

(No Model.)

C. E. CANDEE.

CAR BRAKE.

No. 312,429.

Patented Feb. 17, 1885.

Fig. 1.

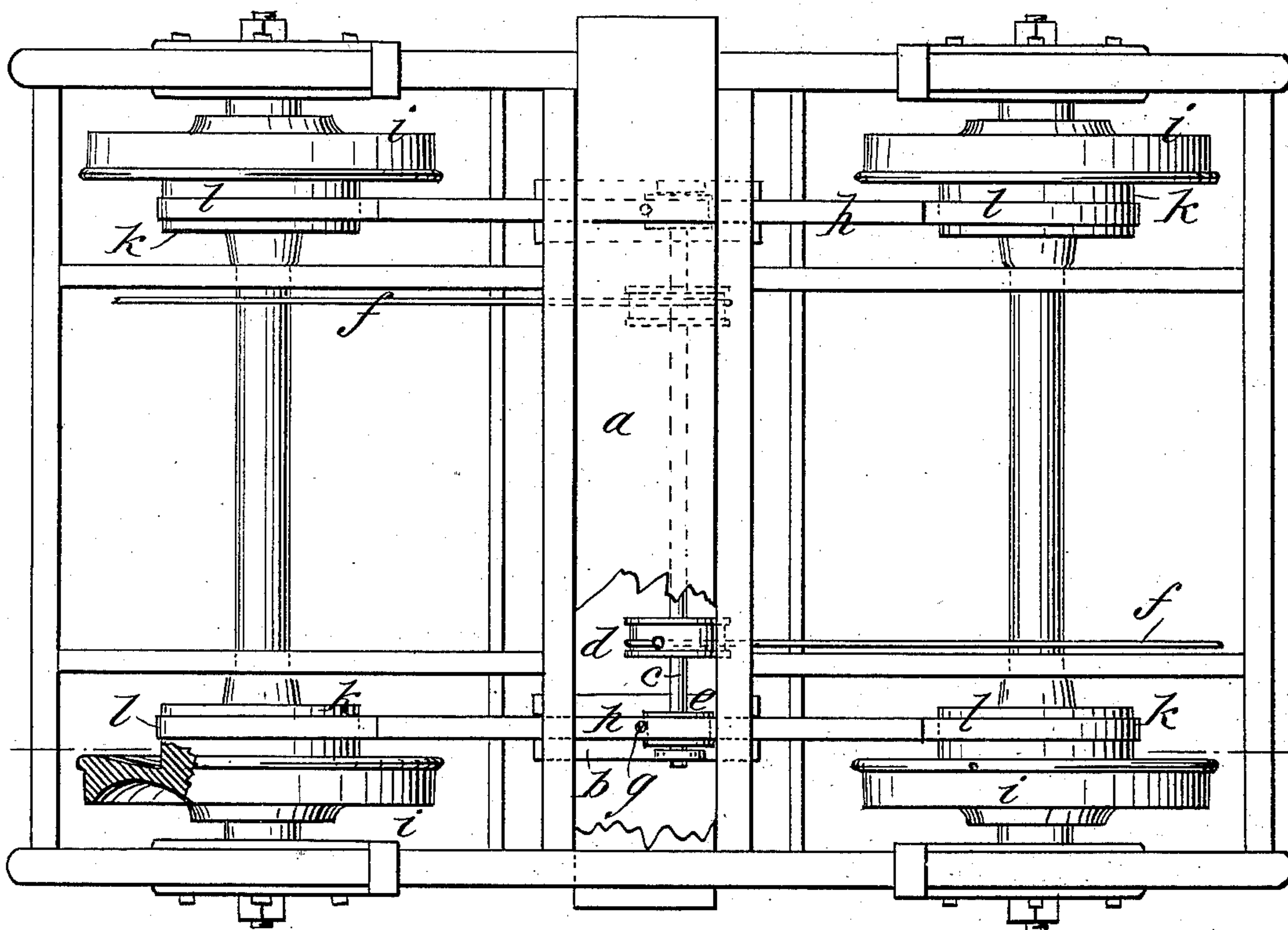
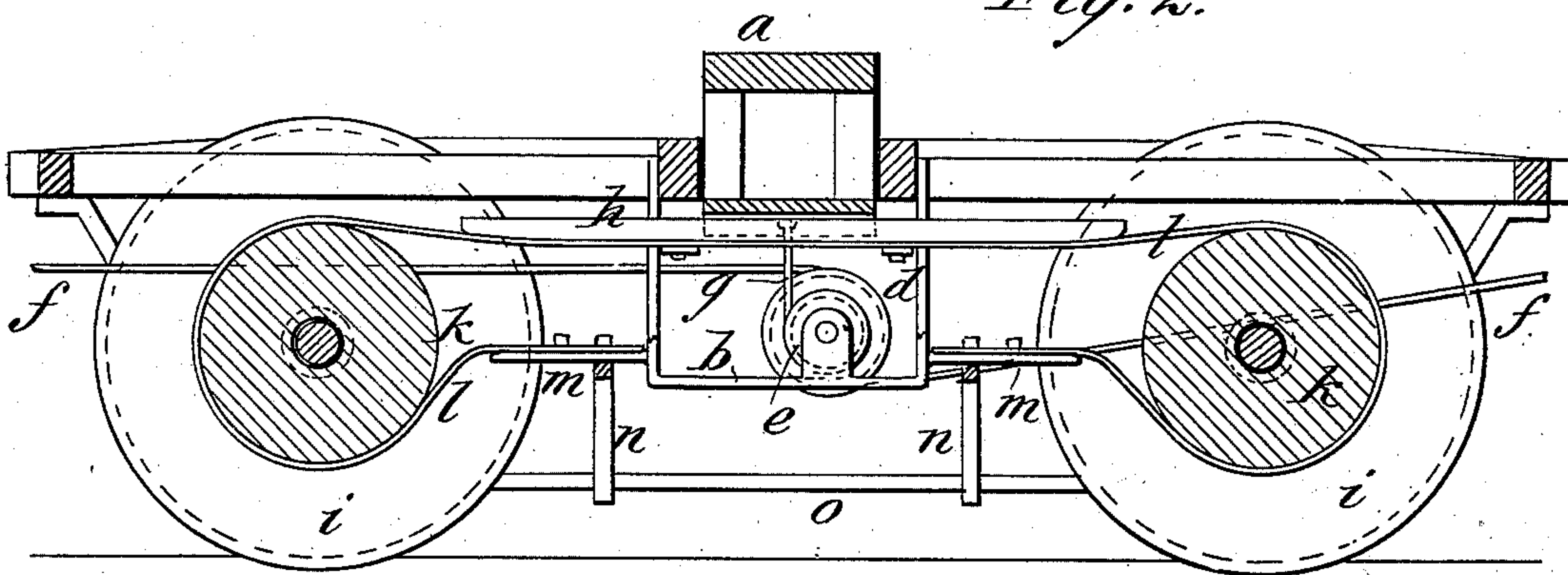


