

C. AMMARELL.
Car-Brake.

No. 228,584.

Patented June 8, 1880.

Fig. 1.

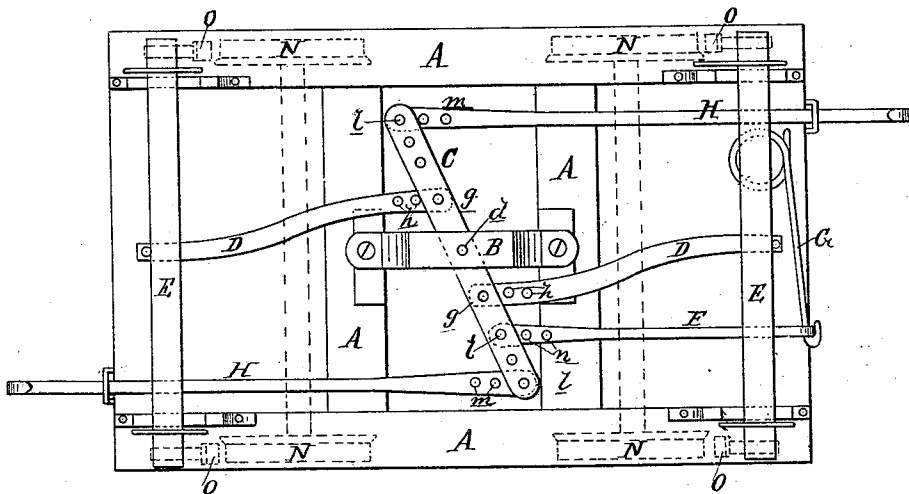
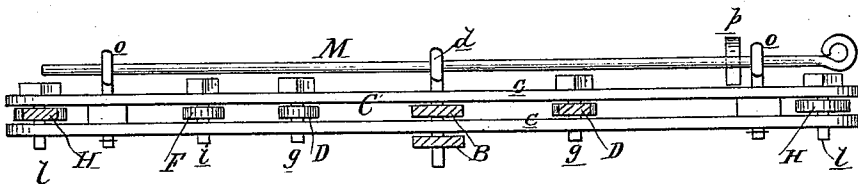


Fig. 2.



WITNESSES:

Henry N. Miller
C. Sedgwick

INVENTOR:

C. Ammarell
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHRISTIAN AMMARELL, OF EAST NEW YORK, N. Y., ASSIGNOR TO HIMSELF
AND FREDERICK HOHMAIER, OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 228,584, dated June 8, 1880.

Application filed December 19, 1879.

To all whom it may concern:

Be it known that I, CHRISTIAN AMMARELL, of East New York, in the county of Kings and State of New York, have invented a new and Improved Car-Brake, of which the following is a specification.

Figure 1 is a plan of the brake viewed from the reverse side. Fig. 2 is an enlarged side elevation of the main lever and locking-rod with cross-sections of its connections.

Similar letters of reference indicate corresponding parts.

The object of the invention is to operate a car-brake by a single spring and to lock the main lever of a car-brake, as hereinafter described.

In the drawings, A represents the bottom of the car; B, the double or slotted hanger depending from the bottom of the car.

C is the main or double lever, composed of the two parallel bars *c c*, one of which is set on top of the hanger B, while the other passes through the slotted portion thereof, the two said bars *c c* being pivoted together to the hanger B by an eyebolt.

Pivoted by the pins *g*, between the bars *c c* of the main lever, are the curved brake-levers D D, whose other ends are connected with the centers of the brake-beams E E, said brake-levers D D being provided with several pin-holes, *h h*, by means of which they may be lengthened or shortened at will.

Pivoted between the bars *c c*, by pin *i*, is the spring-rod F, whose other end connects with the spring G, which is secured to the bottom of the car, as shown, and operates to hold the brakes off the car-wheels.

Pinned by the pins *l*, in the extreme ends of the lever C, are the adjustable brake-rods H H, that extend in opposite directions beyond the ends of the car, so that the ordinary operating attachments may be applied to them. Both these brake-rods H H and the spring-rod F are provided with pin-holes *m n*, respectively, by which they may be adjusted to suit the action of the spring or the wear upon the brake-shoes. The ends of the bars *c c* are held together, forming the lever C, by the eyebolts *o o*, that pass through the said bars and have

their points upset, as shown, or provided with lock-nuts.

Through the eyes of the lever-pivoting bolt *d* and the bolts *o o*, and lengthwise of the lever C, is passed the locking-rod M, said rod M being itself locked in place by the locking-pin *p*, that is entered into a slot in the said rod and prevents its turning or its disengagement from the eyebolts. The function of this locking-rod M is to bear upon the heads of the pins pivoting the brake-levers, brake-rods, and spring-rod, so as to hold said pivoting-pins in place; and a further purpose of using this rod M is that it may be quickly and easily withdrawn to permit the removal and replacing of either of the pivoting-pins when either of the rods or levers requires adjusting.

N N represent the car-wheels, and O O the brake-shoes, which latter are secured to the brake-beams in the usual manner.

Ordinarily two or four springs are used in connection with car-brakes, and hence it requires a great exertion of strength to compress them sufficiently to apply the brake effectively, and it also requires so much time to effectively apply the brake against the usual two or four springs that many injuries to fallen horses and many other accidents occur on horse-car roads that might be avoided by the use of the device herein shown, which operates with but one spring. It is found, too, that in the ordinary horse-car brake the brake-beam does not move evenly—that one brake-shoe becomes firmly engaged with a wheel, while the shoe on the other end of the beam exerts little or no pressure upon its opposite wheel, and this is another reason why cars cannot be stopped as quickly as they might and often should be. It is often found, too, that because of the difficulty or impossibility of properly adjusting all the parts of a brake the brake becomes wholly or partially ineffective as the wear upon the shoes increases; hence accidents often occur because of worn brake-shoes, and slightly-worn shoes have to be replaced by new ones.

By using but one brake-spring I make a saving in the cost of a brake, and make it (the brake) more quickly and easily controlled, and with much less exertion on the part of the op-

erator, by this means also preventing many accidents.

By providing the brake-levers and rods with adjusting pin-holes the work of lengthening
5 or shortening them to suit the conditions of the spring or shoes is simple and effective. By making the main lever in two parts, as shown, and by pivoting the levers and rods between the
10 a locking-rod, all nuts and bolts are dispensed with, and much time and trouble thereby saved in adjusting the parts; and by making the brake-levers curve, as shown, so that their
15 ends shall centrally connect with the brake-beams, I assure an even and equal pressure of each end of the beam, or the shoes thereon,

against the opposite wheels. These brake-levers herein shown may have their ends where they connect with the brake-beams drawn round and passed through the beams, 20 and be secured in the usual manner by nuts.

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

The combination, with the main lever C and 25 eyebolts *d o o*, of the locking-rod M and locking-pin *p*, substantially as and for the purpose described.

CHRISTIAN AMMARELL.

Witnesses:

I. I. STORER,
C. SEDGWICK.