No. 702,211. Patented June 10, 1902.

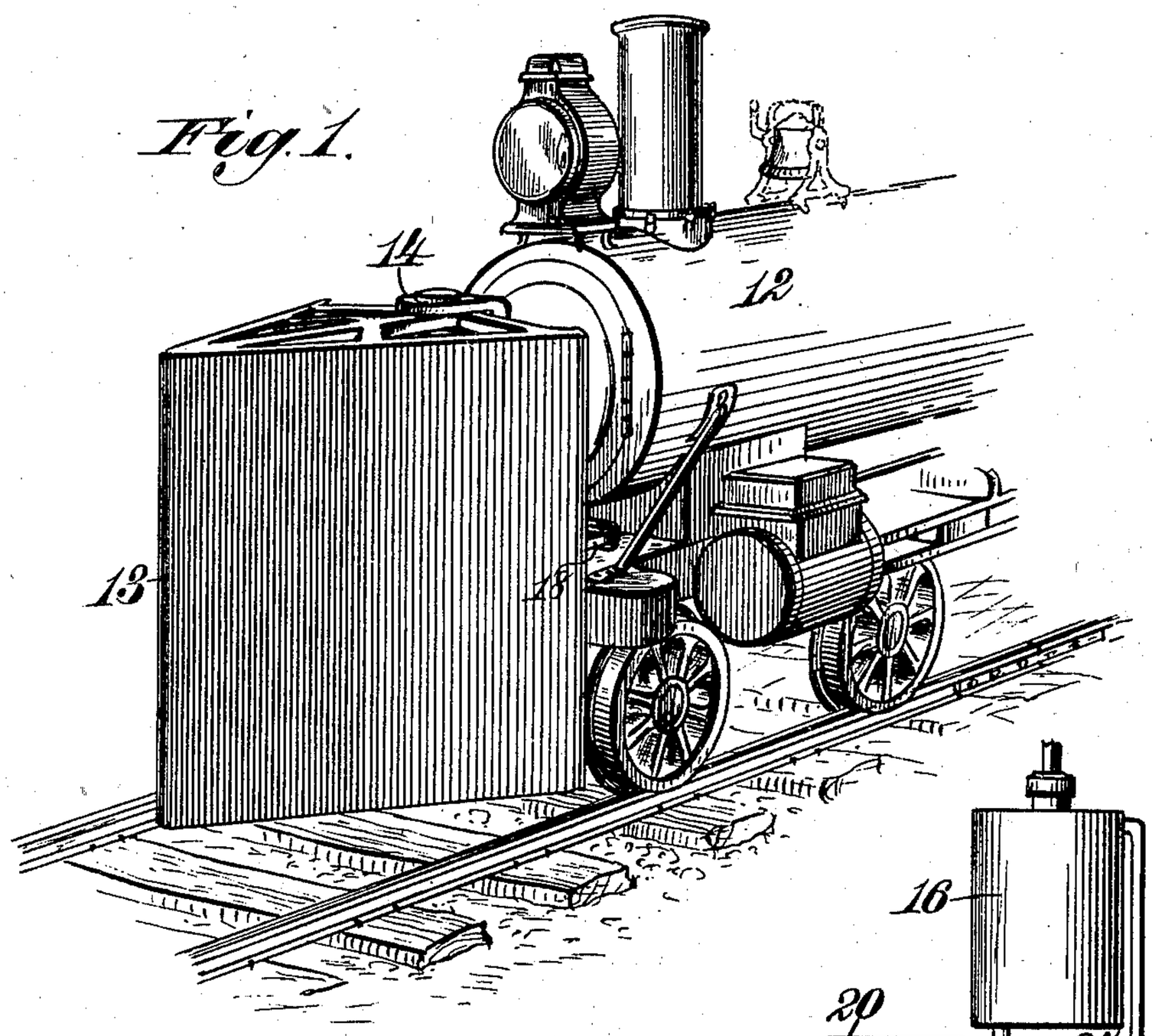
W. B. HEYBURN.

ANTITELESCOPING RAILWAY TRAIN GUARD.

(Application filed Jan. 22, 1902.)

(No Model.)

Fig. 1.



