Joseph Paradis.

Brakes for Railroad Cars.

No. 120,316. Patented Oct. 24, 1871.

Fig. 2.

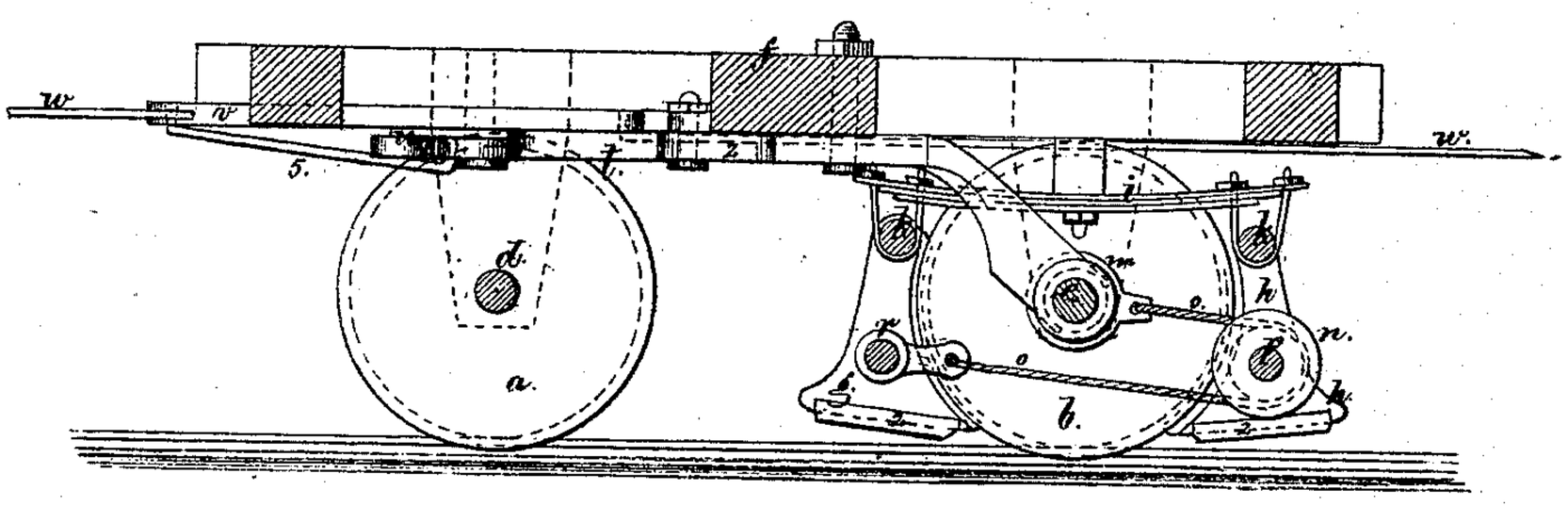
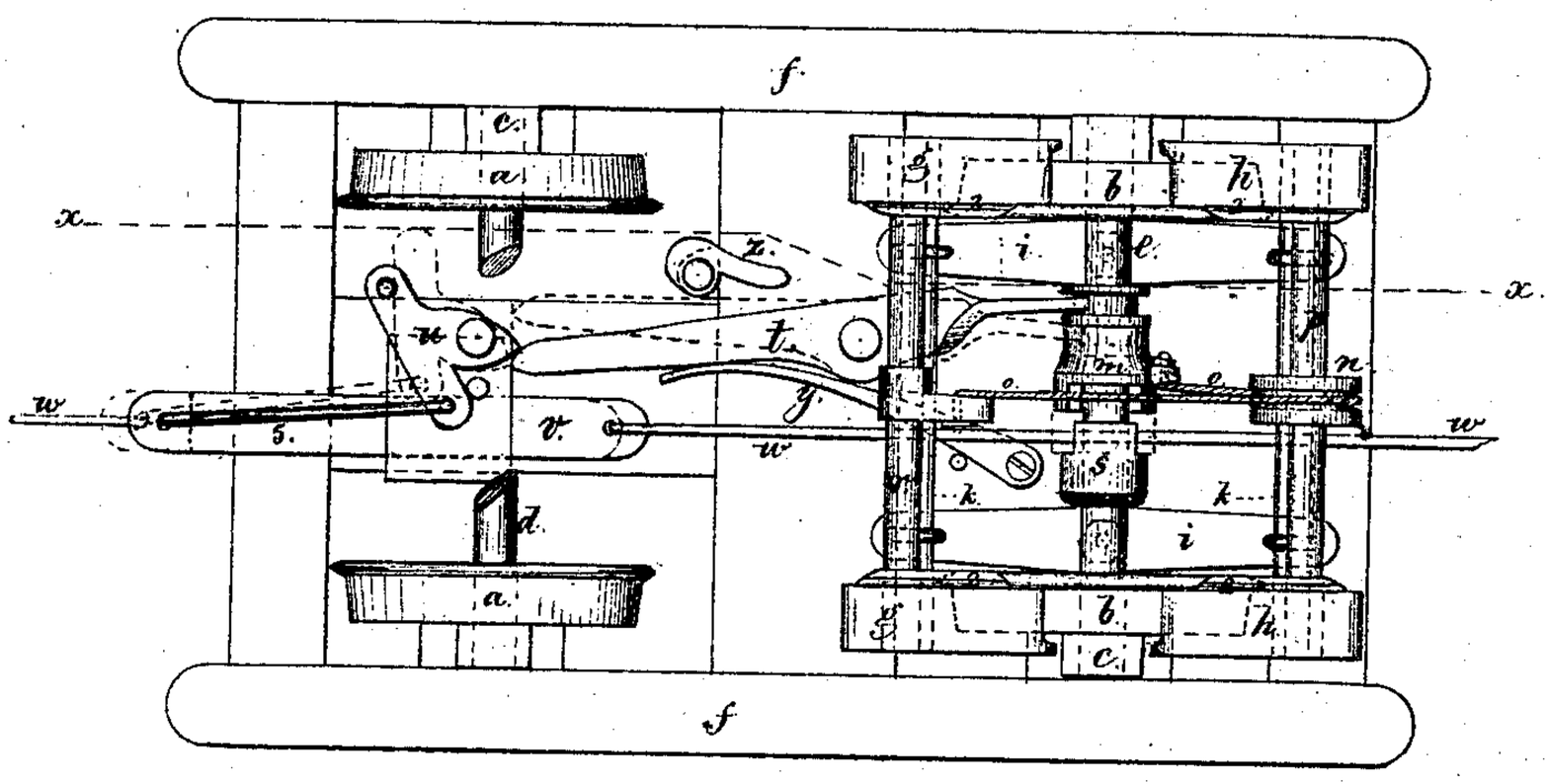


