

(No Model.)

S. BISSELL.
STREET RAILWAY CAR.

No. 264,849.

Patented Sept. 26, 1882.

Fig. 1.

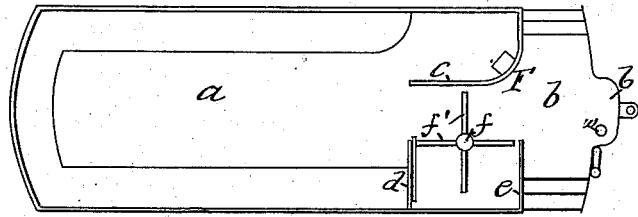


Fig. 2.

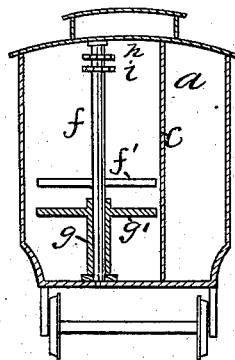


Fig. 3.

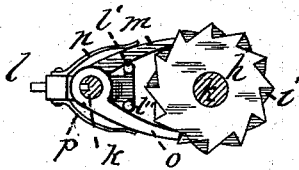


Fig. 4.

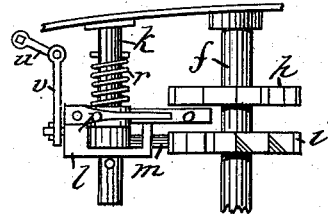


Fig. 7.

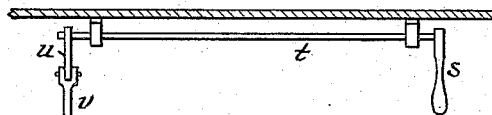


Fig. 5.

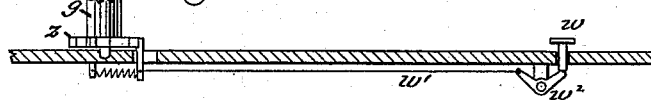
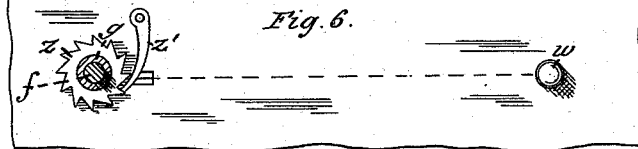


Fig. 6.



Witnesses:

C. L. Burdett.
W. H. Marsh

Inventor:

Sylvester Bissell
By W. E. Simonds,
Atty

UNITED STATES PATENT OFFICE.

SYLVESTER BISSELL, OF HARTFORD, CONNECTICUT.

STREET-RAILWAY CAR.

SPECIFICATION forming part of Letters Patent No. 264,849, dated September 26, 1882.

Application filed March 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER BISSELL, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Street-Railway Cars, of which the following is a description, reference being had to the accompanying drawings, where—

Figure 1 is a top view of a car embodying my improvements with the car-roof removed. Fig. 2 is a view of same in vertical cross section on plane passing through the turnstile, the pawls being omitted. Fig. 3 is a detail view of the ratchets and pawls located near the upper end of the turnstile-shaft. Fig. 4 is a side view of same. Fig. 5 is a view in longitudinal section through the locking device and foot-lever. Fig. 6 is a top view of the lock and foot-lever. Fig. 7 is a detail view of pawl-shifting mechanism.

My invention relates to that class of street-railway cars in which no conductor is employed, the fare being deposited by each passenger in a suitable box fixed at one end of the car.

It consists mainly of peculiar arrangement of the entrance and exit doors at the front end of the car, and also of the devices that place the control of the doors in the power of the driver.

In the old style of this car (commonly called "bob-tail") the passengers enter and leave by the rear door, and are required to put their fare in a box at the front end. This arrangement is liable to many disadvantages, which are remedied as hereinafter described.

In the accompanying drawings, the letter *a* denotes my improved car as a whole; *b*, the front platform, provided with the slightly-projecting driver's stand *b'* and the usual steps on both sides of the car. Partitions *c d e* are so arranged near the front end of the car as to form a passage-way, at one side of which a turnstile, *f*, is arranged, with arms *f'* projecting across the passage as the stile turns. A shorter turnstile, *g*, is placed at the lower end of turnstile *f*, and revolves upon it as a center, with arms *g'* fixed at about the height of a child paying one-half fare. Near the upper end of the stile *f*, which is pivotally attached to the floor and the roof-timbers of the car,

ratchet-wheels *h* and *i* are secured to the upright shaft, with a space between them. A short standard, *k*, is secured to the care-roof and bears a frame, *l*, which reciprocates vertically upon the standard, but is held from turning upon it by a pin taking into a longitudinal slot in the standard. Upon the standard *k* a pawl *m* is arranged rotarily and resting upon the frame *l*. This pawl is held in place by the spring *n* and prevented from too great inward play by the lug *l'*, which projects upward from the frame *l*. Resting upon this pawl *m*, which operates in connection with ratchet *i*, is a similar pawl, *o*, held by spring *p* and lug *l''*, and operating in connection with ratchet *h*. The pawls are pressed down upon the frame by the spiral spring *r*, and in this position the pawl *m* engages with ratchet *i* and allows the turnstile *f* to turn from the inside of the car, so as to allow passengers to leave the car, but prevents any from entering.

By means of handle *s*, rod *t*, crank *u*, and pitman *v*, connected to frame *l* and arranged upon the under side of the car-roof, the driver can lift the frame until pawl *m* is disengaged from its ratchet and pawl *o* engages with ratchet *h*, thus allowing passengers to turn the stile to enter but not to leave the car.

When one set of pawls and ratchets is in contact the other is free, thus allowing the stile to turn in one direction, and it is intended that it shall be generally free to turn so that passengers may leave the cars.

The lower turnstile, *g*, is intended to turn when children enter, and without moving the main stile. The locking device, operated by the foot of the driver, is shown in Figs. 5 and 6 as connected with this lower stile, and consists of foot-pad *w*, wire or rod *w'*, crank *w''*, ratchet *z*, and pawl *z'*.

In order to enter one of these cars, the passenger is required to deposit his fare in a conveniently-placed fare-box, as *F*, and then the driver unlocks the stile by lifting the frame, as described, to permit entrance to the car.

If desirable, each of the stiles *f* and *g* is connected with a recording apparatus.

I claim as my invention—

1. A street-railway car provided with an entrance at its front end, wherein a compound turnstile is rotarily secured under control of

the car-driver, all substantially as described, and for the purpose set forth.

2. In a street-railway car, in combination, main turnstile *f*, lower turnstile, *g*, ratchets *i h*, 5 and pawls *m o*, whereby rotation of the turnstiles in one direction only is possible, all substantially as described.

3. In a street-railway car, in combination, turnstile *g*, ratchet *z*, pawl *z'*, rod or wire *w'*, 10 crank *w²*, and foot-pad *w*, all substantially as described, and for the purpose set forth.

4. In a street-railway car, in combination, a turnstile with appurtenant ratchets and pawls connected with shifting mechanism, whereby

rotation of the stile in either direction under 15 control of the car-driver is secured, all substantially as described, and for the purpose set forth.

5. In a street-railway car, in combination, a main and a shorter turnstile concentrically ar- 20 ranged and provided with reversing and locking mechanism under control of the car-driver, all substantially as described, and for the purpose set forth.

SYLVESTER BISSELL.

Witnesses:

C. L. BURDETT,
W. H. MARSH.