(No Model.) 2 Sheets—Sheet 1.

R. SALVADGE, Dec'd.

F. M. SALVADGE, Administratrix.

AUTOMATIC CAR BRAKE.

No. 302,782. Patented July 29, 1884.

Fig. 2.

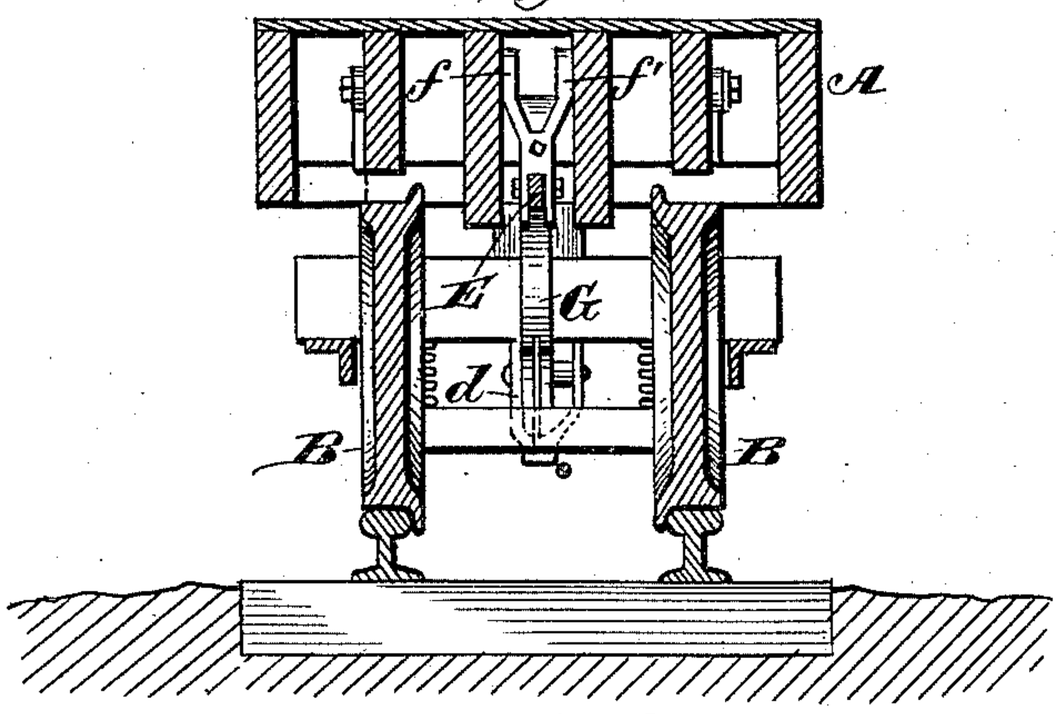


Fig. 3.

