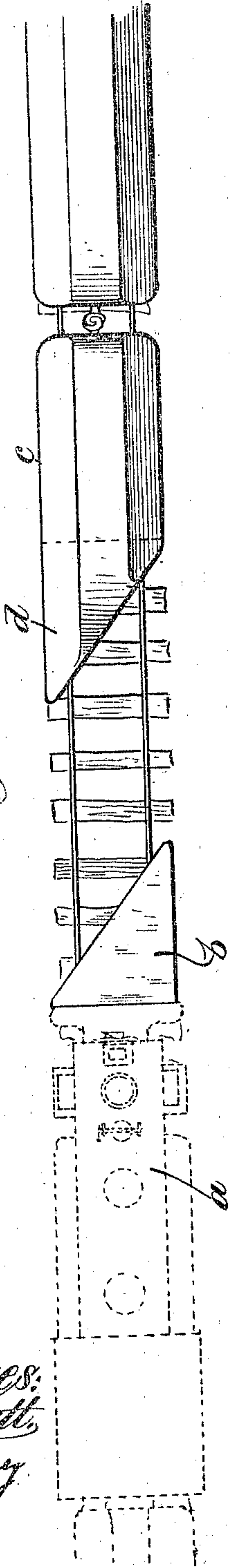
Patented June 10, 1902.

W. B. HEYBURN.  
ANTITELESCOPING RAILWAY TRAIN GUARD.

(Application filed Jan. 22, 1902.)

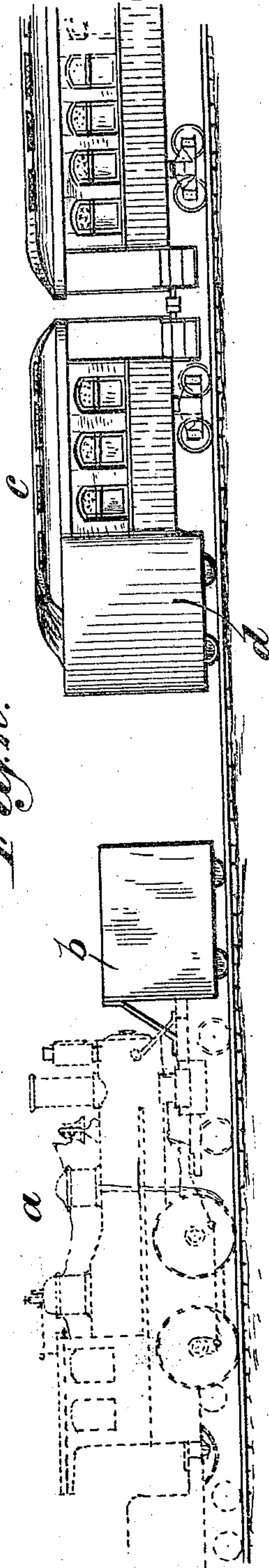
(No Model.)

*Fig. 1.*



*Witnesses:*  
*Philo Quett,*  
*L. M. Sweeney*

*Fig. 2.*



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*Atty.*



# UNITED STATES PATENT OFFICE.

WELDON B. HEYBURN, OF WALLACE, IDAHO.

## ANTITELESCOPING RAILWAY-TRAIN GUARD.

SPECIFICATION forming part of Letters Patent No. 702,210, dated June 10, 1902.

Application filed January 22, 1902. Serial No. 90,777. (No model.)

*To all whom it may concern:*

Be it known that I, WELDON B. HEYBURN, a citizen of the United States, residing at Wallace, in the county of Shoshone and State of Idaho, have invented certain new and useful Improvements in Antitelescoping Railway-Train Guards, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has for its object to provide means for reducing or avoiding the dangers to life and limb by railroad travel and resulting in the "telescoping" of trains by reason of "head-on" or "rear-end" collisions. In some terrible railway accidents which have occurred in the past locomotive-engines have been known to rise up and practically leap over onto the tops of passenger-cars, crushing them down and by the continued running of the engines grinding up the cars and passengers.

The dangers of railway travel are lessened in accordance with my present invention by providing each of the locomotives with a rigidly-attached heavy and strongly-built pilot, having its front face beveled horizontally, so as to be diagonal to the railway-tracks, and also preferably by providing a special rear car for each of the trains, having a strongly-built and heavy rear portion, the rear face of which will be horizontally beveled reversely to the beveled pilots of the locomotives. The front beveled locomotive-pilots and the rear beveled rear end guards for the trains will be of such considerable heights as to prevent the engines from overriding the cars by upward leaping or rising. Thus in the event of a rear-end collision either the locomotive or the rear end car, or both, would be derailed or shunted sidewise from the impact of the collision, thereby avoiding worse dangers. In the event of a head-on collision of locomotives provided with my improved pilots one or both of the locomotives would be derailed and telescoping of the trains be thus avoided.

