

(No Model.)

S. P. MITCHELL & C. L. & M. B. SCHUPPE.

BRAKE FOR RAILWAY CARS.

No. 534,224.

Patented Feb. 12, 1895.

Fig. 1.

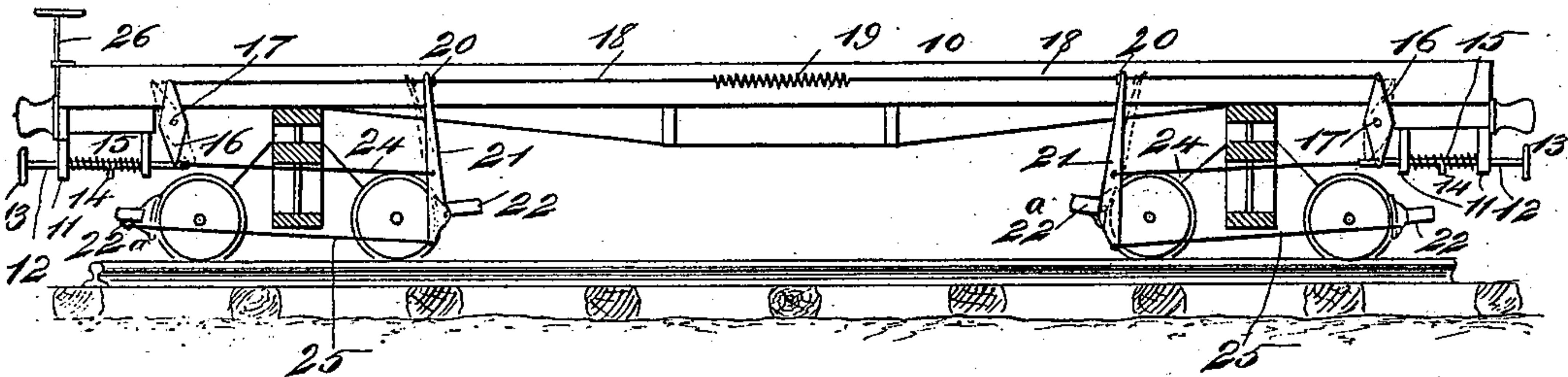


Fig. 3.

