No. 897,052. PATENTED AUG. 25, 1908.

O. H. BLACK.

SAFETY BRAKE APPLIANCE.

APPLICATION FILED APR. 17, 1908.

Fig. 1.

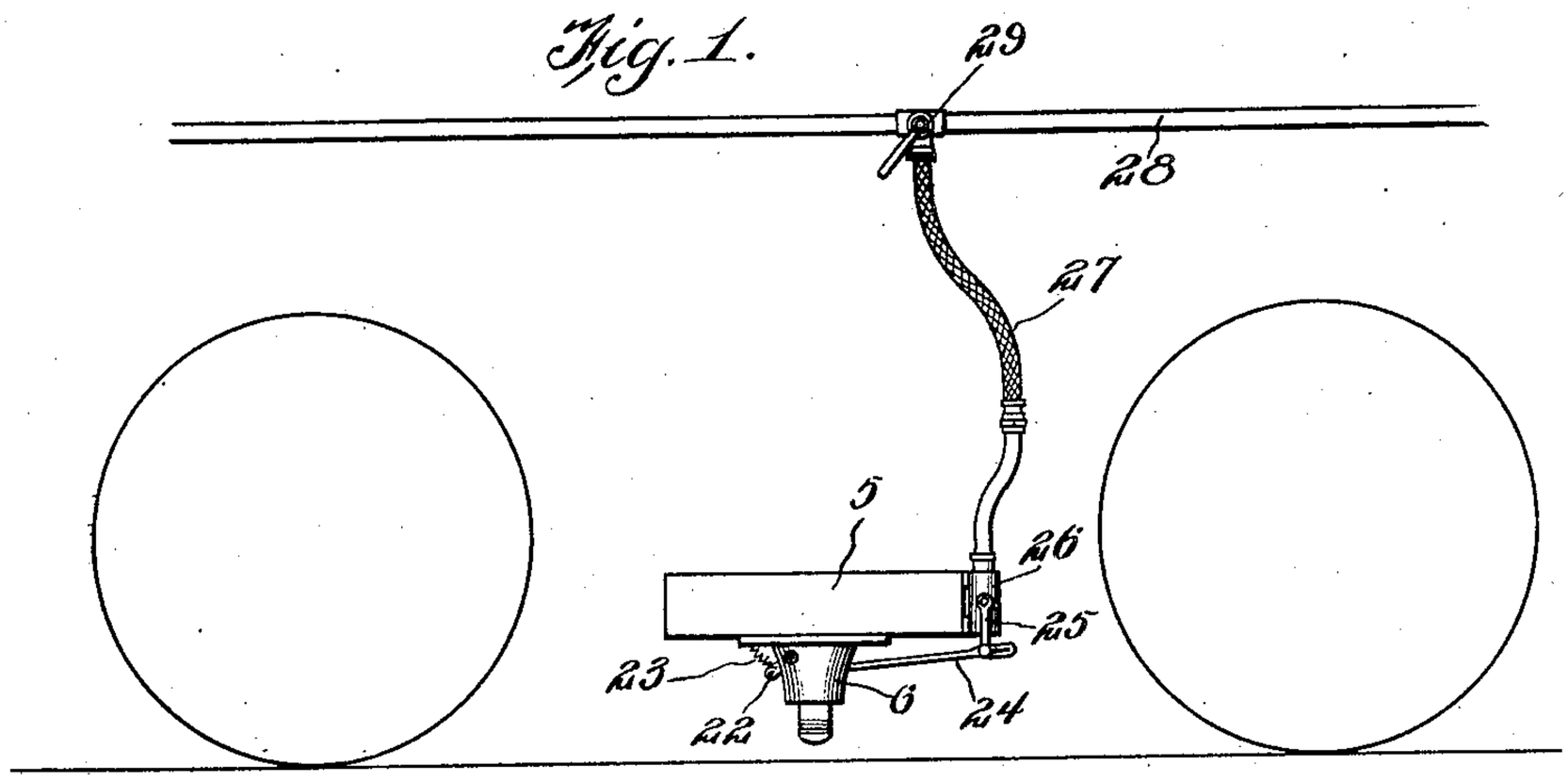


Fig. 2.

