[20.] # M. F. Daughtrey. Car-Coupling.

No. 119,582. Patented Oct. 3, 1871.

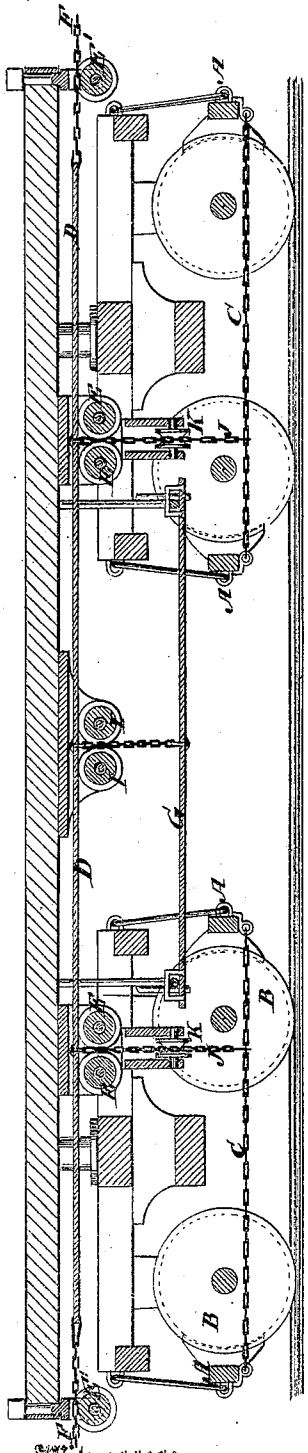

Fig. 1.

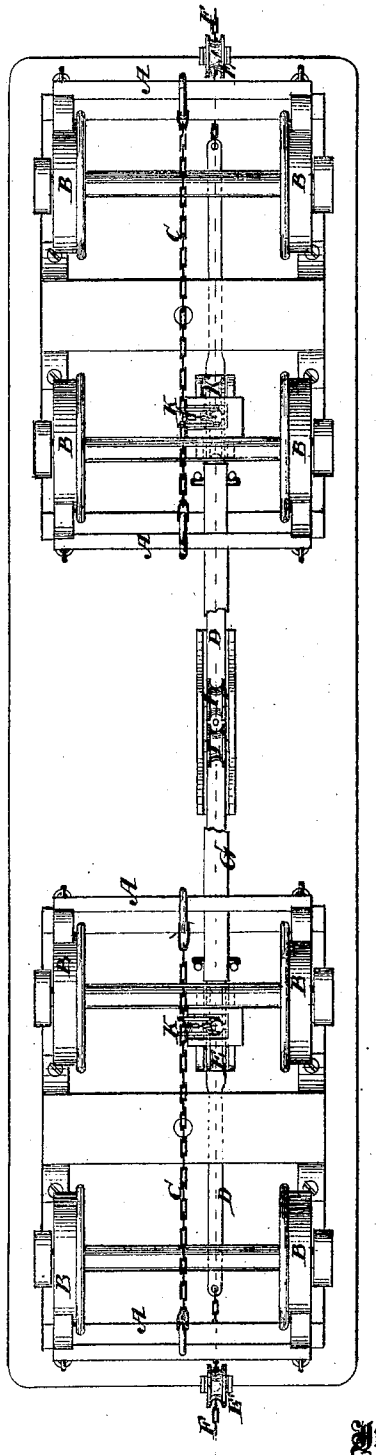

Fig. 2.

Witnesses:

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

MARMADUKE F. DAUGHTREY, OF PORTSMOUTH, VIRGINIA.

IMPROVEMENT IN RAILWAY-CAR BRAKES.

Specification forming part of Letters Patent No. 119,582, dated October 3, 1871.

To all whom it may concern:

Be it known that I, MARMADUKE F. DAUGHTREY, of Portsmouth, in the county of Norfolk and State of Virginia, have invented a new and improved Car-Brake; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in apparatus for connecting the brakes of cars with the actuating devices, whether the latter be the ordinary hand-shafts and wheels mounted on the platforms of each car, or a power apparatus on the locomotive to which all the brakes are connected. The said invention consists in having the cross-bars or brake-bars of each truck connected to each other by a chain, or by chains and a flat metal spring, and the said connecting-chain or chains and spring connected by a vertical chain with a rod or chain suspended lengthwise of the car underneath the bottom on rollers, and form a link in the connection with the brake-operating devices, the said connection either extending the whole length of the train to the engine or connecting with the winding-shaft at each end of the car; and the said rod is connected at the center of the car between the trucks by another vertical chain with a horizontal flat spring, which draws it back and releases the brakes, which are forced against the wheels by the endwise movement of said rod in either direction.

Figure 1 is a longitudinal sectional elevation of a car provided with the improved brake apparatus, and Fig. 2 is a plan of the bottom of the same.

Similar letters of reference indicate corresponding parts.

A represents the brake-bars, which are suspended in front of the wheels B in the ordinary way. The two bars of each truck are connected together by a chain, C, which is so adjusted as to length that, when extending in a right line or thereabout between them, the brakes will be free from the wheels. This chain C is connected, by vertical chains J, to the long rod D; or it may be a chain extending from end to end of the car above the rollers E E′, and connecting with the winding-shaft at each end of the car; or it may be connected to the similar rods of all the other cars in the train by short sections of chain F, to be operated by means on the locomotive for working all the brakes at once, said chains J passing between rollers E; but whichever way it is worked its movement in either direction, so as to draw the chain C upward from the right line by drawing chains J over rollers E, will force the brakes on the wheels. G is a long flat spring bar of metal suspended at each end from the car in a horizontal plane, and connected at the center with the rod D by a vertical chain or cord, H, to the rod D, said cord or chain passing between the rollers I in the same way the chains J pass between rollers E, so that when the rod is moved in either direction the spring is deflected for drawing said rod back and releasing the brakes when the rod is released. The vertical chains J may also pass between guide-rollers K, to prevent them from swinging laterally by the motion of the cars. Of course these chains may be arranged to draw the chains C laterally or in any other direction for applying the brakes to the wheels, but the arrangement would not be as simple as one here shown.

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

The combination of the spring G, chain H, and rollers I with the rod D, all substantially as specified.

MARDADUKE F. DAUGHTREY.

Witnesses:

T. B. BROWN,

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