H. EMPEY.

Car-Brake.

No. 208,229. Patented Sept. 24, 1878.

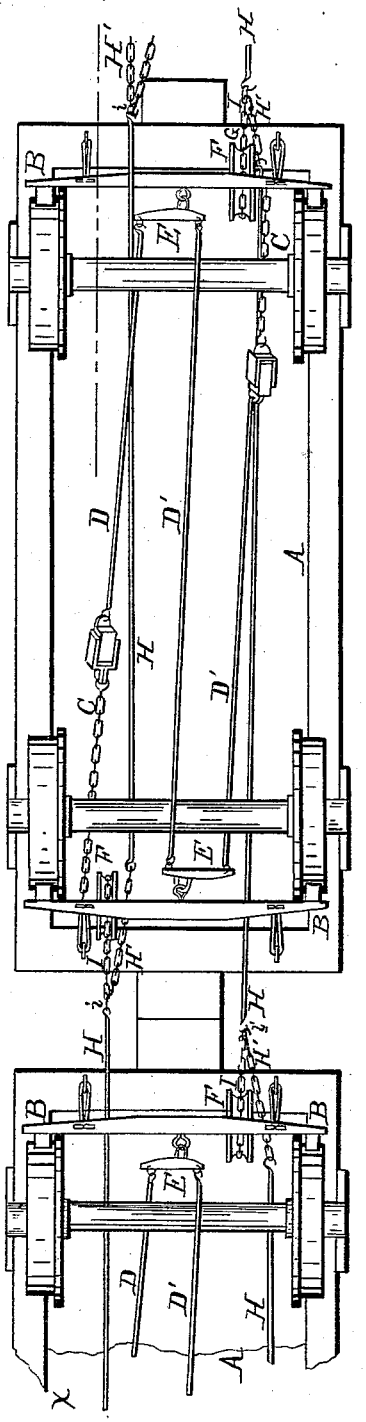

Fig. 1.

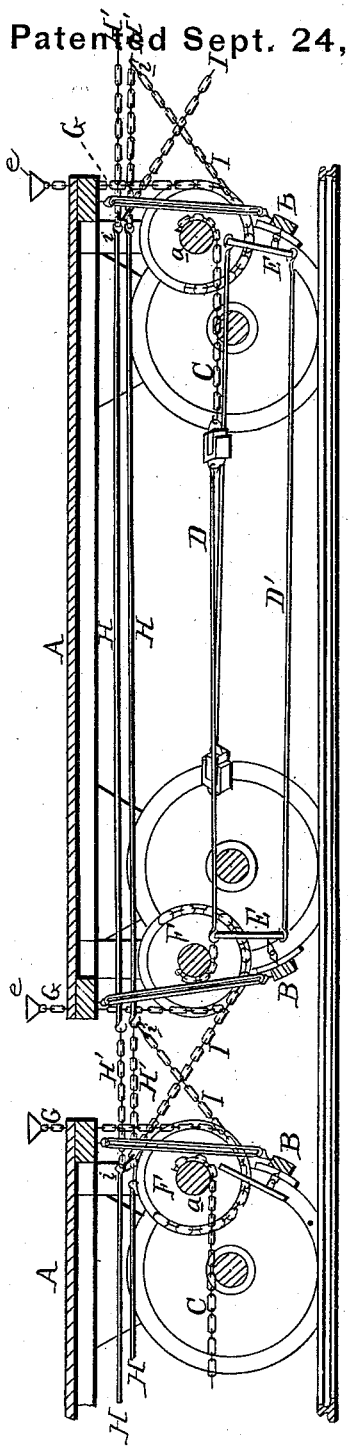

Fig. 2.

Witnesses:

H. L. Aulls

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Inventor:

Henry Empey

UNITED STATES PATENT OFFICE.

HENRY EMPEY, OF DETROIT, MICHIGAN.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **208,229**, dated September 24, 1878; application filed February 15, 1878.

To all whom it may concern:

Be it known that I, HENRY EMPEY, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Continuous Brakes, of which the following is a specification:

The nature of my invention relates to a device to be used with cars fitted with the brakes for which Letters Patent of the United States were issued to Martin B. Aldrich and George F. Huggins on June 29, 1875, and numbered 164,955; and the object I have in view is to render the brake system continuous throughout a train of such cars and under the control of the engineer or other person placed in charge thereof at either end of the train.

To this end my invention consists in a pair of rods suspended loosely under the floor of each car, each rod having a chain at one end to hook into an eye turned in the end of a corresponding rod under the next car, the chains and hooks alternating, so as to couple up at either end of the car when turned around in making up a train. One rod of the forward car is connected by a chain passing under the tender of the engine to a rotary winch, steam or air piston, or other motor under the control of the engineer, whereby he can move at will, longitudinally, one continuous line of said rods throughout the train.

Figure 1 is a bottom plan of two cars fitted with my improvement. Fig. 2 is a longitudinal vertical section on the line *x x* of Fig. 1.

In the drawing, A represents the platform of a flat car, under which the brakes B B are hung, in the usual manner, and are operated by the brake-chain C, rods D D′, and levers E E, now in common use. *a* is a short shaft, journaled in hangers under the end of the platform, or under the front end of the car. F is a grooved pulley, keyed on the shaft *a*, to which the outer end of the brake-chain is secured. G is the operating-chain, one end of which is secured in the groove of the pulley F, around which it is led to the rear, thence up through an opening in a casting at the end of the platform. At the end of the chain a triangular gripe, *e*, may be secured, whereby the brakes of the several cars may be set as described in the said Letters Patent.

Under the platform of each car is suspended, by eyebolts, the rods H over each drum F, and extending the full length of the car, with a hook turned in one end of each rod, with a chain, H′, on the other, and alternating ends of said rods adapted to engage with the hooks of similar rods in contiguous cars of the train. A short chain, I, has one end secured either to the drum F or to its operating-chain G, as shown, while the other end has a hook, *i*, to engage with the connecting-chain H′ above, so that if said continuous line of connected rods H be moved forward by the engineer all the brakes so connected with it will be simultaneously set. Where the control of the brakes is thus given to the engineer, only the chain I on the forward end of each car need be coupled up to the continuous line of operating rods and chains. The other line need not be thus coupled up, and the brakes of any or all cars may be independently set by the train hands.

With a little care and judgment in hooking up the chains I, all "lost motion" or slack in the described brake system may be accurately taken up, so as to produce a uniform brake-pressure on the wheels when power is applied.

What I claim as my invention is—

The combination of the rods H, their coupling-chains H′, and the chains I, for connecting the same with the drums F of the described brake system, whereby the latter can be operated by a motor at the end of the train, substantially as set forth.

HENRY EMPEY.

Witnesses:
GEO. SMITH,
SAMUEL H. JOSLIN.