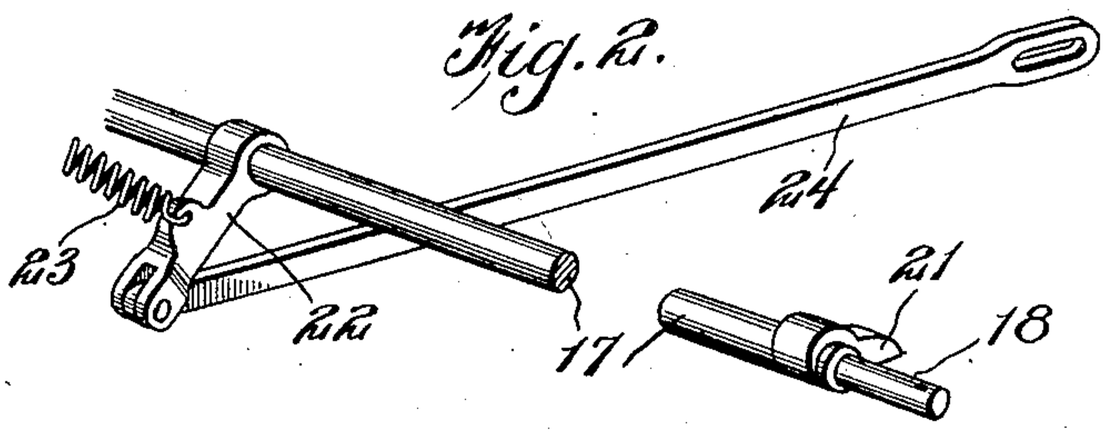


Fig. 3.

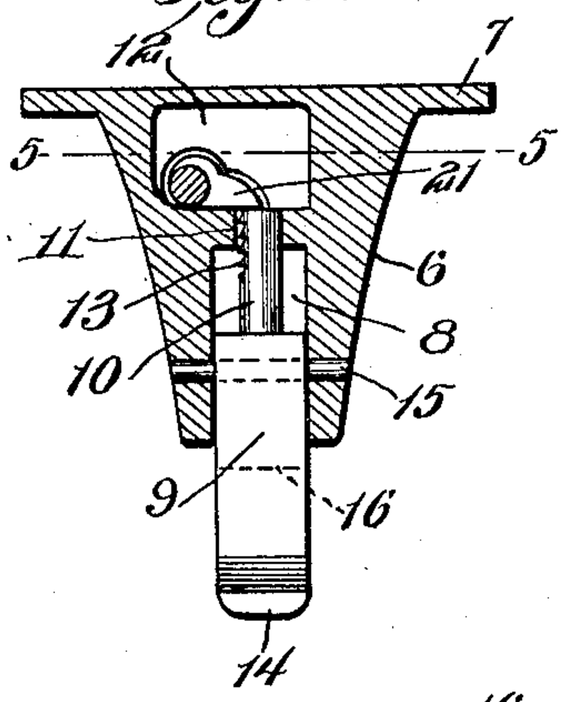


Fig. 4.

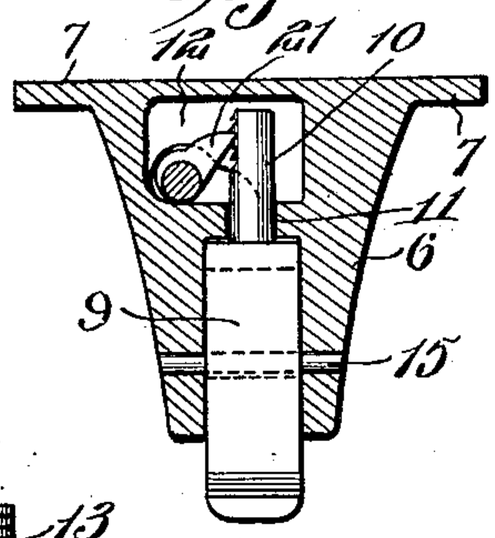


Fig. 5.