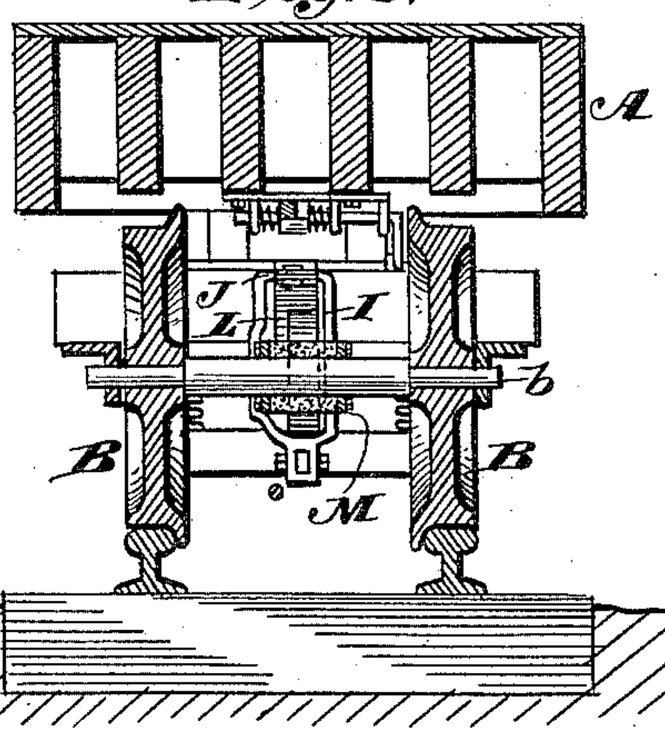
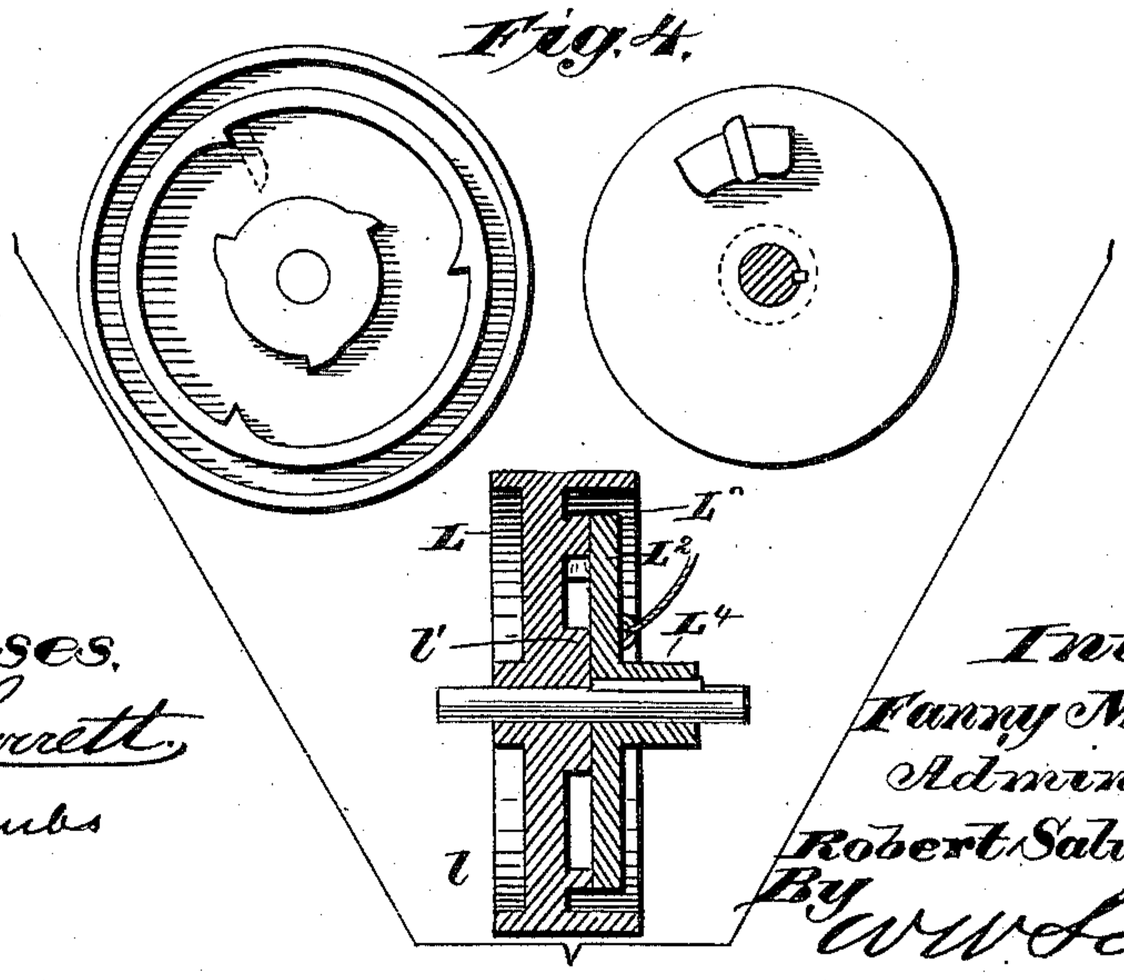


Fig. 4.



Witnesses.
Robt Everett.
Jos L. Coombs

Inventor
Fanny M. Salvadge
Administratrix of
Robert Salvadge deceased.
By W W Lacy & Co Attys

(No Model.) 2 Sheets—Sheet 2.

