S. LEVI.

CAR-BRAKE.

No. 187,648. Patented Feb. 20, 1877.

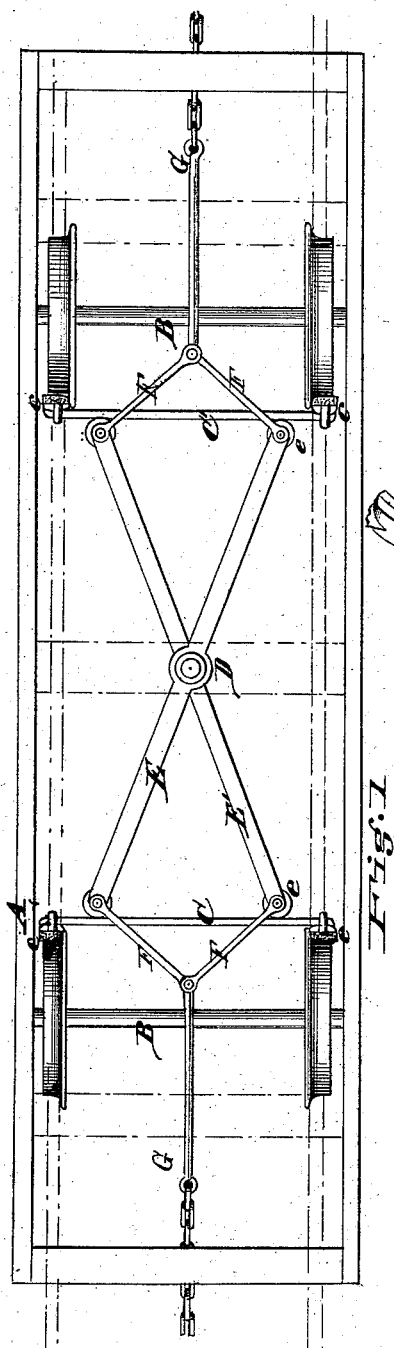

Fig. 1

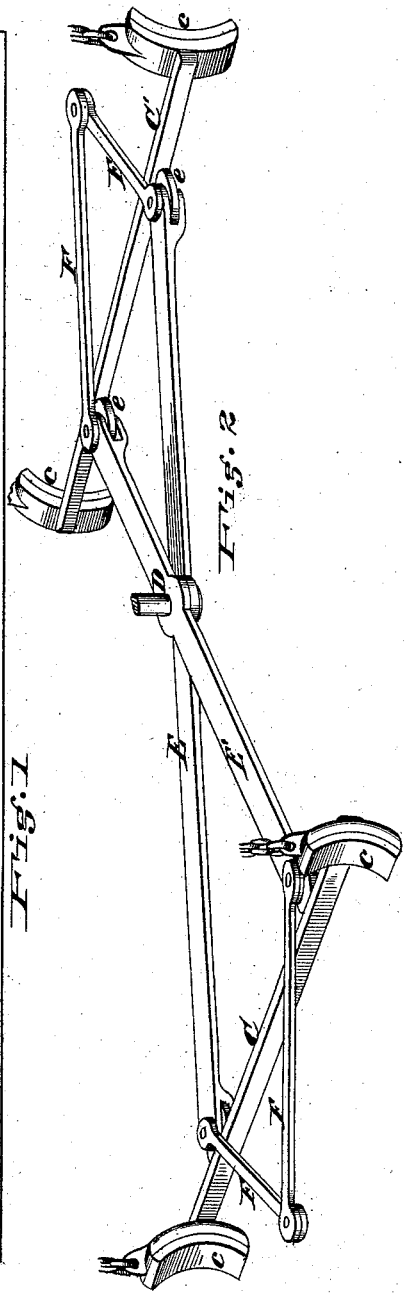

Fig. 2

Witnesses

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SIGMUND LEVI, OF CINCINNATI, OHIO.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **187,648**, dated February 20, 1877; application filed July 11, 1876.

To all whom it may concern:

Be it known that I, SIGMUND LEVI, of Cincinnati, Hamilton county, State of Ohio, have invented an Improvement in Car-Brakes, of which the following is a specification:

My invention has for its object the construction of a car-brake which shall be rapid in action and possess great binding powers; and my invention consists, in the first part, of a certain arrangement of bars, located to expand between and against the brake-bars of both fore and aft truck, or against and between the brake of either truck, and a stationary abutment to force the brake bar or bars against the wheels, the whole more fully described hereafter.

My invention consists, in the second part, of a certain arrangement of levers and chains for operating the expanding bars, more fully described hereafter.

Figure 1 is a plan view of a car-frame and trucks with my improved brake attached. Fig. 2 is a perspective skeleton view of the expanding bars and brake-bars.

A is the bottom frame of the car, generally termed the "sills" thereof; and B denotes the fore and aft wheels. C C′ are brake-bars to the fore and aft trucks, having rubbing-blocks *c*. Located to hinge by their centers at a point, D, equidistant between the two trucks B, are a pair of expanding bars, E E′, the expansion being a horizontal rotary movement on the bearing-point D.

The length of these bars is such that, before brought parallel on a line at right angles to the brake-bars C C′, the ends thereof will bear against the brake-bars, and, if still further contracted toward a parallel position, will act to press both of the said brake-bars against their respective wheels simultaneously, no matter from which end, if either, or both ends, the power may be applied. To the ends of these bars are secured rods F, which are secured together at their loose ends, and connect to a draft bar and chain G. The draft-chain extends forward to the end of the car, and connects to the ordinary rod and hand-wheel for operation by the brakeman; or the draft-bar may connect to, or in itself constitute, the piston-rod of a steam-brake-operating device, such as in common use.

It will also be obvious that instead of the bars or rods F being used as a means of contracting or drawing toward a parallel line the bars E E′, I may employ chains or cables passing around pulleys whose peripheries lie close to a point equidistant from the opposing expanded ends of the bars E E′, so that a pull upon the chain will tend to draw the two ends together and toward the position of the said pulleys.

Furthermore, the expanding arms E E′ may be, while desirably in long cars decreased in length, made to operate by securing them to expand between a fixed abutment and the brake-bar of one set of trucks, thereby necessitating, however, a double set of expanding bars for each car, which bars, in this instance, may be pivoted by one end at the point D, and oppose the loose ends to the brake-bar of the one set of trucks; and these double set of expanding bars may be made to connect operatively by means of connecting-rods, so as to operate in conjunction, no matter at which end the power is applied. To furnish a frictionless, or almost frictionless, bearing or contact between the brake-bars C C′ and the pressure-bars E E′, I provide the ends of the latter with anti-friction rollers *e*, as shown.

It is evident that by connecting these brake-levers through a train together directly, or to a common draft cable or rod leading from the engine, they may be operated by power applied at the engine at one and the same time with instantaneous effect upon all the cars.

Having thus described my invention, I claim—

1. In a car-brake for action upon brake bar or bars C C′, the expanding pivoted pressure-bars E E′, connected to operate substantially as and for the purpose specified.

2. In combination with brake-bars C C′ and pressure-bars E E′, the connecting operating-bars F, operating substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

SIGMUND LEVI.

Witnesses:
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