

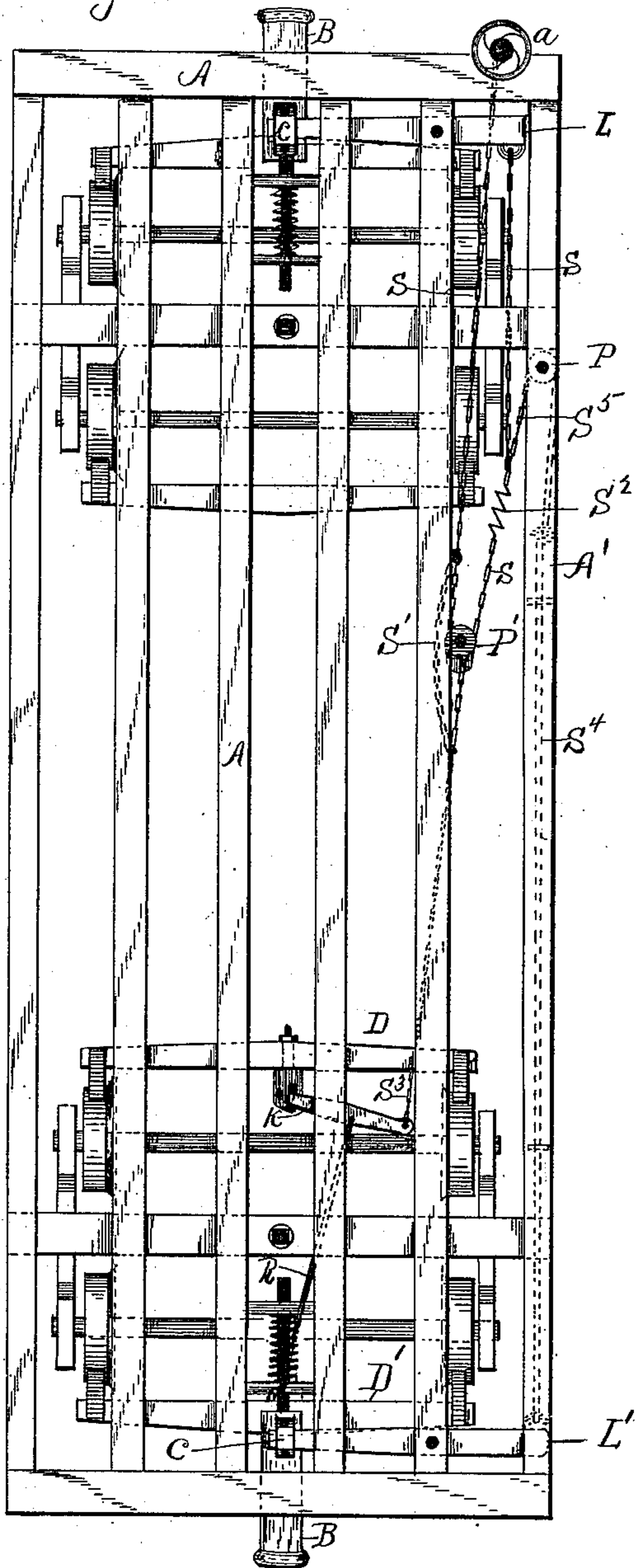
(No Model.)

C. L. AMES.
AUTOMATIC CAR BRAKE.

No. 408,567.

Patented Aug. 6, 1889.

Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

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AUTOMATIC CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 408,567, dated August 6, 1889.

Application filed June 10, 1889. Serial No. 313,717. (No model.)

To all whom it may concern:

Be it known that I, CHESTER L. AMES, a citizen of the United States of America, residing at Cabery, in the county of Ford and State of Illinois, have invented certain new and useful Improvements in Automatic Car-Brakes, of which the following is a specification, reference being had therein to the accompanying drawing, and the letters and figures of reference thereon, forming a part of this specification, in which the figure represents a plan view of the upper side of a car-frame having the floor removed and showing the parts below the frame.

This device relates particularly to that class of car-brakes that may be denominated "automatic," and is intended to automatically set the brakes by means of the concussion contact of the draw-bars in a train of cars when the train slows up, the draw-bars being connected with the brakes by means of levers, chains, and rods.

Referring to the drawing, the draw-bars B B are intended to be of the ordinary pattern, and respectively connected loosely, by means of straps C C, to the inner ends of the levers L and L', extending horizontally and at right angles to the draw-bars and pivoted near their centers to one of the sills of the car-frame, as shown. The outer end of lever L has connected to it chain S, which extends horizontally to near the center of the car and passes around a pulley-block P', and returns to the end of the car near said lever and attaches to the brake-rod A, upon which it is intended to be wound in the ordinary manner. Said pulley-block P' is connected with the outer end of the brake-lever K of the opposite truck. The inner end of said brake-lever is pivoted to brake D, and a rod R connects said lever at its center with the opposite brake D'. The chain S is provided with a coil-spring S² in its part between lever L and pulley P'.

S⁵ is a chain connected at one end to chain S at a point between said spring and lever L, and passes around a pulley P, located on the under side of the side sill A', at a point some distance from said spring and between it and lever L. The opposite end of said chain S⁵ connects with the opposite lever L' through

the medium of the rod S⁴, (shown in broken lines under sill A',) and supported thereby by any suitable means.

S' is a short chain for connecting chains S and S³ around pulley-block P'. This short chain, with chains S and S³, connect the brake-rod a directly with brake-lever K, so the brakes D D' may be set by said brake-rod in the ordinary manner in case it is desired to brake up the car when it is disconnected from other cars, so their draw-bars are not in contact.

In operation the brake-rod is intended to be turned so as to have some tension on the chain and rods, but not so much as to hold the brakes set. When the tension is thus brought to bear on the chains and rods, pressure on the outer ends of the reciprocating draw-bars B B, or either one of them, will operate the levers L L', respectively or together, so as to give sufficient tension on the chains and rods and to set the brakes automatically. The coil-spring S² is introduced in the chain S for the purpose of making the tension of the chains and rods yielding, so they may not break when the draw-bars are suddenly operated by a concussion with those of another car.

As shown, the brake apparatus is applied to the wheels of only one truck.

If desired, a duplicate apparatus may be applied in the reverse position, so as to brake the wheels of the opposite truck. The advantage to be gained by the use of such apparatus is that by setting the brake-rod so as to give an initial tension to the rods and chains, but not sufficient to set the brake whenever the train slows up, and the draw-bars of the cars forming the train are brought in contact and reciprocated toward the car to which they respectively attach, they will give greater tension to the rods and chains and set the brake automatically, and the brake will remain set until the draw-bars of the cars are separated from each other, as when the engine starts up, and instantly all of the brakes of the train are unset, so the train may at once proceed without the necessity of unsetting the brake of each car separately. If desired, the pulley-block P may be substituted by a bell-crank or a straight lever, if desired, having

the chains attach, respectively, at the opposite ends of the cranks.

Having thus described my invention, what I claim as new, and desire to secure by Letters
5 Patent, is as follows, to wit:

1. In combination with the frame and brakes of a car, the chains S S' S³ S⁵, rods S⁴ and R, levers L L', draw-bars B, brake-lever K, coil-spring S², pulleys P P', and brake-rod a, all
10 arranged substantially as and for the purpose set forth.

2. In a car-brake, in combination with the brakes of a truck, brake-rod, and the reciprocating draw-bars, the levers L L', chains S S³ S⁵, coil-spring S², rods S⁴ and R, brake-lever 15 K, pulley P, and pulley-block P', substantially as and for the purpose set forth.

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Witnesses:

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