J. M. CROSBY.

Railway Car Brake.

No. 94,083. Patented Aug. 24, 1869.

Fig. 1

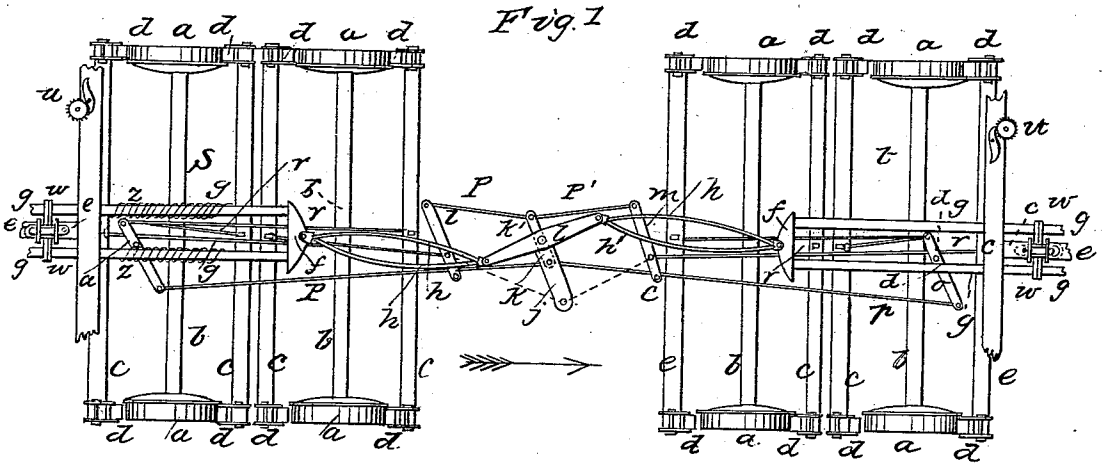


Fig. 2

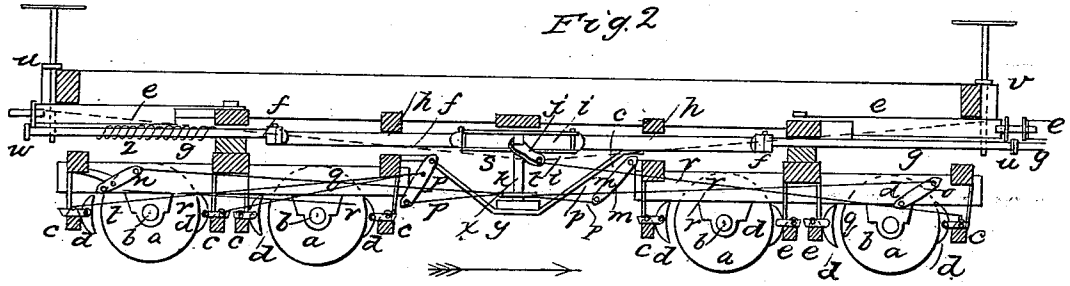


Fig. 3

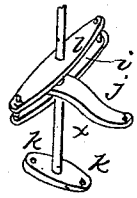


Fig. 4

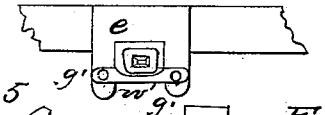


Fig. 5

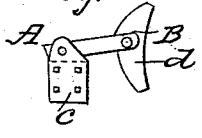
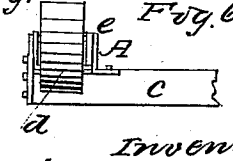


Fig. 6



Witnesses
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JAY M. CROSBY, OF MARATHON, NEW YORK, ASSIGNOR TO HIMSELF, WILLIAM BALLARD, AND FRANK LIVINGSTON.

Letters Patent No. 94,083, *dated August* 24, 1869.

IMPROVED RAILWAY-CAR BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAY M. CROSBY, of the town of Marathon, in the county of Cortland, and State of New York, have invented a new and useful Improvement in Car-Brake; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my invention, placed on the bare trucks to show its construction.

Figure 2 is a side view of the same, with the near half of the car cut away, the better to show my plan.

Figure 3 is a view of that part of my invention by which the same is shifted, and adjusted for moving in opposite directions.

Figure 4 is the end view of the car-bumpers.

Figures 5 and 6 are respectively side and end views of the block used in connection with my invention, and as a part thereof.

