(No Model.)

G. A. LA FEVER.

BELL CORD ATTACHMENT.

No. 395,839. Patented Jan. 8, 1889.

Fig. 1.

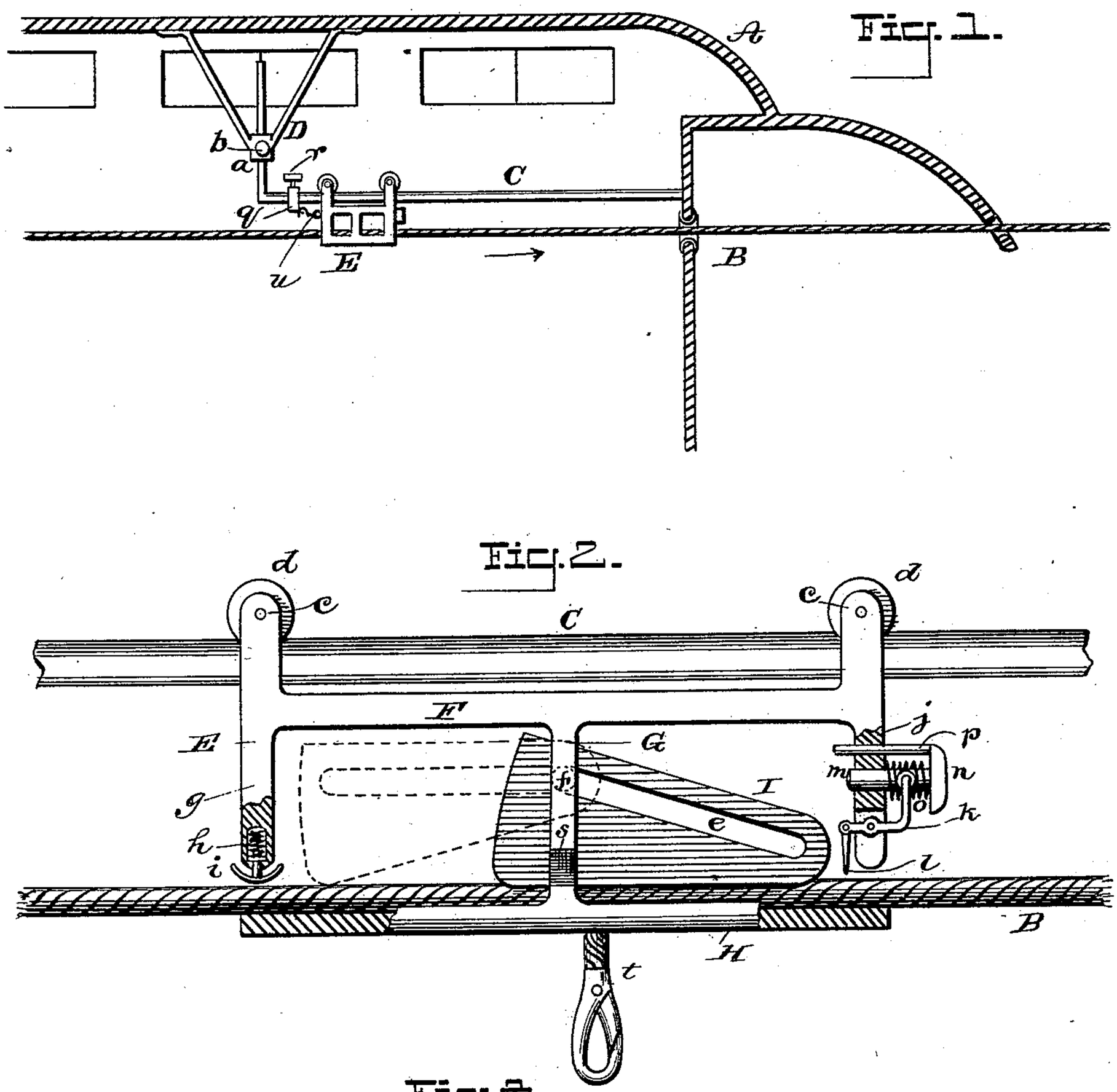
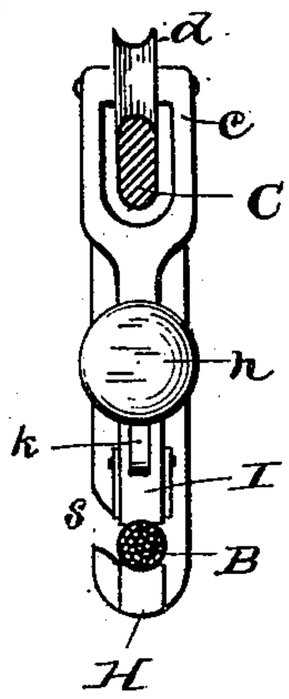


Fig. 2.

