S. HEWITT.

Car-Brake.

No. 207,179. Patented Aug. 20, 1878.

Fig. 1.

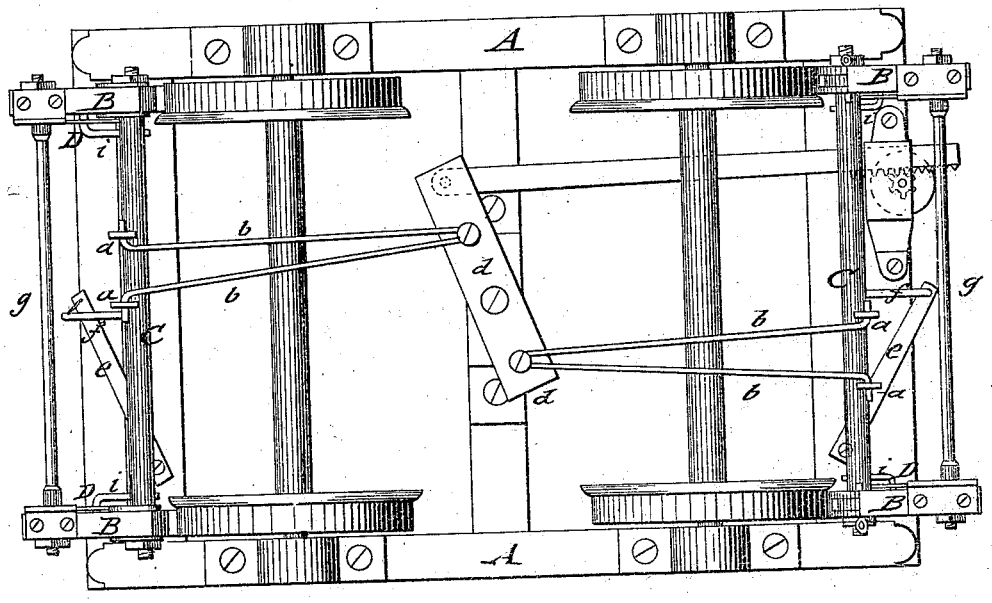
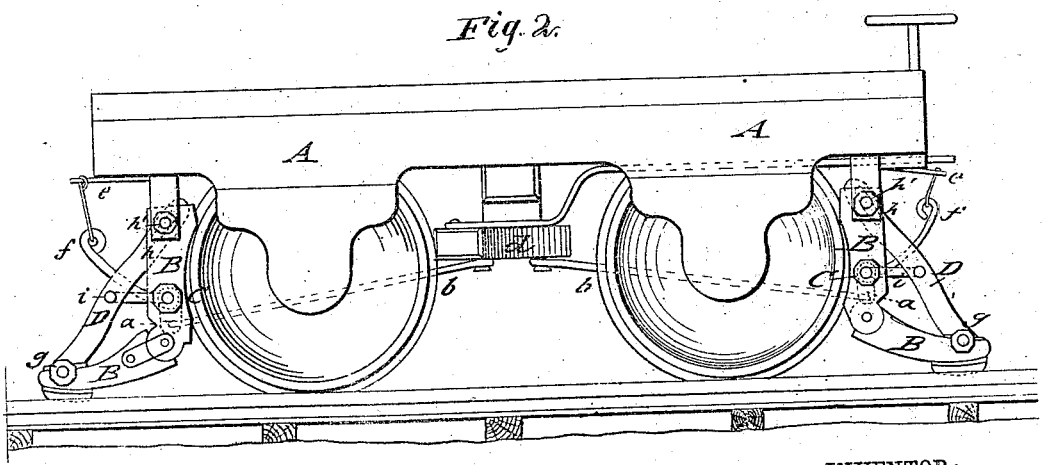


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SILAS HEWITT, OF SENECA FALLS, NEW YORK.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **207,179**, dated August 20, 1878; application filed July 6, 1878.

To all whom it may concern:

Be it known that I, SILAS HEWITT, of Seneca Falls, in the county of Seneca and State of New York, have invented a new and Improved Car-Brake, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a bottom view of a car-truck with my improved brake, and Fig. 2 is a side elevation of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to an improved car-brake that exerts a double frictional action by contact with the wheels and rails, so as to be more powerful and effective than the single brakes which have heretofore been applied either to the wheels or to the rails.

The invention consists of a jointed double brake-shoe, that is hung in such a manner to the truck-frame and so connected with the operating and releasing mechanism that one section of the shoe is first applied to the wheel, and then the other section to the rail, and released in reverse order.

Referring to the drawings, A represents a car-truck of the usual construction, to the frame of which are hung, in proper proximity to the car-wheels, by hinge-connections, the double or compound brake-shoes B. Each brake-shoe B is constructed of two hinged sections, of which the upper section, of concave shape, is intended to bear on the tire of the wheel, while the lower convex section is intended to act on the rail of the track. The upper concave sections of the shoes of two corresponding truck-wheels are connected rigidly by a transverse crank-rod, C, whose crank-arms *a* are jointed by crank-rods *b* to pivots of a fulcrumed lever, *d*, at points equidistant from the fulcrum. The lever *d* is operated by a lever-rod connection and suitable gearing from a hand brake-wheel with pawl and ratchet or any other equivalent mechanism. By turning the brake-wheel in one direction the fulcrumed lever is operated, and the brake-shoes of the wheels applied in the usual manner, while, by releasing the hand-wheel, the brake-shoes are taken off the wheels, the return motion being accelerated by means of band or other springs *e*, connected to crank-arms *f* of the transverse rods C.

The lower convex sections of the brake-shoes are faced with metal, the facings or linings being flanged at the inside to pass down sidewise of the rail-heads. The lower shoe sections are also laterally connected by a brace-rod, *g*, and the outer end of the lower section connected with the upper section by a bar, D, which is pivoted to the brace-rod *g* at the lower end, and guided by a slot, *h*, at the upper end on a fixed pin, *h'*, of the upper shoe section.

The bar D is pivoted about midway between its ends to a fixed crank-arm, *i*, of the transverse rod C of the upper brake-shoes, and thereby the lower shoe section operated and applied to the rail.

By turning the hand wheel the upper brake-shoes are first applied to the wheels, and by continuing the turning the lower shoes to the rails, by the action of the crank-rod and sliding bars.

On releasing the brakes the lower shoes are first raised, and then the upper shoes taken off from the wheels in reverse order, as before.

The brakeman has it in his power to apply one or both shoes, according to the friction desired to be exerted, so as to produce thereby at will either a single or double brake action.

If desired, the double shoe may be made in the form of an elbow-lever, of one piece, without hinge connection at the angle of the shoe section, in which case, however, the upper and lower brake-shoes are applied at the same time.

I am aware that it is not broadly new to use a compound brake-shoe formed of an oscillating frame so arranged that one end is forced down on the rail by the friction of the brake-shoes; but

What I claim is—

In a compound car-brake, the two hinged sections B B of each shoe, connected rigidly with those of the other by a crank-rod, C, in combination with a bar, D, hinged to a brace-rod, *g*, of the lower sections, and guided by a slot on a fixed pin of upper section, as shown and described.

SILAS HEWITT.

Witnesses:
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