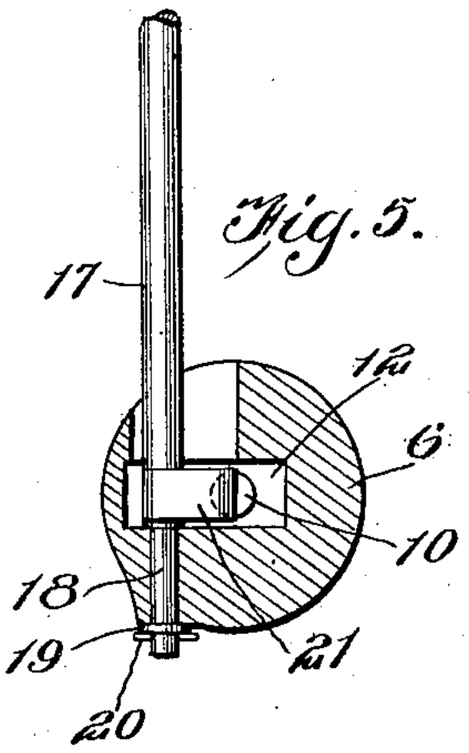
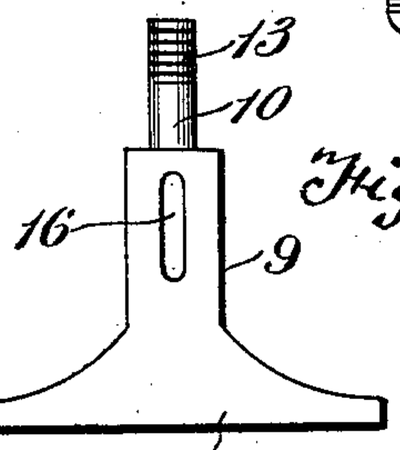


Fig. 6.



Witnesses

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SAFETY BRAKE APPLIANCE.

No. 897,052. Specification of Letters Patent. Patented Aug. 25, 1908

Application filed April 17, 1908. Serial No. 427,649.

To all whom it may concern:

Be it known that I, OLA H. BLACK, a citizen of the United States, residing at Benson, in the county of Cochise and Territory of Arizona, have invented new and useful Improvements in Safety Brake Appliances, of which the following is a specification.

This invention relates to safety appliances for railroads; and it has for its object to provide a simple and improved device whereby the air-brake mechanism shall be automatically actuated to effect the application of the brakes in the event of accidental derailment of a car equipped with the appliance.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing—Figure 1 is a side elevation showing the invention as applied to a railroad car truck. Fig. 2 is a perspective detail view showing a portion of the rock shaft and the connecting rod whereby the air valve is actuated. Fig. 3 is a vertical sectional detail view taken through one of the supporting brackets, and showing the foot in its normal, lowered position. Fig. 4 is a similar view, but showing the foot raised. Fig. 5 is a sectional detail view taken on the plane indicated by the line 5—5 in Fig. 3. Fig. 6 is a detail view, in elevation, of the foot which constitutes the actuating element of the device.

Corresponding parts in the several figures are denoted by like characters of reference.

Secured upon the under side of the truck beam 5, which extends transversely of a railroad car are supporting brackets 6, one such bracket being, in practice, preferably disposed at either end of the truck beam, in longitudinal alinement with the car wheels, or approximately so. The supporting brackets preferably consists of castings provided at their upper ends with flanges 7 for the passage of bolts or fastening members of any description; the body of each bracket or casting being tapered downwardly and provided at its lower end with a recess or socket 8, which is preferably of rectangular or non-circular cross-section, said recess being for the accommodation of the body of the foot 9, which is vertically movable in said recess or socket, and which is provided with a cylindrical shank 10, that extends upwardly through an aperture 11, which connects the inner end of the socket 8 with a recess or cavity 12, formed transversely in the upper portion of the bracket 6. The shank 10 is provided with a plurality of notches forming teeth or ratchets 13; and the lower end of the foot 9 is expanded laterally to form the shoe 14. A pin 15 extends transversely through the bracket 6 and through a slot 16 formed vertically in the body of the foot, which latter is thereby retained against accidental displacement.

