

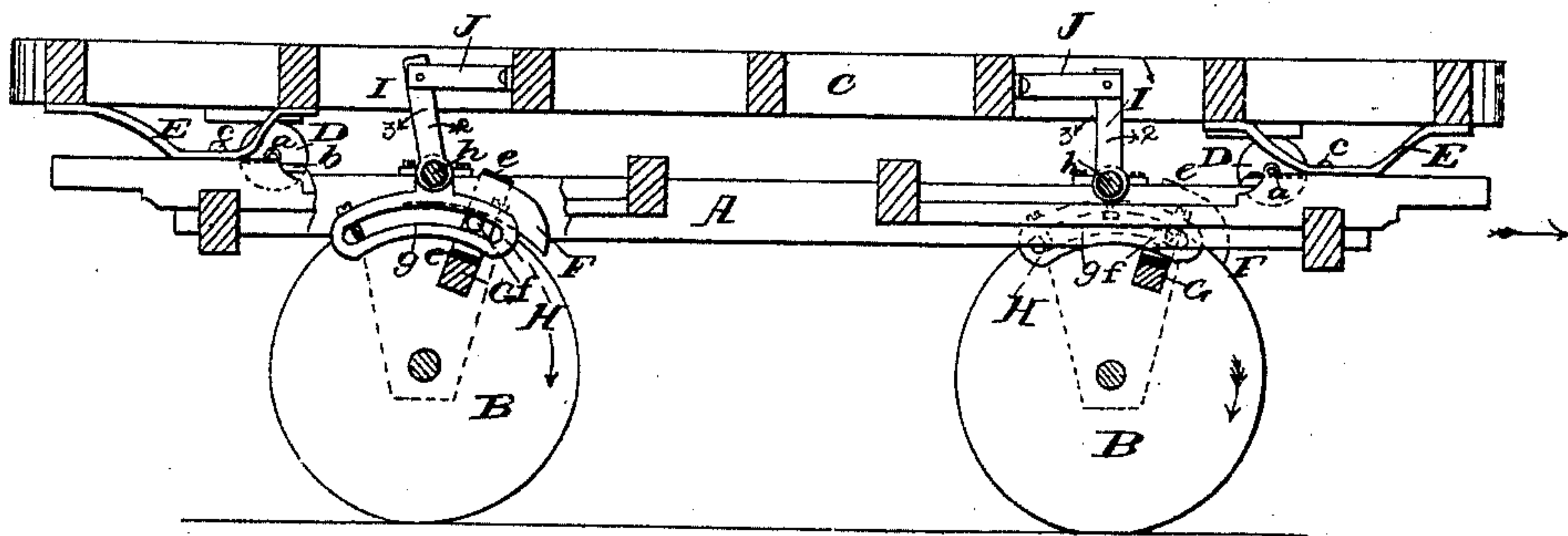
E. F. JEWETT.

Car Brake.

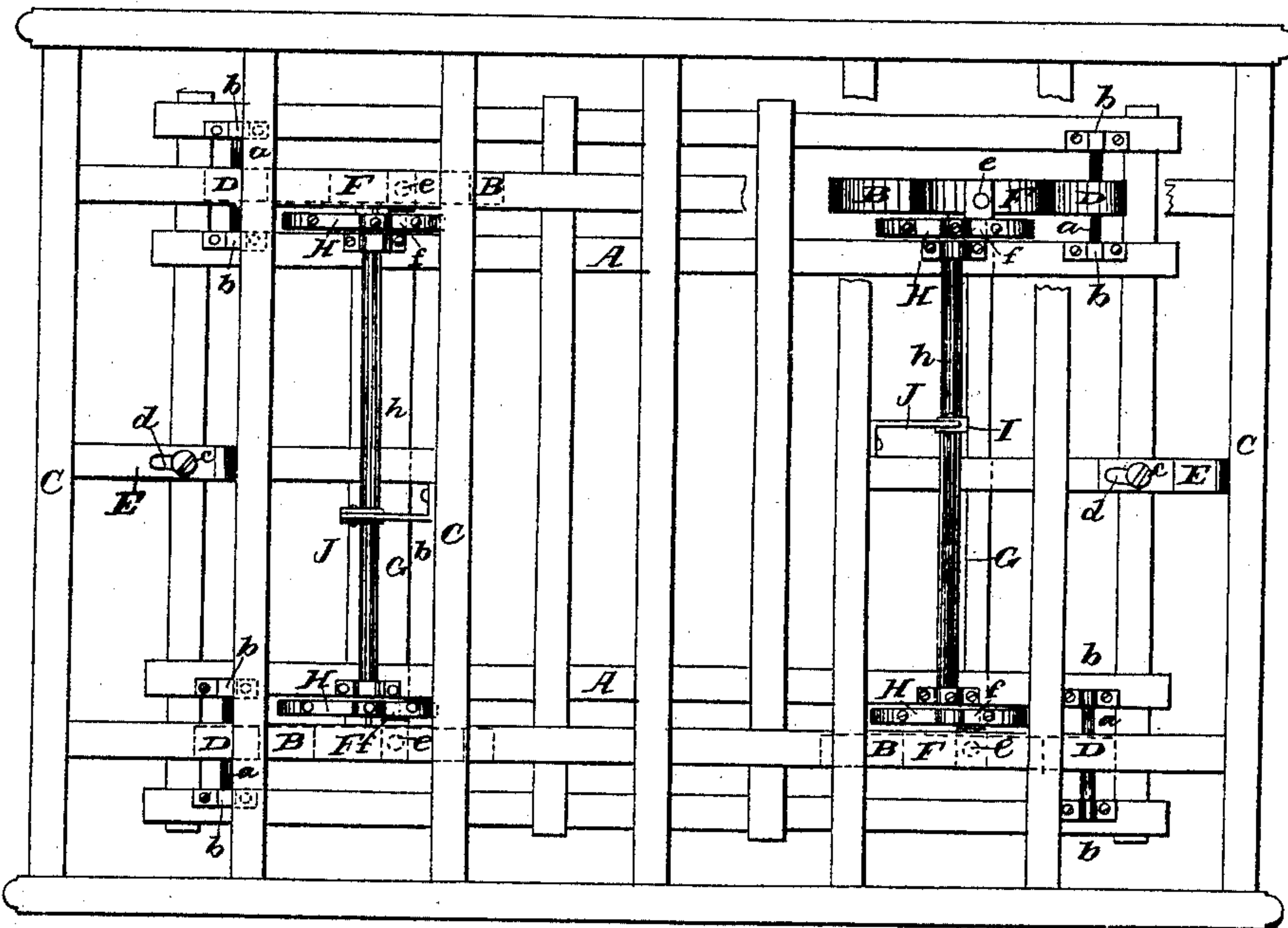
No. 28,087.