In the accompanying drawings, Figure 1 is a plan view, and Fig. 2 an elevation, conventionally illustrative of my invention.

Referring to the drawings, *a* denotes a locomotive-engine, which may be of any proper or approved construction, and *b* denotes a heavy pilot of a height as near to the height

of the locomotive as is practicable, said pilot being strongly attached to the engine and having its front face beveled horizontally and preferably entirely across, so as to be diagonal to the length of the engine and to the tracks on which the trains run. The pilot *b* will preferably be of steel and very strongly constructed and braced, so as to be able to withstand a very heavy shock without collapsing, and it will preferably be provided with wheels, so that its weight will be entirely or largely sustained by the tracks rather than by the engine, with which latter it will be better not to encumber the very considerable weight of the pilot. Some little looseness of construction between the engine and the strongly-attached pilot may be desirable to provide for proper running on curves or inequalities of the road, and the improved guard-pilot will preferably be of as great a height as will be admissible and still not interfere with or obscure the headlight of the locomotive.

For the best successful cooperation with my improved locomotive-pilots in guarding against the dangers of rear-end collisions I propose to provide each of the trains with a special rear-guard car, as *c*, the rear end of which will have a heavy beveled guard, as *d*, preferably of steel and strongly braced, so as to withstand severe shocks without collapsing. To provide such an extended vertical impact-surface of the rear guard *d* as will prevent upward leaping or overrunning of either of the contacting parts in case of collision, said guard *d* is of a height practically equal to the height of the body of the car *c*. The special car *c* may be adapted for use either as a passenger or baggage car or for the accommodation of storage batteries or dynamos for the electric lighting of the train, and the beveled rear guard *d* will preferably be made as a rigid part of the car *c* and running on wheels.

From the foregoing it will be understood that in the event of a collision (either head-on or rear-end) of locomotives and trains provided with my antitelescoping devices one or the other, or both, of the colliding vehicles will be derailed or shunted sidewise, so that telescoping of trains and the attendant awful horrors will be avoided.

I am aware that it is not new, broadly, to



provide railway-trains with beveled devices for avoiding telescoping—such, for example, as beveled platforms or crushable cars partly beveled—but these prior devices were not of such construction as to effectively prevent the engines or cars from leaping or rising up under great shocks, so that in such event beveled parts heretofore provided could pass each other, and thus fail to effectively serve their intended purposes as antitelescoping devices.

My invention, as will be understood, contemplates providing a railway-vehicle (either a locomotive or rear car) with a heavy and strongly-built guard of considerable height and having a single beveled face of an extent to practically or approximately reach across the railway or the width of the vehicle, said guard being preferably of steel or iron and having sufficient strength to resist heavy shocks without collapsing, and which guard will have a sufficiently-extended vertical impact-surface to cause derailment or side or horizontal shifting of one or both of the colliding objects without danger of collapsing or without liability of the colliding vehicles passing each other vertically, thus effectively avoiding crushing of cars by overriding or "rearing" engines, as well as avoiding telescoping.

The invention is not to be understood as being limited to the details of construction herein shown and described, as these may be varied widely within the limits of mechanical skill without departing from the essence of the invention.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A railway-vehicle provided with an antitelescoping metallic guard of considerable height and having a single beveled impact-face diagonal to the length of the train or to the railway and which face is of an extent to practically reach across the width of said vehicle.

2. A railway-vehicle provided with an anti-

telescoping metallic guard of a height as nearly equal to the body of the vehicle as is practicable, said metallic guard being supported on wheels and having a single beveled impact-face diagonal to the length of the train or to the railway and of an extent to practically reach across said vehicle.

3. A railway-locomotive provided with a heavy and strongly-built pilot of a height as near to the height of the locomotive as is practicable, and having a single vertical beveled front face of the height of the body of the pilot, and diagonal to the railway, and practically extending across the latter.

4. A railway-locomotive provided with a heavy and strongly-built pilot having a single vertical beveled front face diagonal to the railway and practically extending across the latter, said pilot being provided with wheels by which its considerable weight is supported.

5. A rear-end railway-guard car, for cooperation with a locomotive-pilot having a front beveled face, said car being provided with a strongly-built rear-end guard portion forming a rigid part of the car and having a single vertical beveled rear face diagonal to the railway and practically extending across the latter, said rear-end strongly-built guard being of a height practically equal to the height of the body of the car.

6. A rear-end railway-guard car, for cooperation with a locomotive-pilot having a front beveled face, said car being provided with a strongly-built rear-end guard portion constructed of metal and forming a rigid part of the car, said guard portion of said car being of a height practically equal to the height of the body of the car and having a single vertical, beveled rear face diagonal to the railway and practically extending across the latter.

In testimony whereof I affix my signature in presence of two witnesses.

WELDON B. HEYBURN.

Witnesses:

LOUIS L. ODELL,

OTTO HUELLEMANN.