

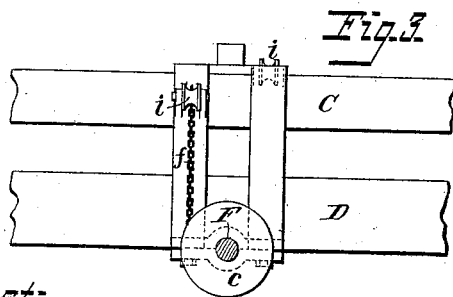
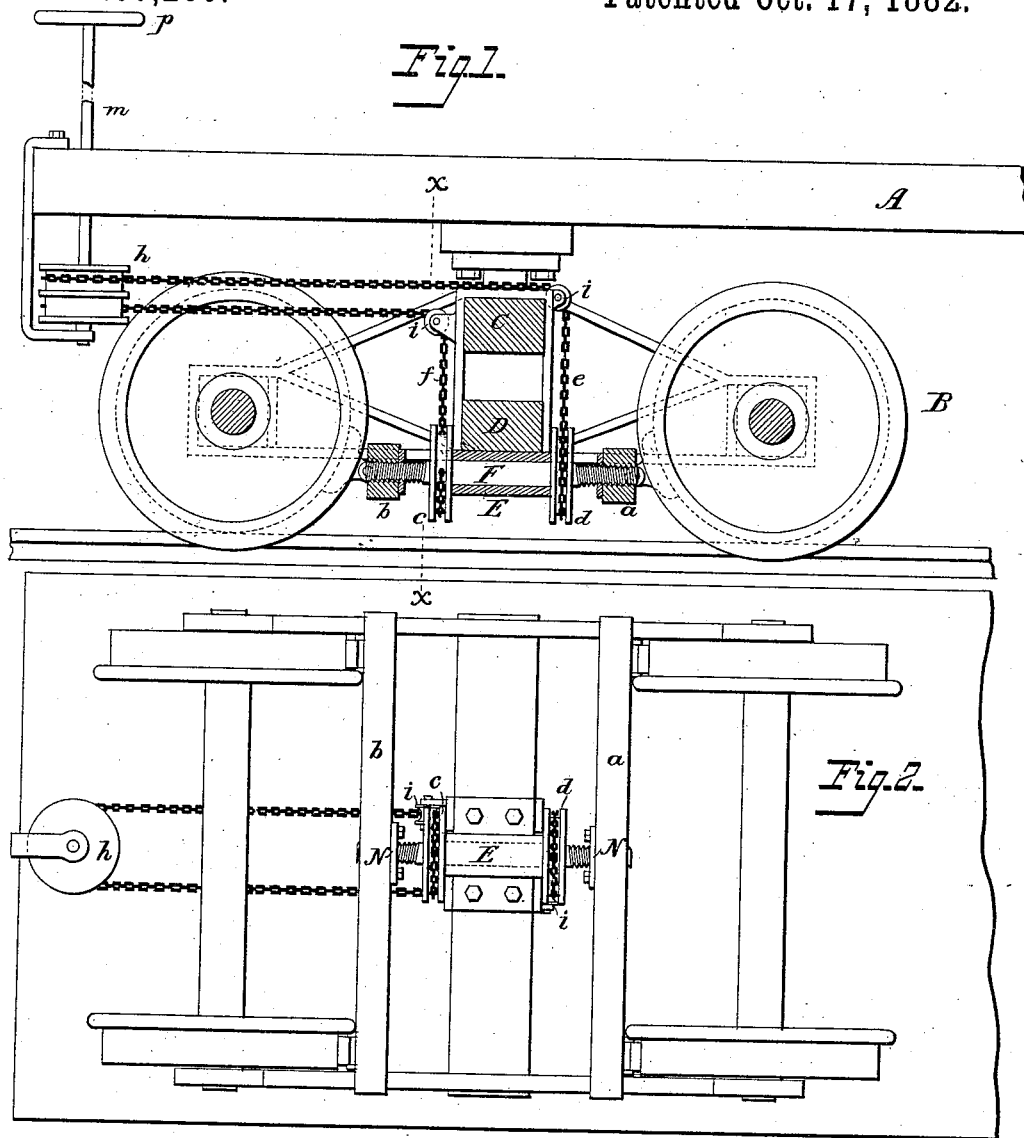
(No Model.)

## H. BARRATT.

CAR BRAKE.

No. 266,260.