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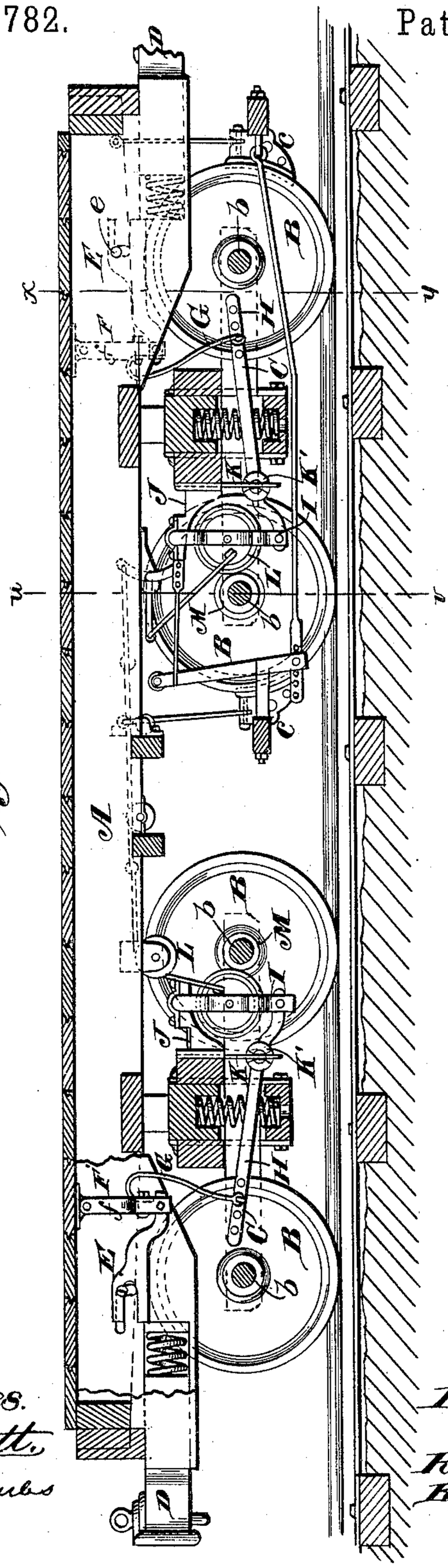

Fig. 1.

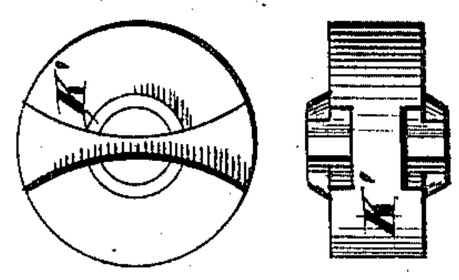

Fig. 5.

Witnesses.
Robert Everett.
Jo. L. Coombs

Inventor:
Fanny M. Salvadge
Administratrix of
Robert Salvadge deceased.
By W. W. Saggett
Atty.

UNITED STATES PATENT OFFICE.

FANNY M. SALVADGE, OF STRATFORD, ONTARIO, CANADA, (ADMINISTRATRIX OF ROBERT SALVADGE, DECEASED,) ASSIGNOR OF SEVEN-EIGHTHS TO SAMUEL STREET FULLER, OF SAME PLACE.

AUTOMATIC CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 302,782, dated July 29, 1884.

Application filed June 30, 1884. (No model.)

To all whom it may concern:

Be it known that ROBERT SALVADGE, deceased, late of Stratford, county of Perth, Province of Ontario, Canada, did invent a new and useful Improvement in Automatic Car-Brakes; and the following is declared to be a full, clear, and exact description of the same, such as will enable others skilled in the art to make and use it, reference being had to the accompanying drawings, which form a part of the specification.

The invention consists of the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a vertical longitudinal section of a device embodying the invention. Fig. 2 is a vertical cross-section along the line *x* and *y*. Fig. 3 is a vertical cross-section along the line *u* and *v*. Fig. 4 represents in detail the construction of the swinging friction-wheel. Fig. 5 represents in detail the construction of the stop-block.

The invention relates to automatic car-brakes, and is more particularly designed as an improvement upon an application for United States Letters Patent filed March 21, 1882, Serial No. 55,919.

