(No Model.)

E. ROOCH.

CAR BRAKE.

No. 537,585. Patented Apr. 16, 1895.

Fig. 1.

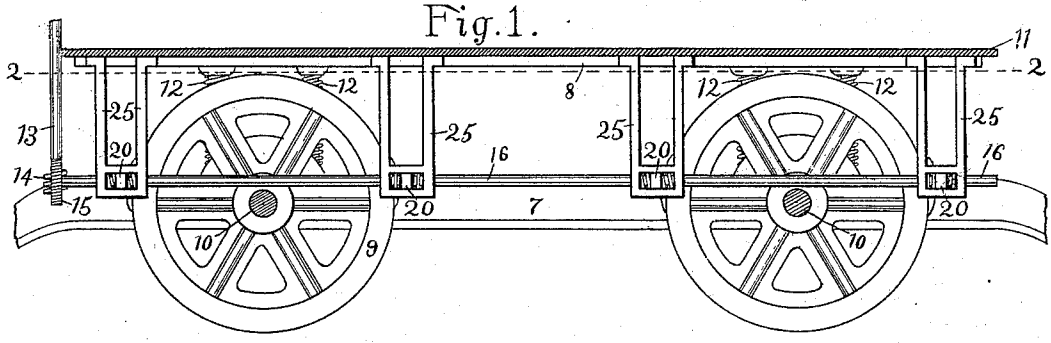


Fig. 2.

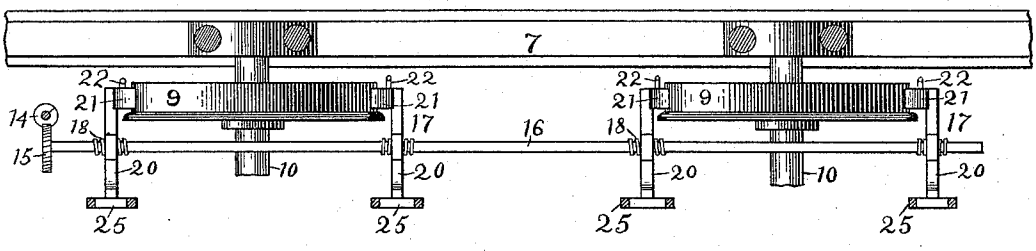


Fig. 3.

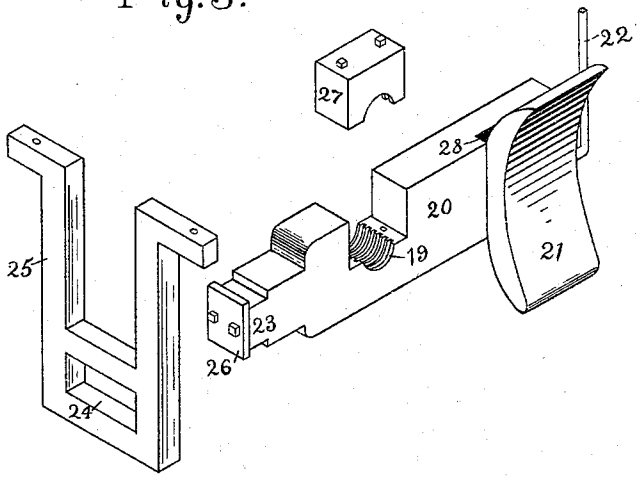
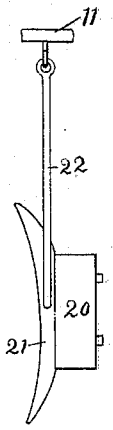


Fig. 4.



Witnesses
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EDWARD ROOCH, OF ST. LOUIS, MISSOURI.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 537,585, dated April 16, 1895.

Application filed January 10, 1896. Serial No. 534,416. (No model.)

To all whom it may concern:

Be it known that I, EDWARD ROOCH, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have invented a certain new and useful Car-Brake, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a new and useful car brake, more especially adapted for four-wheeled trucks, in which the power is communicated, by means of a worm or other suitable gearing, to a rod provided with right and left-handed threads, by which means the brake shoes are caused to approach or recede from the wheels.