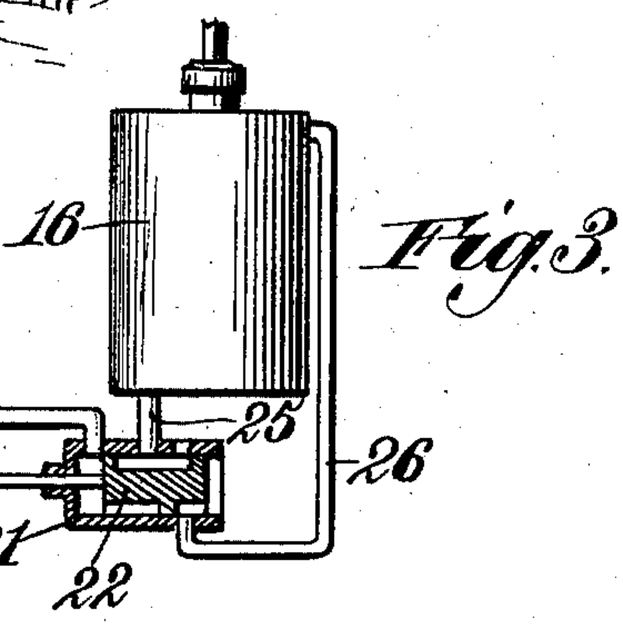


Fig. 3.

Fig. 2.

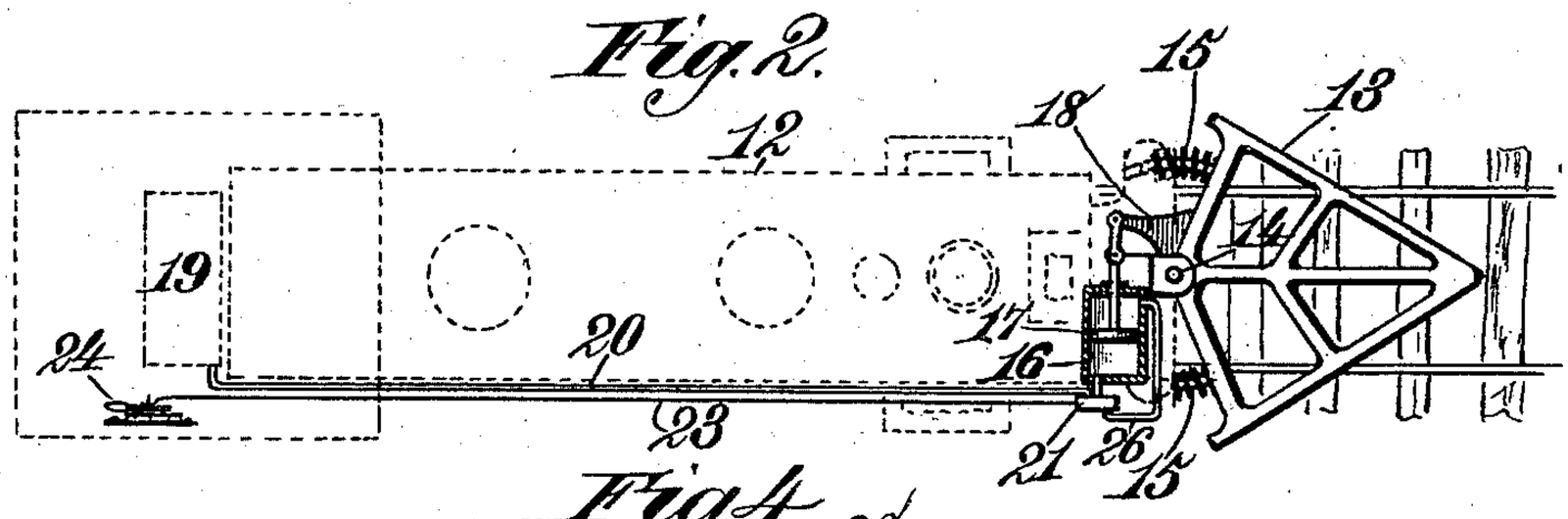
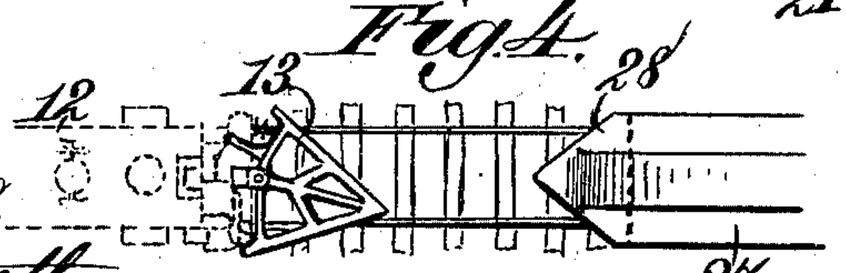


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

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ANTITELESCOPING RAILWAY-TRAIN GUARD.

SPECIFICATION forming part of Letters Patent No. 702,211, dated June 10, 1902.

