S. WILLIAMS.
Car-Brakes.

No. 197,919. Patented Dec. 4, 1877.

Fig. 1

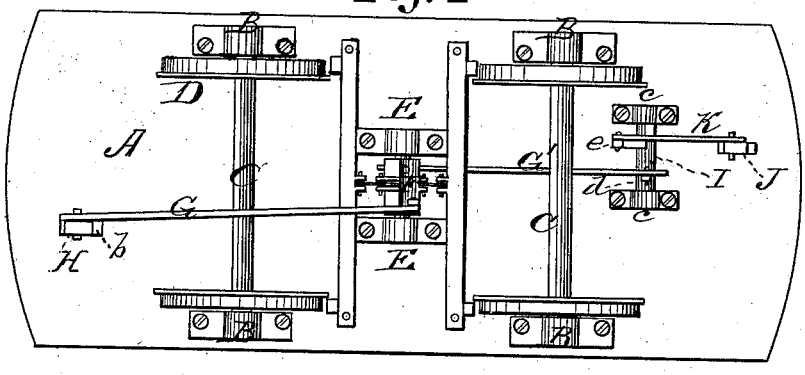
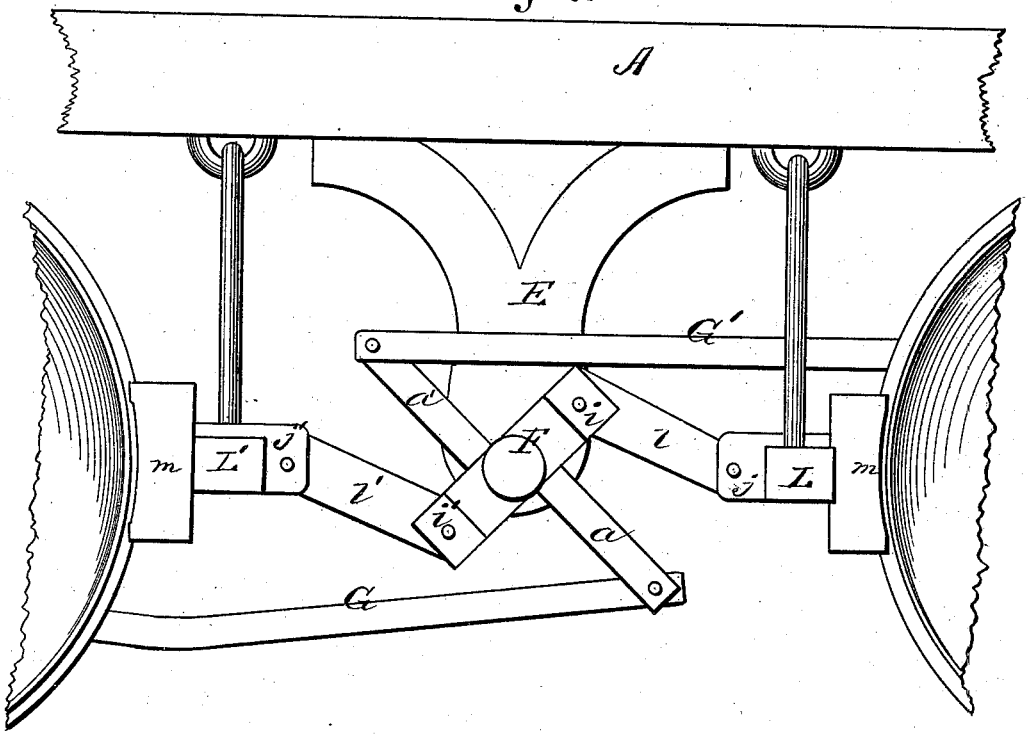


Fig. 2



WITNESSES
F. J. Masi
Geo. C. Boulton

INVENTOR
Samuel Williams,
by E. W. Anderson,
ATTORNEY

UNITED STATES PATENT OFFICE.

SAMUEL WILLIAMS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **197,919,** dated December 4, 1877; application filed June 30, 1877.

To all whom it may concern:

Be it known that I, SAMUEL WILLIAMS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Car-Brakes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a bottom view of my invention, and Fig. 2 is a detail side view of a part thereof.

This invention has relation to improvements in car-brakes for railway-cars.

The object of the invention is to devise a braking mechanism that may be applied with equal facility and effect from either end of the car.

The nature of the invention will be fully set forth hereinafter.

In the annexed drawings, the letter A designates an ordinary car-body; B, the pedestals; C, the axles journaled therein, and D the transporting-wheels rigidly secured thereon. E indicates two spaced hangers depending from the bottom of the car, midway of the axles C, that afford bearings in their lower ends for a transverse rock-shaft, F. This latter is provided with two arms, *a a'*, projecting therefrom in opposite directions, to the ends of which are pivoted the brake-rods G G', of which the former extends across the axle C to a vertically-vibrating lever, H, arranged at one end of the car, and working in a longitudinal slot, *b*, formed therein, to which it is securely pivoted. The rod G' extends over the other axle to a second rock-shaft, I, arranged in suitable bearings *c*, near the other end of the car, and is pivoted to an arm, *d*, projecting therefrom.

The rock-shaft I has a second arm, *e*, that is connected to the vertically-vibrating operating-lever J by means of a rod, *k*.

The rock-shaft F is provided with lugs *i i'*, upon opposite sides and at right angles to the plane of the arms *a a'*, that are connected, respectively, with the brake-beams L L', having similar lugs *j j'*, by means of rods *l l'*.

The beams L L' are suspended from the car-body between the wheels by means of vibrating hangers, and when the brakes are taken off naturally gravitate away from the periphery of the wheels and withdraw the shoes *m* therefrom.

The rod G' is provided at its end nearest the end of the car-body with a number of spaced perforations, by means of which it is adjustably connected to the arm *d* of the rock-shaft I, the said arm being also perforated, in order to limit the reciprocation of the rods G G'.

By operating either of the levers H J, the brakes will be expeditiously and vigorously applied.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the swinging brake-beam and shoe *m*, of the rods *l l'*, pivoted to said beam, the rock-shaft F, having lugs *i i'*, to which said rods are pivoted, and the arms *a a'*, at right angles to the plane of said lugs, the connecting-rods G G', pivoted to lever H and arm *d*, and to arms *a a'* upon said rock-shaft, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL WILLIAMS.

Witnesses:

ALLEN M. GANGEWER,

CHAS. F. VAN HORN.