

F. M. CHAPMAN.
Car-Brakes.

No. 133,629.

Patented Dec. 3, 1872.

Fig. 1.

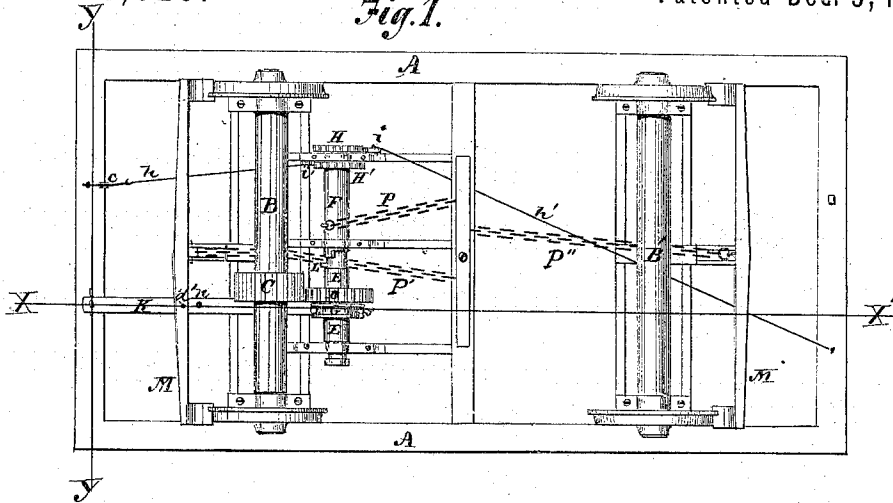


Fig. 2.

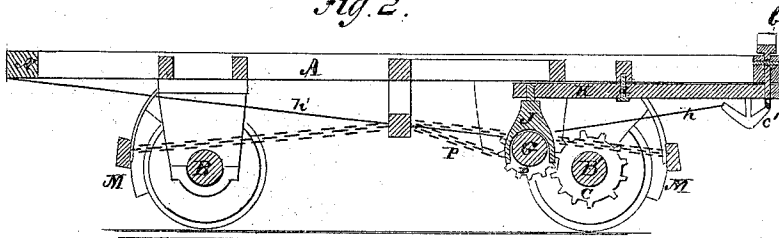
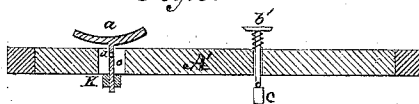


Fig. 3.



Witnesses.

W. H. Hamilton
Isaiah Hanna

Inventor.

Frank M. Chapman

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Fig. 4.

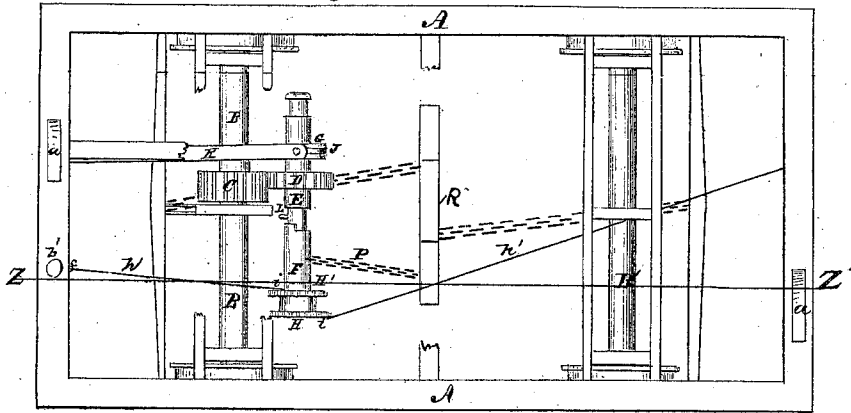


Fig. 5.

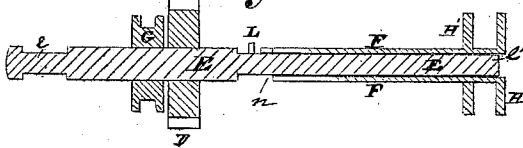
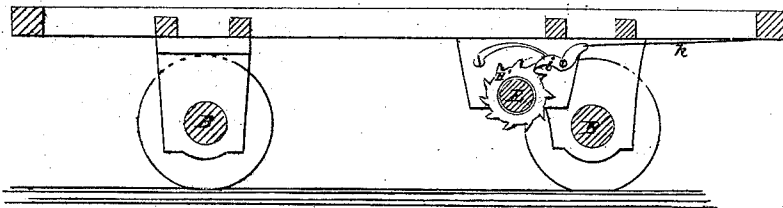


Fig. 6.



Witnesses

W. H. Barnitt

Seaborn Hanna

Inventor

Frank M. Chapman

UNITED STATES PATENT OFFICE.

FRANK M. CHAPMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. 133,629, dated December 3, 1872.

To all whom it may concern:

Be it known that I, FRANK M. CHAPMAN, of the city, county, and State of New York, have invented certain Improvements in Car-Brakes, of which the following is a specification:

This invention consists in a combination of devices constituting a car-brake, to be operated by being thrown into and held in gear with the car-axle as it revolves, and by being released from the same, thus utilizing as a power the force and motion of the wheels and axle of the truck.

Referring to the accompanying drawing, Figure 1 is a bottom view of the brake; Fig. 2 is a section on the line $x x'$; Fig. 3 is a section on the line $y y'$; Fig. 4 is a plan view; Fig. 5 is an enlarged section of shaft, &c.; and Fig. 6 is a section on the line $z z'$.

A A' is the frame of the truck. B and B' are the axles. C is a cog-wheel on the axle B. E is a shifting-shaft having a projecting groove, G, to receive the prongs S of the brake-lever K, and having elongated bearings e and e' and a projecting pin, L. F is a thimble fitting over the bearing e , and having the ratchets H and H' and a notch, n , to receive the pawls i and i' and the pin L. The shaft and thimble are supported in hangers. D is a cog-wheel on the shaft E to operate with the cog-wheel C, and to be thrown in and out of gear with it, by means of the shifting-shaft E and the thimble F and their attachments. The lever K has a lateral vibrating motion when moved by the pedal a , in consequence of the pivots d and d' and the slot o . P, P', and P'' are the chains attached to the centers of the brake-

bars M and lever R, and to the thimble F. The brake-bars are suspended from the frame by flexible supports. The ratchets are operated by rods h and h' , levers c and c' , and pedals b and b' .

Pressure upon the right-hand side of the pedal a pushes the shaft E into the thimble F, and, consequently, the pin L into the notch n , at the same time the two cog-wheels are thrown into gear. The car being in motion, motion is thus communicated to the thimble F, around which the chain P is consequently wound, thereby drawing forward one end of the lever R, and transmitting draft to the chains P' and P'' and to the brake-bars, thus forcing the brake-shoes upon the wheels to retard their motion.

I claim as my invention—

1. In a car-brake, the combination of the shaft E having bearings e and e' , the projecting groove G and the pin L, the thimble F having ratchets H and H' and the notch n , the cog-wheel D, the cog-wheel C on the axle B, the lever K, and the pawls i and i' , all constructed and arranged substantially as set forth.

2. A car-brake, consisting essentially of pedal a , lever K, shaft E, thimble F, cog-wheel D, cog-wheel C on the axle B, ratchets H and H', rods h and h' , pedals b and b' , chain P, lever R, chains P' and P'', and brake-bars M having brake-shoes, all constructed, combined, and arranged in relation to a car or truck, substantially as set forth.

FRANK M. CHAPMAN.

Witnesses:

W. H. HAMILTON,
ISAIAH HANNA.