The improvements consist chiefly, first, in the construction of the swinging friction-wheel which engages with the friction-pulley upon the axle; second, in the substitution of a spring for a pendent lever in the rear of the push-bar; third, in pivoting the rear end of the push-bar to a suitable bracket and connecting the spring thereto; fourth, in dispensing with the coiled springs upon the bar connecting the swinging friction-wheel with the spring in the rear of the push-bar; fifth, in the employment of a retracting-spring, secured at one end upon said connecting-bar by a suitable top-block.

The invention is carried out as follows:

A represents the platform of the car; B, the trucks; *b*, the axles; C, the track-beams; *c*, the brakes, constructed in any suitable manner.

D is the draw-head, so constructed that it is compressed or forced backward.

E is the forked push-bar, provided with an operating-rod, *e*, as already described in the application referred to.

F is a swinging bracket, to which the forked push-bar is pivoted, said bracket constructed in any suitable manner, preferably consisting of arms *f* and *f'* at the top, said arms being bent at right angles and having their bearings in the frame of the car.

G is a spring of any proper construction, preferably consisting of a flat strip of metal, bent as shown, said spring secured at the top to the swinging-bracket, and at the bottom having a suitable connection with the connecting-bar H, said bar H secured at the opposite end to the hanger I, said hanger being properly secured upon the stationary bracket J, which is attached to the truck-beams.

K is a retracting-spring, preferably consisting of a flat strip of metal forked at its lower end, and secured upon the connecting-bar by means of the stop-block K', said spring secured at the top to the stationary bracket or the truck-beams. The stop-block is preferably constructed as shown in Fig. 5.

L is the improved swinging friction-wheel, suspended in the hanger I. Said wheel is constructed as shown in Fig. 4, in which L' is one of the faces, provided with a rim, *l*, and ratcheted on the interior, and a collar, *l'*, ratcheted upon its exterior. L^2 is another face of the friction-wheel, provided with lugs l^2 and l^3. L^3 is a sliding bolt adapted to be engaged between said lugs, and to be carried freely about the spaces between the ratcheted collar and the ratcheted rim as the wheel is revolved in one direction, and to be caught by the ratcheted surfaces of the collar and the rim, so as to prevent an opposite revolution, the two faces of the friction-wheel capable of having independent motion. L^4 is a winding-reel, mounted upon the shaft of the friction-wheel, as in the application before mentioned. The mechanism just described dispenses with the ratchet-wheel and the gravity-pawls shown and described in the said application.

M is the friction-pulley upon the axle.

The mechanism for operating the brakes

connected with the swinging friction-pulley is essentially the same as that described in the application herein referred to.

The operation of the device is essentially the same as the device in said former application. The method of constructing the various parts herein described, however, as will be seen, simplifies many of the parts, and also diminishes the cost of construction.

What is claimed is—

1. In an automatic car-brake, the combination, with a swinging bracket, of a push-bar pivoted thereto, a bar connected to said bracket by the intervening spring, and a friction-wheel connected at its free end to said bar, said bar provided also with a suitable retracting-spring, substantially as described.

2. In an automatic car-brake, the combination, with the bar H, of front and rear springs, G and K, the swinging friction-wheel L, and in connection therewith a push-bar adapted to force backward the bar H through the intervention of the spring G, substantially as described.

3. In an automatic car-brake, the combination, with the bar H, of the front spring, G, and retracting spring K, and the swinging friction-wheel L, said wheel constructed as herein set forth.

4. The combination, with the bar H, of the front spring, G, and retracting-spring K, forked at its lower end, and connected with said bar by means of the stop-block K′, said bar connected at its rear end to the swinging friction-wheel L, substantially as herein set forth.

5. In an automatic car-brake, a swinging friction-wheel having its bearing in a suitable hanger, said wheel constructed with two separate faces, one of said faces provided with a rim ratcheted on the interior, and a collar ratcheted on its outer edge, the other face provided with lugs, a sliding bolt engaged between said lugs, and in connection therewith a suitable winding-reel, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

FANNY M. SALVADGE,
Administratrix of the estate of Robert Salvadge, deceased.

Witnesses:
WM. B. RUFF,
A. E. TROW.