Similar letters of reference indicate like parts.

In the accompanying drawings—

A is a car-wheel.

b is the axle thereof.

C, the usual wooden bar, which is attached to and holds the brake-blocks *d*.

E is the bumper, in common and general use.

f is the inner head of the new bumper.

g g are the rods thereto, extending to the end of the car, and uniting with the false or new bumpers W.

h are two elastic iron or steel bars or rods, forming springs, and connecting the inside heads *f f*, of new or false bumpers, with the centre lever *i*.

j is an arm, used, by means of the chains or cords *t* and *s*, in connection with the usual brake-wheel and ratchet *u* and *v*, to shift the brakes for use in different directions.

k is a lever, which, by being firmly attached to the post *x*, with the lever *i* and arm *j*, is made, by means of power applied to said lever and arm, as hereinafter explained, to operate the bars C, and apply the brake-blocks *d*.

l is a lever, working upon the pivot *b'*.

m is a lever, working upon the point C'.

n is a lever, working upon the point *a'*.

o is a lever, working upon the point *d'*.

p p are rods or chains, of iron, connecting the lever *k* with long arms of the levers *n* and *o*.

p' p' are rods or chains, of iron, connecting said lever *k* with the long arms of levers *l* and *m*.

q q are rods or chains, of unequal length, which, with the car going in the direction of the arrow in figs. 1 and 2, connect back-bars C C of the rear truck with the short arm of the lever *l*.

q' q' are similar rods or chains, connecting the back-bars C C of the forward truck with the short arm of the lever *o*.

r r are similar rods or chains, connecting the forward bars C C of the rear truck with the short arm of the lever *n*.

r' r' are similar rods or chains, connecting the forward bars C C of the forward truck with the short arm of the lever *m*.

z z are coil-springs, so placed and constructed around the bars or rods *g g* as to throw the same back to position after being used.

Fig. 1 represents the car as moving in the direction of the arrow, or to the right.

It will be seen that the arm *j* is thrown forward by means of the brake-wheel *v*, and held in that position by means of the ratchet on said wheel, as therein shown, it being attached by means of the chain *t*.

The heads of the new or false bumpers, extending beyond the bumper by which the cars are coupled, strike each other when the engine is slowed, as shown in fig. 1, at W, thus pressing the forward end of the lever *i* backward, which, as before stated, acts upon the arm, moving end *k* thereof forward, and end *k'* thereof backward; *k* being attached by *p* to lever *n*, draws the long end thereof forward, and applies the forward brake of the rear truck, by its action on the chains *r r*, fastened thereto; *k'* being likewise attached by *p'* to lever *m*, draws the long end thereof backward, and thus applies the forward brakes of the forward truck, by means of the chains *r' r'*, fastened thereto.

If it is desired to move in the opposite direction, except when backing, unwind the brake-wheel *v*, and wind up the opposite, *u*, thereby moving the end of arm *j* to the rear, and then, by the pressure above mentioned, the same effect is produced, except by a different set of brakes, the forward brakes always acting.

When it is desired to back the train, no change is necessary, as the brake-blocks are so constructed as to fly up and out of the way, by a reverse motion of the wheels; said blocks being hung, as shown in fig. 5, by the pivots A and B, are thrown out of use by a backward movement, and in the position shown in fig. 6.

I do hereby reserve to myself the right exclusively to fasten all the bars C C on each truck together by a strap or rod, thereby subjecting all to one motion, and also of using only three of the bars C C to each truck, if I should desire so to do.

Having thus described my invention,

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

1. A car-brake, the power to which is applied by means of the false bumper W *g g f*, by the pressure

thereon, occasioned by stopping the engine, or other means of locomotion attached to the car, in connection with the rods or chains *p p'*, *q q'*, *r r'*, springs *h*, coils *z*, and levers *i*, *k*, *l*, *m*, *n*, and *o*, substantially as herein described, and for the purpose set forth.

2. The united arm *j* and levers *i* and *k*, in connection with the chains *s* and *t*, and post or standard *x*, and the rods, bars, levers, chains, coils, and springs mentioned in the first claim, as herein described, and for the purpose set forth.

3. The self-adjusting blocks or brake-pads *d*, in connection with the parts above mentioned and claimed, as herein described, and for the purpose set forth.

The above specification of my invention signed by me, this 6th day of February, 1869.

JAY M. CROSBY.

Witnesses:
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