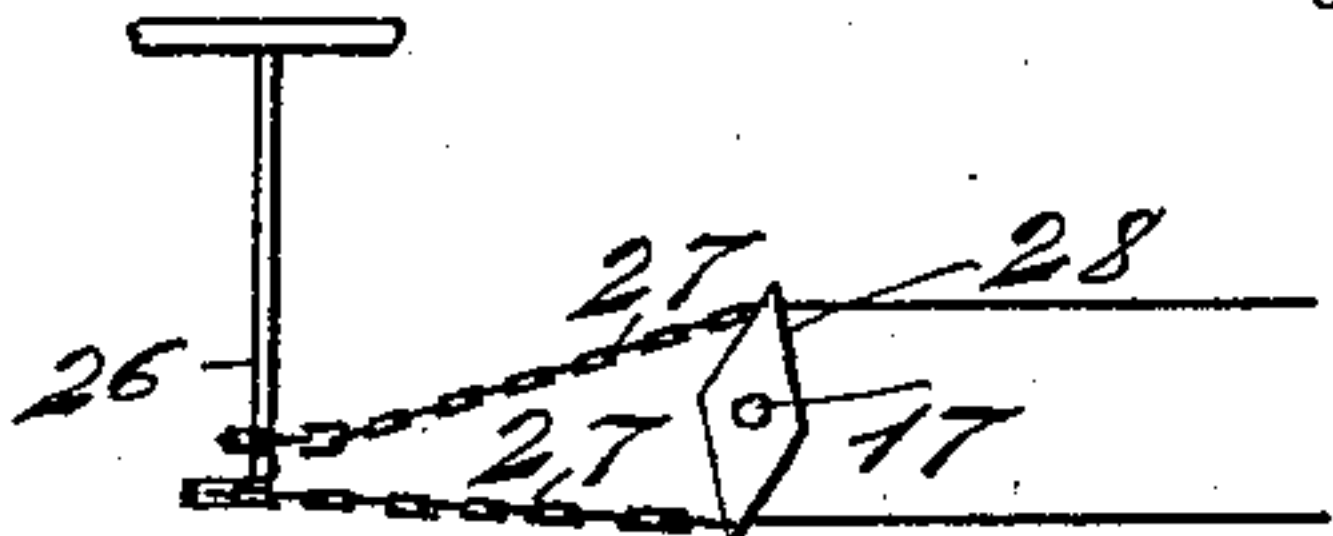
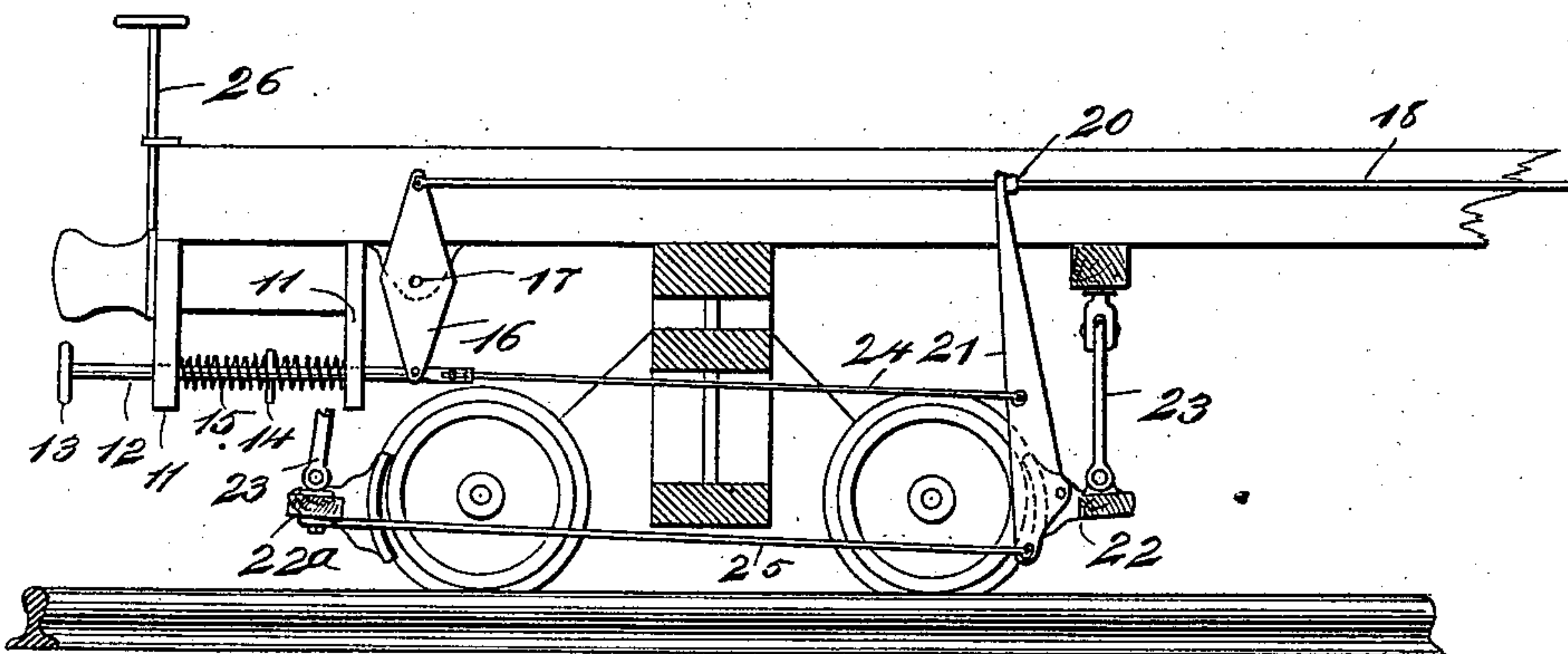


Fig. 2.



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BRAKE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 534,224, dated February 12, 1895.

Application filed April 24, 1894. Serial No. 508,794. (No model.)

To all whom it may concern:

Be it known that we, SIMON P. MITCHELL and CARL L. SCHUPPE, both of Van Buren, in the county of Crawford and State of Arkansas, and MAX B. SCHUPPE, of the city, county, and State of New York, have invented a new and Improved Car-Brake, of which the following is a full, clear, and exact description.

Our invention relates to improvements in car brakes; and the object of our invention is to provide mechanism which may be set in such a manner that the brakes can be easily and mechanically controlled from the engine, which mechanism may be applied to any ordinary form of car, either freight or passenger, and also to construct the said mechanism in such a way that it may be operated by the ordinary hand brake shaft and set by the said shaft so as to be in position to operate automatically.

To these ends our invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a sectional elevation of a flat car provided with our improved brake mechanism. Fig. 2 is a broken enlarged sectional elevation of the mechanism at one end of the car; and Fig. 3 is a detail view, showing the means of connecting the ordinary hand brake shaft with our improved mechanism.