Fig. 1.



Witnesses.

Chas. A. Smith

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UNITED STATES PATENT OFFICE.

JOSEPH PARADIS, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF, WILLIAM H. DREW, AND CHARLES PARKER, OF SAME PLACE.

IMPROVEMENT IN BRAKES FOR RAILWAY-CARS.

Specification forming part of Letters Patent No. 120,316, dated October 24, 1871.

To all whom it may concern:

Be it known that I, JOSEPH PARADIS, of Brooklyn, in the county of Kings and State of New York, have invented and made an Improvement in Brakes for Railway-Cars, and the following is declared to be a correct description of the same.

Devices have heretofore been made for holding the wheels of cars so as to prevent them rotating freely or to stop them entirely. In either instance the wheel is liable to be worn flat and produce concussion to the car when in motion.

My invention is made for the purpose of applying a shoe on each side of the wheel and thereby lifting the wheel and applying the necessary friction to stop the car. The power to draw these shoes in beneath the wheel is derived from the rotation of the wheel itself; hence, when the wheel is sufficiently lifted to cease rotating, the shoes are held in place and grip the wheel, as well as furnish a surface that slides upon the rails and produces the friction necessary to stop the car.

It is to be understood that this device is not intended for general use, but as an appliance that can be thrown into action instantly by the engineer in cases of emergency.

In the drawing, Figure 1 is an inverted plan; and Fig. 2 is a vertical section at the line *x x*, showing my brakes as applied to two wheels of a truck.

The wheels *a a* and *b b* upon the axles *d* and *e* are of any usual character; and the boxes *c* and truck-frame or platform *f* are also to be of any desired construction. The brake-blocks *g* and *h* are connected in pairs by cross-shafts or bars, *k*, and these are suspended from or supported by yielding arms or springs *i i* attached to *f*, so that, in a normal condition, the springs *i i* will suspend the blocks *g h* above the track and they will hang clear of the wheels, or may be pressed out of contact by springs. When these blocks *g h* are drawn toward each other they grasp the wheels below the axle, and the curvature of the wheels causes the brake-blocks to move downward as they are drawn together until they rest upon the track and become shoes that interpose between the wheels and the track, and lift such wheels off the track and form sliding frictional brakes that stop the momentum of the car as quickly as possible. The shoe-blocks *g h* have guide-flanges 2 setting on one or both sides of the rail. As the brake-blocks or shoes are drawn together and pressed toward the track, the springs *i i* yield, and after the train has been stopped and the parts are released, these springs restore the blocks to their normal position. In order to draw these blocks toward each other I make use of a rope or chain, *o*, passing from a clutch-drum, *m*, upon the shaft or axle *e* around the pulley *n* and cross-bar *p* to the cross-bar *r*, and upon the axle *e* in the stationary portion *s* of the clutch, so that when the clutch-drum *m* is shifted into contact therewith by the engineer or otherwise, the rotation of the wheels *b* winds up the chain *o* upon the clutch-drum *m*, drawing the brake-block shoes down beneath the wheels. The lever *t* is used to move the clutch-drum *m*, and this lever is held so as to keep the drum *m* from contact with *s* by means of a catch, *w*, that is connected by the sliding-bars or rods *v* with levers *w* or other devices under the control of the engineer, brakeman, or attendant, so that in case of accident or danger the catch *u* can be moved to liberate the lever *t* and allow a spring, *y*, to throw the clutch-drum into contact with *s*, and thereby cause the rotation of the wheels *b* to apply the brakes. A cam-lever, *z*, is employed to disconnect the clutches and liberate the brakes, this is to be actuated separately by hand. The link 5 can be changed from one hole to the other on the catch *u* so as to be operative from either end of the car.

I claim as my invention—

The brake-blocks *g h*, applied in pairs to opposite sides of the wheels and suspended by the springs *i* or yielding-arms, in combination with the clutch-drum *m* and its lever *t* for bringing the brake-blocks into action, as set forth.

Signed by me this 16th day of March, A. D. 1871.

JOSEPH PARADIS.

Witnesses:

CHAS. H. SMITH,

GEO. T. PINCKNEY.

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