No. 638,398. Patented Dec. 5, 1899.

L. W. OLMSTEAD.

SAFETY ATTACHMENT FOR CAR TRUCKS.

(Application filed Oct. 14, 1898. Renewed Nov. 8, 1899.)

(No Model.)

Fig. 1.

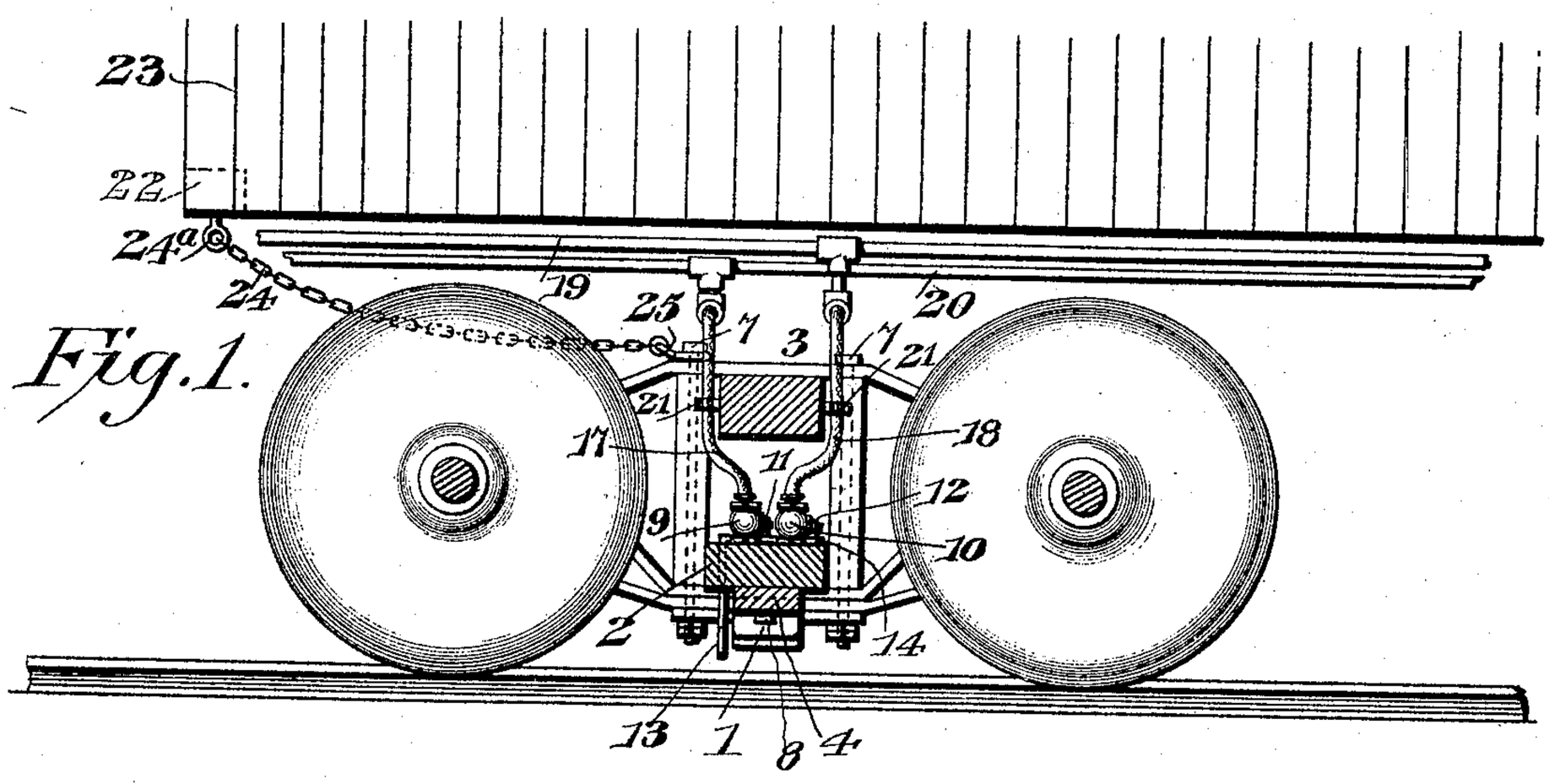


Fig. 3.

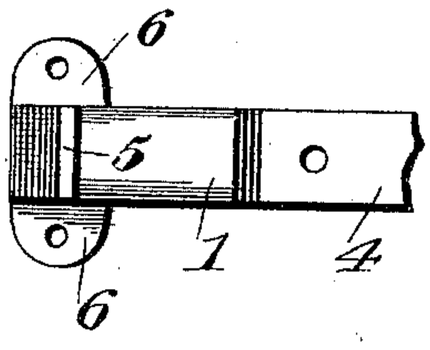


Fig. 5.