A rock-shaft 17, extends transversely underneath the car truck, said rock-shaft being provided with reduced ends 18 having bearings in the brackets 6 adjacent to which retaining means may be provided, such as a washer 19 and a pin or key 20 adjacent to the outer side of each bracket. That portion of the rock-shaft which extends through the cavity 12 of each bracket carries a pawl 21, which is normally disposed adjacent to the upper extremity of the shank 10, but which, when the foot is moved in an upward direction will engage the teeth or ratchets 13 upon the shank, thus supporting the foot in a raised position. The rock-shaft 17 is provided intermediate its ends with an arm or crank 22, which is connected by a spring 23 with the under side of the truck-beam 5, the rock-shaft being thereby retained in its normal position with the pawls 21 engaging the upper extremities of the shanks 10, and thus preventing the feet 9, from bouncing in an upward or inward direction. The crank 22 is connected by a link 24, with the handle 25 of an air-controlling valve disposed within a casing 26, which is suitably connected by a flexible hose 27 with the train-line which is indicated at 28; a valve 29 being preferably provided whereby the hose 27 may be cut out when desired.

The operation and advantages of this invention will be readily understood from the foregoing description taken in connection with the drawings hereto annexed, by those skilled in the art to which it appertains. In

the event of a derailment of a car one or both of the feet 9 will be forced in an upward direction, by contact with the rail, and the rock-shaft 17 will thus be actuated to operate the air-valve which is so connected with the brake system as to cause the air-brakes to be instantly set, thus checking the further progress of the train. When the foot is forced in an upward direction, the teeth or ratchets will be engaged by the pawl 21, and the foot will thus be retained in a raised position which serves at the same time to retain the rock-shaft in a tilted condition until it is restored to normal by proper manipulation.

Having thus described the invention, what is claimed is:—

1. In a device of the character described, a supporting bracket, a member supported for vertical movement in said bracket, a rock-shaft having a bearing in the bracket, a pawl upon the rock-shaft adapted for engagement with ratchets upon the vertically movable member, an air-controlling valve and connecting means for actuating the valve by the oscillation of the rock-shaft.

2. In a device of the character described, a supporting bracket, a member supported for vertical movement in said bracket, a spring actuated rock-shaft having a bearing in the bracket and carrying a pawl normally engaging the upper extremity of the vertically movable member, said member being provided with ratchets for engagement with the pawl when the member is moved in an upward direction, and an air-valve connected with and controlled by the rock-shaft.

3. In a device of the character described, a supporting bracket having a recess at its lower end and a transverse cavity near its upper end, a member movable vertically in the recess and having a toothed shank extending into the cavity, the rock-shaft having a bearing in the bracket, a pawl upon said rock-shaft within the cavity of the bracket, a spring actuated crank upon the rock-shaft whereby the pawl is normally held in contact with the upper extremity of the vertically movable member, and an air-controlling valve suitably connected with and actuated by the crank of the rock-shaft.

4. In a device of the character described, a supporting bracket having a recess at its lower end and a transverse cavity near its upper end, a foot supported for vertical movement in the recess, said foot being laterally expanded to form a shoe at the lower end thereof and provided with an upward extending toothed shank, a rock-shaft having a bearing in the bracket, a pawl upon the rock-shaft within the transverse cavity, said pawl being normally supported upon the upper extremity of the toothed shank and adapted to engage the teeth of said shank when the latter moves in an upward direction, a spring actuated crank upon the rock shaft, an air-controlling valve, and actuating means for said valve connected with the crank of the rock-shaft.

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

OLA H. BLACK.

Witnesses:

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