

(No Model.)

2 Sheets—Sheet 1.

J. ARMAND.  
CAR BELL STRAP.

No. 385,337.

Patented July 3, 1888.

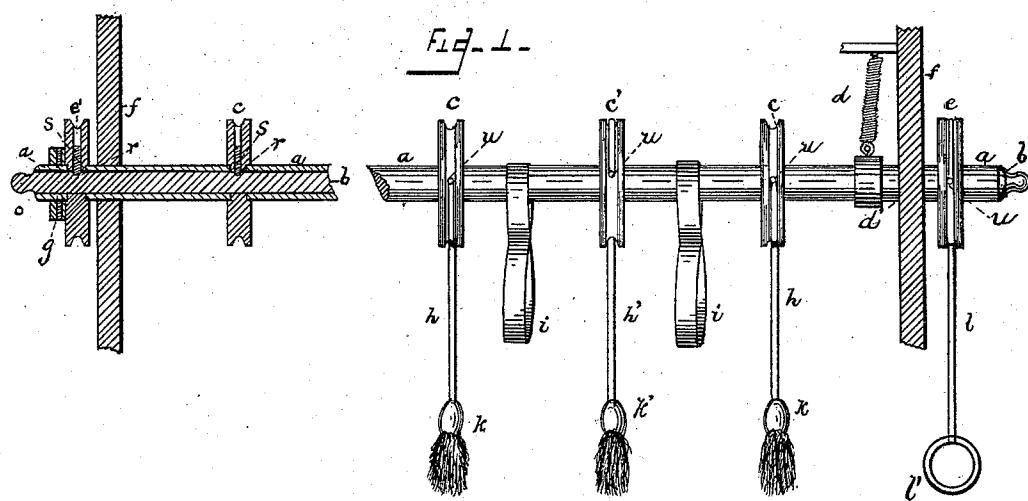
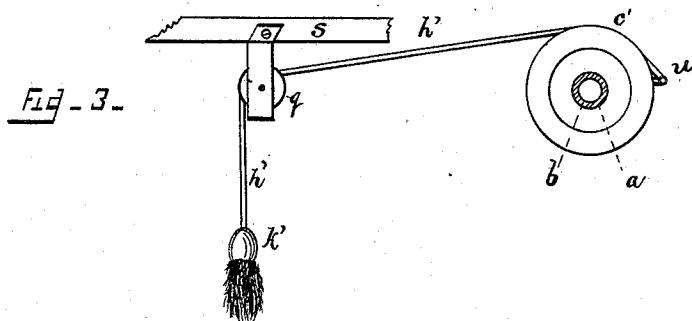
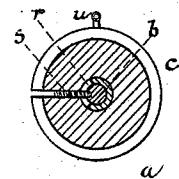


FIG. 2.



WITNESSES.

Fred. W. Rubin.  
C. E. McDonald.

INVENTOR:

Joseph Armand.  
By  
Lingers & Bowers

ATTORNEYS:

(No Model.)

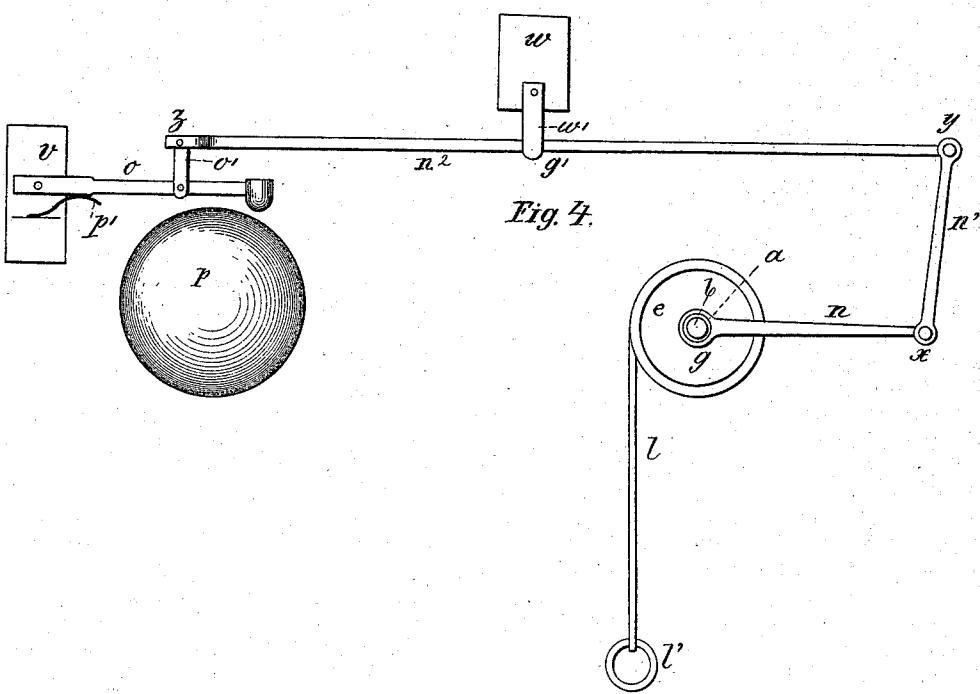
2 Sheets—Sheet 2.

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Witnesses.

B. von Brillzingslowey.

C. E. M. Donald.

Inventor.

Joseph Armand

By his Attorney

Finger & Elmer

# UNITED STATES PATENT OFFICE.

JOSEPH ARMAND, OF NEW YORK, N. Y.