Patented May 1, 1860.

*Fig. 1.*



*Fig. 2.*



*Witnesses*

*William Hughes*  
*Miner*

*Inventor*

*E. F. Jewett*

# UNITED STATES PATENT OFFICE.

E. F. JEWETT, OF PLAINVILLE, OHIO.

## CAR-BRAKE.

Specification of Letters Patent No. 28,087, dated May 1, 1860.

*To all whom it may concern:*

Be it known that I, E. F. JEWETT, of Plainville, in the county of Hamilton and State of Ohio, have invented a new and Improved Car-Brake; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of the specification, in which—

Figure 1, represents a longitudinal vertical section of my invention. Fig. 2 is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in both views.

This invention consists in arranging the car body, the truck and the brake shoes, in such relation to each other that the superior momentum of the car body, over that of the truck, when the train is checked serves to operate the brakes, as will be hereinafter more fully explained; and it also consists in arranging slotted arms on rock shafts which are actuated by a sliding motion imparted to the car body by its momentum independent from the track, in such relation to the brake shoes that the brakes are applied by the momentum of the car body, if the motion of the truck is checked, and so that the engineer has always perfect control over the brakes as well to apply them as to take them off.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A represents the truck of a rail-road car that is supported by four wheels, B, in the usual manner. The car body, C, rests on friction rollers, D, which are mounted on arbors, *a*, that have their bearings in journal boxes *b*, on the top of the longitudinal timbers of the truck, and pendants E, which are secured to the truck by means of screws *c*, prevent the car body rolling off. The screws *c*, work in slots *d* in the pendants E, leaving the car body a certain amount of play in a longitudinal direction.

F are the brake shoes which are attached to cross-bars G, by means of standards *e*. These standards are furnished with pivots *f* that extend through slots *g* in curved arms, H, and which form the support for the

brake shoes and cross-bars G. These arms H, are firmly secured to rock-shafts *h*, which have their bearings in journal boxes *i* on the longitudinal timbers of the truck. Secured to these shafts are the arms I, the upper ends of which are pivoted to standards J, that are attached to the cross timbers in the bottom of the car body. A longitudinal sliding motion of the car body therefore produces an oscillating motion of the rock shafts *h* and arms, H, and the brake shoes are raised from or depressed on the faces of the wheels.

The operation of my car-brake is as follows:—The train is connected by means of the trucks leaving the car bodies entirely independent of each other, and from the locomotive. If a strain is now exerted on the trucks causing them to move in the direction of arrow 1, Fig. 1, they will move independent from the car bodies until the screws *c*, strike the front ends of the slots *d* and in this position the front end of the slotted arms H, will be turned up as shown in Fig. 1, keeping the brake shoes elevated from the face of the wheels. If the engineer wishes now to apply the brakes all he has to do is to suddenly slacken the speed of his engine. The speed of the trucks will thus be slackened and the car bodies, compelled by their momentum, will fly out until the back end of the slots *d*, strikes the screws *c*. By this motion the rock-shafts *h*, turn in the direction of arrows 2 and the front ends of the slotted arms H, together with the brake shoes F, are depressed. The motion of the wheels themselves, in the direction of the arrows marked on them, draws the brake shoes up tight, and the brakes are applied. A sudden strain on the trucks, that is to say, a sudden increase of the speed of the locomotive, will cause the car bodies to recede again, so as to assume the position, shown in the drawing, in relation to the trucks, and the rock-shafts *h*, are turned in the direction of arrow 3, lifting the brake shoes from the wheels, and the brakes are taken off. When the train moves in the direction opposite to arrow 1, the brake shoes, by the friction between them, and the wheels are thrown to the other end of the slotted arms H, and the operation is exactly the same, as



above described, so that the engineer has perfect control over the brakes in backing as well as in going forward.

5 Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

The arrangement and combination of the slotted arms H, brake shoes F, rock-shafts

h, arms, I, and standards J, or their equivalents, substantially as and for the purpose 10 described.

E. F. JEWETT.

Witnesses:

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