Fig. 2.



WITNESSES:

Don Twitchell.

C. Sedgwick

INVENTOR:

C. E. Candee

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES E. CANDEE, OF NEW YORK, ASSIGNOR OF ONE-HALF TO ALBERT G. STORY, OF LITTLE FALLS, N. Y.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 312,429, dated February 17, 1885.

Application filed May 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. CANDEE, of the city, county, and State of New York, have invented certain new and useful Improvements in Car-Brakes, of which the following is a full, clear, and exact description.

This invention pertains to that class of car-brakes wherein frictional drums and straps are used, together with a tightener; and it consists of certain combinations and arrangements of parts, substantially as hereinafter fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of a car-truck having my improved brake mechanism, parts being broken away; and Fig. 2 is a longitudinal section of the same.

The truck may be of any ordinary construction. Attached to the bolster *a* are depending frames *b b*, one at each side of the truck, carrying a cross-shaft, *c*, which has bearing in boxes on frames *b*, and the shaft carries near each end rollers or drums *d e*. Upon drums *d d* ropes or chains *f* are connected and pass in opposite directions for connection to the usual brake-shafts, and ropes or chains *g* from drums *e* are connected to bars *h*, that pass loosely through slots in the ends of frames *b*, so that the bars are retained in line with the truck, while being free to move up and down in the frames. The supporting-wheels *i* of the truck are formed at the inner side with drums *k*, that carry a friction band or strap, *l*, the band *l* at each side extending around the drum on the two wheels, with its ends connected to arms *m* on the frames *b*. The slide-bars *h* are above and connected to the top portions of the bands. The arms *m* and bands *l* are connected to cross-braces *n* from the bars *o*, to strengthen them against strain.

In the operation of this brake mechanism, when either rope *f* is drawn upon, the shaft *c* is rotated by the connection of the rope to

drum *d*, and the drums *e* are thereby caused to take up the ropes *g*, with the effect to draw down the bars *h* and tighten the bands *l* on the drums *k*. The bands embrace at least two-thirds of the peripheries of the respective drums, so that the friction and pressure are distributed over a large extent of surface, and a most effectual action thus obtained without excessive wear at one point. The bands are steel, and their elasticity serves to raise the bars *h* and loosen the bands as soon as the strain on ropes *f* is relieved.

I prefer to form the friction-drums *k* integral with the wheels; but they may be separate without departing from my invention.

It is to be observed that the friction-bands are substantially loose endless belts that are tightened by compression.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The brake mechanism for cars, comprising friction-drums on the truck-axes and metallic elastic bands provided with compression-bars and fitted to be clasped upon the drums by a tightener, substantially as described.

2. In brake mechanism for cars, the combination of friction-drums *k*, elastic friction-bands *l*, and the tightener *h*, connected to a drum, *e*, arranged in common with a second drum, *d*, upon a shaft, *c*, said drums being operated to act oppositely upon their encircling bands, substantially as set forth.

3. In brake mechanism for cars, the combination of the cross-shaft *c*, rope-drums *d e*, ropes *f g*, compression-bars *h*, bands *l*, and friction-drums *k*, substantially as described, for operation as specified.

4. In brake mechanism for cars, the elastic bands *l*, having their ends connected rigidly to the truck-frame or car, and provided with the rigid compression-bars *h*, substantially as described.

CHARLES E. CANDEE.

Witnesses:

EDGAR TATE,

ROBERT ADAMS.