## CAR-BELL STRAP.

SPECIFICATION forming part of Letters Patent No. 385,337, dated July 3, 1888.

Application filed July 21, 1887. Serial No. 244,900. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH ARMAND, a subject of the Queen of Great Britain, residing at the city of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Car-Bell Straps, of which the following is a specification.

The invention consists in the combination, with a stationary tube extending through the whole length of a car, supported by and projecting outwardly beyond the end walls thereof, and a rod within the bore of said tube extending through its whole length and movable therein, of pulleys mounted on said tube having each a screw passing through a transverse slot in said tube, and connecting said pulleys with said interior rod to turn the same within said tube, when said pulleys are turned, through the length of said transverse slot, mechanism connecting said rod with bells fixed on each end of said car to ring said bells, and means for turning said pulleys, substantially as hereinafter described.

The invention also consists in the details of construction, substantially as illustrated in the drawings, hereinafter described, and eventually pointed out in the claim.

Figure 1 is an illustration of my invention, partly in elevation and partly in section. Fig. 2 is a cross-sectional illustration of one of the pulleys, the said stationary tube, and the interior rod. Fig. 3 is a detail view illustrating one of said pulleys and the mechanism by which the same is turned. Fig. 4 is a detail view illustrating the mechanism connecting the said interior rod and the bell on the end of the car.

A single tube of any suitable metal and of convenient thickness, (designated by *a*), is fixed above the windows near the side wall in a car, so that it extends through the whole length of the car and projects outwardly beyond the ends *ff* of the car. Within this tube, extending through its whole length, is placed the rod *b*. This rod *b* is of such size as to be easily movable in said tube. Within the car and at convenient distances apart are mounted pulleys *c c'*. Under each of these pulleys is a transverse slot cut through the tube *a*, (designated by *r*). Through this slot *r*, and fastening the pulley *c* to the rod *b*, is the screw *s*, as illustrated by *c r s* of Figs. 2 and 1. Over each pul-

ley *c* the ropes *h*, to which are attached the tassels *k*, are wound one way, the ropes *h'*, to which are attached the tassels *k'*, are wound round the pulleys *c c'* the other way, each rope passing over a pulley, *q*, and hanging down by the window in reach of the passengers. At either end outside of the car, for the convenience of the driver and conductor, are mounted the pulleys *e e'*, which are constructed and used similarly to the pulleys *c c'*, being attached by screws through a slot in the tube *a* to the inner rod, *b*, and operated by ropes *l* and ring *l'*. A smaller wheel or hub is mounted on the tube *a* outside of the pulleys *e e'*, and is also, by means of a slot and screw, such as is hereinbefore described, fastened to the inner rod, *b*.

The wheel or hub *g* carries an arm, *n*, which is pivoted to the arm *n'* at *x*. This arm *n'* is pivoted to one end of the lever *n''* at *y*. This lever *n''* is pivoted at *g* to the support *w'*, which is fastened to the metal plate *w*. This plate *w* is fastened upon the outside of the end wall of the car. The other end of this lever *n''* is pivoted to one end of the link *o'* at *z*. The other end of this link *o'* is pivoted to the shank of the clapper *o*. The clapper *o* is pivoted to the plate *v*, which is fastened on the outside of the end wall of the car. The spring *p'*, which is fastened to the plate *v*, resting against the under side of the shank of the clapper *o*, constantly tends by its resilience to hold the clapper away from the bell *p*. When by pulling one of the cords *h, h', or l* the rod *b* is turned, and turns the wheel or hub *g* with it. The wheel or hub *g* moves the arm *n*. This causes the arm *n'* to move endwise and oscillate the lever *n''*, which, acting through the link *o'*, throws down the clapper *o* against the bell *p*, and, striking the bell, gives the signal. When the clapper *o* has struck the bell, the spring *p'* instantly throws it away from the bell, and thus allows the bell to vibrate. On each end of the car is such a bell and the like mechanism, so arranged that the signal may be given at either end of the car, as hereinafter described.

On the tube *a*, between the pulleys *c c'*, are hung the hand-straps *i*, the whole device to be as illustrated in the drawings.

When the device has been placed in a car, as described, the tassels *k k'* hang, as aforesaid, down within reach of the passengers, they

pulling them themselves can signal the driver without interrupting the conductor. When pulleys *c* are turned one way, the ropes *h* are unwound off them and the ropes *h'* wound on 5 the pulleys *c'*, and the reverse occurs when the ropes *h'* are pulled to move the pulleys in the opposite direction. The bell at one end of the car rings when the ropes *h* are pulled, and at the other end when the ropes *h'* are pulled. 10 The operation of the spring *d* is to return the pulleys *c c'* to their original position when they have been turned away by pulling the ropes *h h'*.

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

15 The combination, with a stationary tube extending through the whole length of a car, supported by and projecting outwardly beyond the end walls thereof, and a rod within

the bore of said tube extending through its whole length and movable therein, of pulleys mounted on said tube having each a screw passing through a transverse slot in said tube and connecting said pulleys with said interior rod to turn the same within said tube, when said pulleys are turned, through the length 20 of said transverse slot, mechanism connecting said rod with bells fixed on each end of said car to ring said bells, and means for turning said pulleys, substantially as and for the purpose set forth.

25 In witness whereof I hereunto set my hand in presence of two witnesses.

JOSEPH ARMAND.

Witnesses:

FREDK. W. RUBIEN,  
C. E. McDONALD.