Application filed January 22, 1902. Serial No. 90,778. (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 railway 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 locomotive-engines with a strongly-built, pointed, and pivotally-mounted or swinging pilot having beveled vertical faces, said pilot being normally held with its point central to the railway or in the line of the longitudinal center of the locomotive by any suitable devices, and means under the control of the engineer being provided whereby the pilot can in the event of an impending collision be swung aside in either direction, so that in striking a colliding object, whether such object be an approaching locomotive or the rear car of a train ahead, one or the other or both of the colliding objects will be derailed or forced aside in such a manner that telescoping will be avoided. By employing a pivoted beveled-faced pilot under the control of the engineer, so that it may be swung aside in either direction, the engineer may select the side to which his locomotive and train will be thrown in the event of a collision, which may often be advantageous. For coöperation with my pivoted antitelescoping locomotive-pilots the trains will preferably be provided with pointed rear-end guards having vertical beveled faces, such rear-end guards being preferably of strong steel construction and formed as rigid parts of the cars carrying them, so that in case of collision the tendency to derailment and side shunting through the action of the beveled-faced pilot will be augmented.

In the accompanying drawings, Figure 1 is a perspective view showing a portion of a locomotive provided with my pivoted-pilot guard. Fig. 2 is a plan view conventionally illustrative of the pivoted-pilot invention. Fig. 3 is a detail view of a mechanism for swinging the pilot aside. Fig. 4 is a conventional plan view illustrative of the operation of the invention in connection with a rear-end-guard car.

Referring to the drawings, 12 denotes a locomotive-engine provided with a heavy and strongly-braced pivoted pilot 13, preferably of steel. As herein shown, the pilot 13 may be pivotally supported on a strong bracket or brackets 14 at the front of the locomotive. The said pilot 13 is made pointed, with two vertical beveled faces, and the pivoted pilot will preferably be of as great a height as can be utilized and not interfere with the headlight of the locomotive.

The pilot 13 will normally be maintained in a central position by any suitable devices with its point midway between the rails of the track. As herein shown, strong coil-springs 15 are provided to hold the pilot normally in place, and some suitable means under the control of the engineer are provided, whereby in the event of an impending collision the pivoted pilot can be quickly swung to one side or the other for the purpose of causing derailment or side shunting. The means for operating the pilot in the manner just referred to, which I have herein illustrated, comprise a cylinder 16, within which is a piston 17, connected to an arm or bracket 18 at the rear of the pilot. The piston 17 may, if desired, be operated by steam from the engine, but will preferably be operated from the compressed-air system of the train, as by supplying compressed air from an air-cylinder 19 through a pipe 20, opening at its front end into a valve-box 21, within which is a sliding valve 22, connected by a rod 23 with a hand-lever 24 at the locomotive-cab and conveniently accessible to the engineer. The valve-box 21 is in communication with

the opposite ends of the cylinder 16 through the pipes 25 and 26, so that by sliding the valve 22 in one direction or the other the piston 17 may be forced in either direction for the purpose of swinging the pilot to one side or the other to cause derailment at either side of the railway as the engineer may elect.

For coöperation with my swinging locomotive-pilot rear-guard cars, as 27, having pointed rear-end guards, as 28, strongly built and preferably of steel, will preferably be provided. The vertical beveled faces of these rear-end guards will preferably be practically of the heights of the cars. With the guard-cars having pointed rear-end guards the swinging pilots need not be moved so far to one side or the other to reliably effect the side shunting as would otherwise be necessary, as will be understood.

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 locomotive-engine provided with an antitelescoping, heavy and strongly-constructed, pivoted, pointed pilot, with extended beveled vertical faces.

2. A locomotive-engine provided with an antitelescoping, heavy and strongly-constructed, pivoted, pointed pilot, with beveled vertical faces, combined with means for normally holding the said pilot in a central position, and means, under the control of the engineer, for swinging said pilot to either side, when desired.

3. A locomotive-engine provided with an antitelescoping, heavy and strongly-constructed, pivoted, pointed pilot, with beveled vertical faces, combined with means for normally holding the said pilot in a central position, a cylinder, a piston therein connected with said pilot, and means, under the control of the engineer, for admitting a fluid under pressure to said cylinder, for the purpose of swinging said pilot to one side or the other.

4. A locomotive-engine provided with an antitelescoping, heavy and strongly-constructed, pivoted, pointed pilot, with beveled vertical faces, combined with means for normally holding the said pilot in a central position, means, under the control of the engineer, for swinging said pilot to either side, when desired, and a rear car provided with a strongly-constructed, pointed rear guard, for coöperation with said pivoted pilot.

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

WELDON B. HEYBURN.

Witnesses:
LOUIS L. ODELL,
OTTO HUELLEMANN.