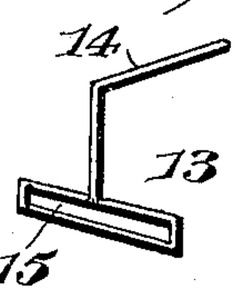


Fig. 4.

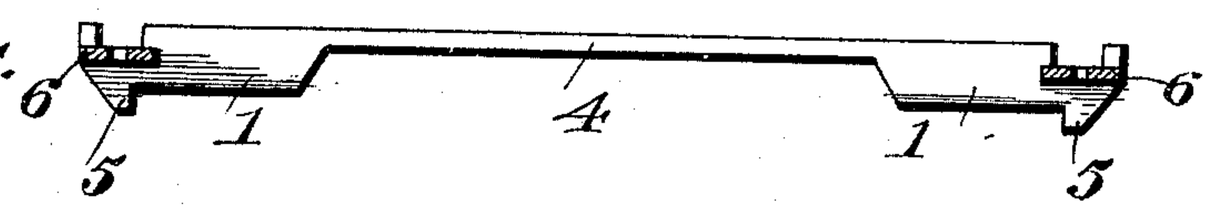
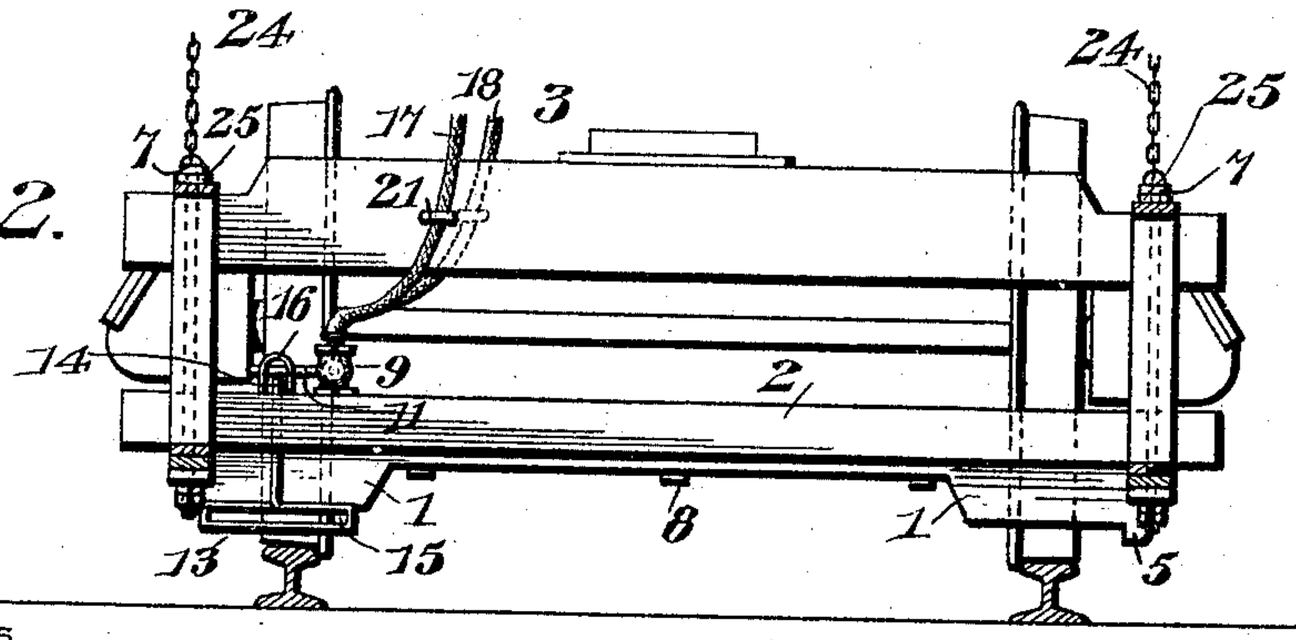


Fig. 2.



Witnesses

Jas. K. McCathran

T. J. Riley

By his Attorneys, Levi W. Olmstead Inventor

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

LEVI W. OLMSTEAD, OF GALETON, PENNSYLVANIA.

SAFETY ATTACHMENT FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 638,398, dated December 5, 1899.

Application filed October 14, 1898. Renewed November 8, 1899. Serial No. 736,286. (No model.)

To all whom it may concern:

Be it known that I, LEVI W. OLMSTEAD, a citizen of the United States, residing at Galeton, in the county of Potter and State of Pennsylvania, have invented a new and useful Safety Attachment for Car-Trucks, of which the following is a specification.

The invention relates to improvements in safety attachments for car-trucks.