Fig. 3.



WITNESSES:

O. D. Mott

C. Sedgwick

INVENTOR:

G. A. La Fever

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE A. LA FEVER, OF SELKIRK, NEW YORK.

BELL-CORD ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 395,839, dated January 8, 1889.

Application filed January 9, 1888. Serial No. 260,137. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. LA FEVER, of Selkirk, in the county of Albany and State of New York, have invented a new and Improved Bell-Cord Attachment, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a longitudinal section of a portion of a railroad-car, showing the application of my improvement. Fig. 2 is an enlarged side elevation, partly in section, of my improved bell-cord attachment; and Fig. 3 is an end elevation showing the guide and bell-cord in section.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to furnish a device for attachment to the passenger-cars of railways for engaging and cutting the bell-cord when the cars separate, thereby preventing the cord from being drawn rapidly through the car and endangering the passengers.

My invention consists in a carriage mounted on a guiding-bar, supported in a horizontal position in the car above the bell-cord, and provided with a device for clamping the cord and severing it in case of an unusual movement of the cord.

In the car A, above the bell-cord B, is supported a horizontal bar, C, parallel with the bell-cord. One end of the bar C is fastened to the end of the car and the opposite end is bent at a right angle and held adjustably by the hanger D, attached to the ceiling of the car. The right-angled end of the bar extends through an eye, *a*, in the lower end of the hanger, and is clamped therein by a set-screw, *b*.

From the bar C is suspended a carriage, E, formed of the frame F, provided with ears *c*, which extend above the bar C and carry grooved rollers *d*, which ride upon the upper edge of the bar. The slotted arm G, extending downward from the center of the frame F, carries a grooved horizontal bar, H, in the groove of which the bell-cord B rests. In the slot of the arm G is placed a wedge, I, provided with a slot, *e*, which receives a pin, *f*, passing through the slotted arm G. The lower end of the downwardly-projecting arm *g*, at the rear end of the frame F, is bored longitudinally to receive the spiral spring *h* and the shank of the shoe *i*, which is pressed downwardly by the spring *h*. The shoe *i* rests upon the cord B with a pressure sufficient to cause the carriage E to move along with the cord.

In the slot of the downwardly-projecting arm *j*, at the forward end of the frame F, is pivoted a bent lever, *k*, to the inner end of which is pivotally connected a knife, *l*, which is supported normally a short distance above the cord B. The outer and upper end of the right-angled lever *k* is connected with a sliding rod, *m*, which passes through the arm *j* and is provided with a head, *n*, between which and the arm *j* is placed a spiral spring, *o*, which tends to force the rod *m* outward. To prevent the rod *m* from turning and to assist in guiding it, a guide-rod, *p*, is attached to the head *n* and extends through a hole in the arm *j*.

In the normal working of the bell-cord and carriage sufficient longitudinal movement is allowed to permit of ringing the bell; but when the cord breaks and is suddenly pulled in the direction indicated by the arrow it is clamped between the wedge I and the bar H, which causes the carriage E to move forward toward the end of the car, and when the head *n* of the rod *m* strikes the end of the car the lever *k* is turned so as to force the knife *l* through the cord, thus severing it. The rearward motion of the carriage is limited by a collar, *q*, clamped on the rod C by the set-screw *r*.

To facilitate introducing the bell-rope into the groove of the bar H, I provide a notch, *s*, in the center bar of the frame F; and for supporting the bell-rope when not connected with the attachment I provide a snap-hook, *t*, of ordinary construction, which is suspended from the frame F by a short piece of rope.

To prevent the frame F from moving when the attachment is not in use, a hook, *u*, is attached to the end of said frame in position to engage an eye projecting from the collar *q*.

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

1. In a bell-cord attachment, the combination of the bar C, suspended from the ceiling of the car, the carriage E, provided with rollers *d*, adapted to rest upon the bar C, the

slotted clamping-wedge I, inserted in a slot of the bar G, the knife L, the lever K, pivotally connected with the knife and pivoted in the carriage E, and the spring-pressed bar M, provided with the head N, arranged to engage the lever K and operate the knife L, substantially as specified.

2. In a bell-cord attachment, the combination of the adjustable bar C, the frame F, provided with rollers *d*, resting upon the bar C, the grooved bar H for receiving the rope B, the slotted wedge I, carried by the carriage E, and the spring-pressed follower *i*, carried by the carriage and adapted to clamp the rope B upon the grooved bar H, substantially as specified.

GEORGE A. LA FEVER.

Witnesses:
J. B. SELKIRK,
D. C. BULL.