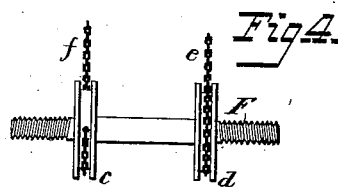
Patented Oct. 17, 1882.



*Attest:-*

Courtney A Cooper

A. E. Hansmann.



Henry Barratt

Inventor:

By Charles E. Fisher  
his atty.

# UNITED STATES PATENT OFFICE.

HENRY BARRATT, OF YORK, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO  
JACOB D. MILLER, OF SAME PLACE.

## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 266,260, dated October 17, 1882.

Application filed February 17, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY BARRATT, a citizen of the United States, and a resident of York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

My invention relates to improvements in that class of car-brakes in which the brake-beams are actuated by means of revolving screw-shafts; and the objects of my invention are to provide a brake that is simple in its construction, effective in its operation, cheap, and capable of easy repair in case of accident. I attain these objects by the mechanism fully described hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a car-truck, partly in section, provided with my improved brake. Fig. 2 is a plan view, the platform removed; Fig. 3, a cross-section on the line  $xx$  of Fig. 1. Fig. 4 is a side view of the screw-shaft and drums, showing also the chains for operating the same.

$\Delta$  is the platform of the car.  $B$  is one of the trucks of the usual form, the cross-beams  $CD$  constituting part of the truck-frame. Beneath the beam  $D$  are bearings  $E$ , in which revolves a shaft,  $F$ , for operating the brake-beams  $ab$ . The ends of the shaft  $F$  are threaded, forming right and left hand screws, which work in threaded bearings or stationary nuts  $N$ , secured to the brake-beams  $ab$ . To the brake-beams are connected brake-shoes of any form which may be found desirable. Metal drums  $cd$  are fastened on the screw-shaft  $F$ , on opposite sides of the beam  $D$ , and to these drums are secured the ends of chains  $ef$ , which are wound in opposite directions. In brackets on the cross-beam  $C$  turn guide-pulleys  $i$ , over which the chains  $ef$  pass to the end of the car, where they are secured to and wound in opposite directions upon a double-grooved drum,  $h$ , on a shaft,  $m$ , the lower end of which has its bearing in a bracket,  $n$ , secured to the platform  $\Delta$  of the car, while the other end extends through and above the platform  $\Delta$ , to receive the hand-wheel  $p$ .

The brakes are applied to the wheels of the

car, or released from the same, by simply turning the shaft  $m$  in a direction to wind either of the chains  $ef$  on the drum  $h$ ; as the occasion may require, thereby tightening the one, at the same time slackening the other, the winding of one chain serving to apply the brakes and the winding of the other to release the same, the screws separating the beams when the drums are turned in one direction and bringing them together when the rotation of the drums is reversed.

It is obvious that the brakes may be operated from either or from both ends of the car, as may be found most convenient.

I am aware that the use of right and left hand screw-shafts to apply car-brakes is in itself old; but brakes of this class heretofore made have been operated by means of cog or gear wheels, which are not only very difficult to operate, owing to the great amount of friction, but are also expensive, and constitute inflexible connections, affording no opportunity for the parts to "play." There is also a serious objection to the use of cog-wheels in this connection, from the fact that the teeth are liable to break off at any time, rendering the brakes inoperative, and as such injuries cannot be repaired upon the road the brakes are useless until the car can be sent to the shops.

By the use of chains in connection with the construction and arrangement of operating appliances as here shown and described, I avoid the use of cog-wheels and gearing, and simplify the operation of the brakes. I further secure a more elastic connection, capable of being easily repaired if broken, and I can also readily connect several brake-beams with one operating-shaft, regardless of the position of the latter, owing to the facility with which the chains can be conducted to different separate points.

I claim—

1. The combination, in a car-brake, of the horizontal screw-shaft  $F$ , having right and left hand screws, turning in bearings between the axles on the cross-beam of the truck, and carrying two drums,  $cd$ , and the brake-beams  $ab$ , provided with nuts, through which the ends of the screw-shaft  $F$  pass, and chains  $ef$ , and devices

for drawing upon and relaxing the same, substantially as set forth.

2. The combination, in a car-brake, of the shaft *F*, having right and left screw-threads, hung centrally within the frame of the truck, between the axles carrying the drums *c d*, the brake-levers *a b*, having threaded perforations, through which pass the ends of the screw-shaft *F*, a shaft *m*, and drum *h*, and chains *e f*,

wound upon the drums *c d h*, substantially as is set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY BARRATT.

Witnesses:

J. D. MILLER,

WM. T. WILLIAMS.