The brake mechanism is shown as applied to an ordinary flat car 10, but it may be applied to a car of any ordinary construction. Beneath the car, near the ends, are depending brackets 11 in which slide longitudinally and horizontally the buffer rods 12, which have buffer plates 13 at their outer ends, and each rod 12 is connected at its rear or inner end with the lower end of a lever 16 which is carried by a shaft 17 journaled in a suitable support beneath the car, and the two levers 16, at the opposite ends of the car, have their upper ends connected with rods 18 which are connected at their inner ends by a strong spiral spring 19, this spring providing for the necessary contraction and expansion when

the buffer plates at both ends of the car are simultaneously struck. Each buffer rod 12 is provided at a point between the brackets 11 with a projecting pin or lug 14, which is engaged by a spiral spring 15 coiled around the buffer rod between the brackets 11, and the tension of the spring holds the rod in its normal position with the lever 16 perpendicular.

On the rods 18, just above the car trucks, are collars 20 which engage the forked upper ends of the levers 21, these levers being pivotally connected with the brake beams 22 at the inner ends of the trucks, which brake beams are of the usual kind carrying the ordinary brake shoes to engage the car wheels, and the beams are suspended in the usual way by means of links 23 from the car bottom. The levers 21 are each connected with the nearest buffer rod 12 by a rod 24 which slides through eyes on the buffer rod, as shown in Fig. 2, and consequently the buffer rod cannot push on the rod 24 but can only actuate it by pulling. If desired, a chain may be substituted for the rod 24. The lower end of the lever 21 connects, by a rod 25, with the front brake beam 22^a.

It is our intention to provide a buffer plate on the engine which may be thrown out by any suitable means so as to strike the buffer plate 13 on the car next the tender, and then the buffer plates on the several cars will operate on the mechanism behind them. We have not shown the buffer plate on the tender, for it will be understood that any suitable means may be employed for throwing the plate on the tender into contact with the buffer plate on the car.

It will be seen that when one of the buffer plates 13 is struck, it pushes in the lower end of the lever 16 with which it connects, thus throwing forward the upper end of the said lever which pulls on the rod 18, and the lug 20 of this rod striking the forked lever 21 pulls the said lever and the brakes from the beam 22, so as to throw the brake shoes against the rear wheels of the forward truck, while at the same time the tilting of the lever 21 draws on the rod 25 and throws the front shoes of the forward truck against the wheels. The pulling of the rod 18, as specified, tilts

the lever 16 at the opposite end of the car, and this pulls on the rod 24 and actuates the lever 21 and the brakes at the rear end of the car in exactly the manner specified above.

On the car is a brake shaft 26, of the usual kind, having the customary hand wheel to turn it, and if desired this shaft may be connected with the brakes in the ordinary way. The shaft has chains 27 attached to it, and these are secured to the upper and lower ends of a lever 28 which is secured to the shaft 17, and it will be seen that by pulling on the chains 27, the lever 28 may be tilted and the shaft 17 turned so as to actuate the lever 16 and its connections, and in this way either buffer plate 13 may be thrown out so as to engage the next adjacent plate and operate the brakes. The chains 27 are secured to the shaft 26 so as to be reversely wound, one winding up while the other is unwound.

It will be understood that instead of using the hand brake mechanism described, any ordinary hand brake attachment may be used, and it will also be understood that the levers 16 and rods 18 may be located in any convenient places beneath the car.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination with a car, and brakes suspended therefrom, of spring pressed buffers, pivoted levers connected with the buffers, a rod connecting the said levers, a second set of levers connected with the brakes and engaged by the said connecting rod, and rods having one end secured to the said le-

vers and their other ends slidably connected with the buffers, substantially as described.

2. The combination with a car, and brakes suspended from the car on opposite sides of the wheels, of spring pressed buffers, pivoted levers connected to the buffers, a rod connecting the said levers and provided with collars, a second set of levers pivoted to the rear brakes and having their upper ends engaged by the collars of the said rod, rods connecting the lower ends of the second set of levers with the front brakes, and rods having one end secured to the said second set of levers and their other ends slidably connected to the buffers, substantially as herein shown and described.

3. The combination, with the car, of the slidable buffer rods at the ends of the car, the levers fulcrumed on the car and connected with the buffer rods, the extensible rods connecting the two levers, brakes arranged opposite the car wheels, and a second set of levers operatively connected with the brakes and the extensible rods, substantially as described.

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