The object of my invention is to construct a brake which will give great power and at the same time require but little space and be of simple construction.

In the accompanying drawings which illustrate one form of my invention, Figure 1 is a side elevation of one side of the truck frame and car frame looking at the inside of the wheels; the car bottom being shown in section. Fig. 2 is a top sectional view on the line 2—2 of Fig. 1. Fig. 3 is a detailed isometric projection of the brake shoe, the bar on which it is carried and the guide in which said bar is carried. Fig. 4 is an end elevation of the brake shoe showing method of attaching same to the bottom of the car.

In the accompanying drawings, in which like marks of reference refer to similar parts in the various views, 7 is the truck frame; 8, the car frame; 9, the wheels; 10, the axles; 11, the bottom of the car, and 12 the coil springs interposed between the truck frame and car frame. All these are of the usual construction and do not effect the operation of my invention.

13 is a brake rod of the usual construction, except that it has formed on its lower part the worm 14 which operates the worm wheel 15 on the shaft 16. This shaft has formed on it, at suitable distances, right-hand threads 17 and left-hand threads 18. These threads 17 and 18 are adapted to turn in corresponding female screw threads 19 in bars 20. These bars carry the brake shoes 21 which have attached to them hanger rods 22. These rods are pivotally attached to the car bottom 11 in any suitable manner. The opposite end of the bars 20 has a reduced portion 23, adapted to slide in a slot 24 in the guides 25, which are secured to the car bottom by bolts or in any other suitable manner. This reduced portion 23 is provided with a removable plate 26, which prevents it from slipping out of the slot 24. The lower half of the threads 19 are formed in the bar 20 and the upper half in a removable block 27 for convenience in placing the bars on or removing them from the rod 16; the block being bolted in position after the two parts have been placed around the rod.

The brake shoe 21 preferably has placed behind it a rubber cushion 28 to prevent breakage by a sudden strain on the brake.

To apply the brake, the brake handle (not shown) on the rod 13, is turned in the usual manner. This causes the worm 14 to revolve and communicate rotary motion to the worm wheel 15 and consequently to the shaft 16 passing through the bars 20. As the threads 17 are right-handed, and the threads 18 left-handed, the motion of the shaft will cause the bars on the threads to move in opposite directions. Therefore each bar will move toward the wheel upon which its brake shoe is adapted to bear, and the brake will be thus applied. By a contrary motion of the handle, the bars with their brake shoes will be caused to recede from the wheels and the brake then removed.

A brake the same in construction and operation as the one described but having its brake rod and gear wheel at the opposite end of the car may be used in connection with the wheels at the other side of the car, when the car is run in the opposite direction.

In place of the four brake shoes shown in the drawings, any two which move in opposite directions may be used.

Other changes may be made in the construction without departing from the spirit of my invention. I do not wish, therefore, to limit myself to the exact construction shown in the drawings, and described.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a car brake, one or more pairs of brake shoes, an independent bar carrying each brake shoe, a threaded shaft operating any two adjacent bars in opposite directions, said shaft being located at the side of the car adjacent to the wheels, and means for maintaining the said bars and brake shoes parallel with the peripheries of the wheels.

2. In a car brake, one or more pairs of brake shoes, bars carrying the same, suitable guides in which one end of such bars are adapted to slide, rods for supporting the other end of such bars, and a threaded shaft operating any two adjacent bars in opposite directions.

3. In a car brake, one or more pairs of brake shoes, bars attached to such shoes, guides for supporting one end of such bars, rods supporting the opposite end of such bars, a right and left-hand threaded shaft operating such bars and shoes, and a worm gear operating such shaft.

In testimony whereof I have hereunto set my hand and affixed my seal, this 7th day of January, 1895, in the presence of the two subscribing witnesses.

EDWARD ROOCH. [L. S.]

Witnesses:
A. C. FOWLER,
J. F. WESTON.