The object of the present invention is to provide for car-trucks a simple, inexpensive, and efficient device adapted in event of the wheels of a truck leaving the rails to signal the engineer, apply the brakes of the train automatically, and operate as a track-brake to stop the train and as a guide or guard to engage a rail and prevent further lateral movement of the truck.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a longitudinal sectional view of a portion of a car provided with a safety device constructed in accordance with this invention. Fig. 2 is an end view of the truck, partly in section. Figs. 3 and 4 are detail views of the brake-shoes. Fig. 5 is a detail perspective view of the operating rod or frame.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 1 designate a pair of brake-shoes, constructed of suitable metal, secured to the lower face of the spring-plank 2 of a truck 3 near the ends of the said plank and connected by a bar 4, formed integral with the brake-shoes. The brake-shoes are provided at their outer ends with depending flanges 5 and have perforated ears 6 at opposite sides of them for the reception of the column-bolts 7 of the truck, whereby the shoes are secured to the truck. The bar 4 is also perforated for the reception of bolts 8 or other suitable fastening devices for securing the shoes to the spring-plank.

The depending flanges 5 are normally located beyond the rails, and when the wheels of the truck leave the latter the said flanges are adapted to engage the sides of the same and limit the lateral movement of the truck, and the weight of the car resting upon the shoes forms an efficient brake for engaging the rail. The brake-shoe adjacent to the car-wheel which drops inside the rails engages the adjacent rail and slides along the same, the flange 5 lying outside of the said rail and preventing any further movement of the car-wheels away from the rails.

In order to warn the engineer when the wheels of a truck leave the rails, blow-off valves 9 and 10 are provided and are arranged in pairs near one end of each truck. The valves 9 and 10, which are preferably mounted upon the spring-plank, as clearly illustrated in Figs. 1 and 2 of the accompanying drawings, are provided with levers 11 and 12, arranged to be operated by a vertically-movable rod or frame 13, located at one side of each truck at the side of the car upon which the train-pipe is mounted. The operating rod or frame 13, which is guided on the truck, extends through an opening of the spring-plank and is provided at its upper end with an arm 14 and at its lower end with a head or loop 15. The arm 14 is located beneath the adjacent pair of levers 11 and 12 and is arranged within a guide or keeper 16, and the head 15, which may consist of an oblong loop, as shown, normally extends below the brake-shoe 1 in position to engage the rail before said shoe strikes the same, whereby when a truck leaves the rails the operating rod or frame will be reciprocated vertically to open the valves. The loop or head 15 is as long as the adjacent shoe, and it is adapted to strike a rail when the truck leaves the track at either side thereof.

The valves 9 and 10 are connected by flexible pipes 17 and 18 with the train-pipe 19 and with the signal-pipe 20, whereby when the valves are open a signal in the cab of the engine will be sounded and the pressure within the train-pipe 19 will be reduced, so that the brakes of the train will be automatically applied, as will be readily understood. The flexible tubular connections between the valves and the pipes 19 and 20 are supported at opposite sides of the bolster by suitable eyes 21.

The front column-bolts 7 are connected with the end sill 22 of the car 23 by means of stay-chains 24, which prevent the truck from twist-

ing around when the wheels leave the rails, but which have sufficient slack to permit the trucks to have the necessary movements incident to rounding curves and the like. The car is provided with suitable eyes 24ª, into which the outer ends of the chains are linked, and the inner ends of the chains are linked into eyes 25, formed on plates which are secured to the truck by the front column-bolts.

The invention has the following advantages: The safety attachment for car-trucks, which is simple and comparatively inexpensive in construction, is adapted to be readily applied to a truck and is capable in event of the wheels leaving the rails of signaling the engineer, automatically applying the car-brakes, and engaging one of the rails to limit the lateral movement of the truck. The device also forms an efficient track-brake and may be used to advantage on cars not equipped with air-brakes.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. In a device of the class described, the combination with a truck, of valves mounted thereon, a brake-shoe carried by the truck and arranged to engage a rail should the wheels of the truck leave the track, and an operating device mounted on the truck, extending below the brake-shoe and arranged to operate the valves, whereby the brakes of the train will be applied and a signal sounded simultaneously with the operation of the brake-shoe, substantially as described.

2. The combination of a truck provided on its spring-plank with vertical guides, a valve mounted on the spring-plank and having a lever located adjacent to the guides, a flexible tube extending upward from the valve, and a vertically-movable rod provided at its lower end with a head disposed transversely of the track and adapted to engage a rail, said rod being extended through the spring-plank and provided at its upper end with a horizontal arm arranged in said guides and adapted to engage the lever of the valve, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEVI W. OLMSTEAD.

Witnesses:
ROSS. SHEFFOR,
NELSON L. ALLEN.