

C. R. LIBBY.
 AUTOMATIC TRAVELING TAKE-UP FOR CABLE CONVEYING APPARATUS.
 APPLICATION FILED MAY 16, 1908.

944,565.

Patented Dec. 28, 1909.

2 SHEETS—SHEET 1.

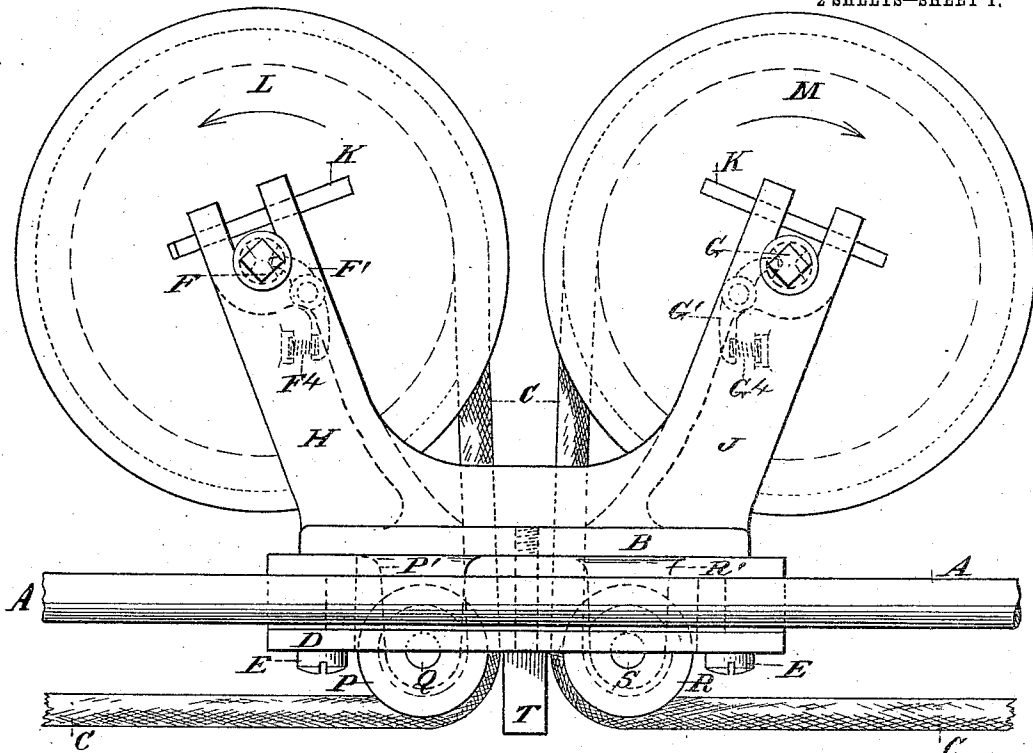


Fig. 1

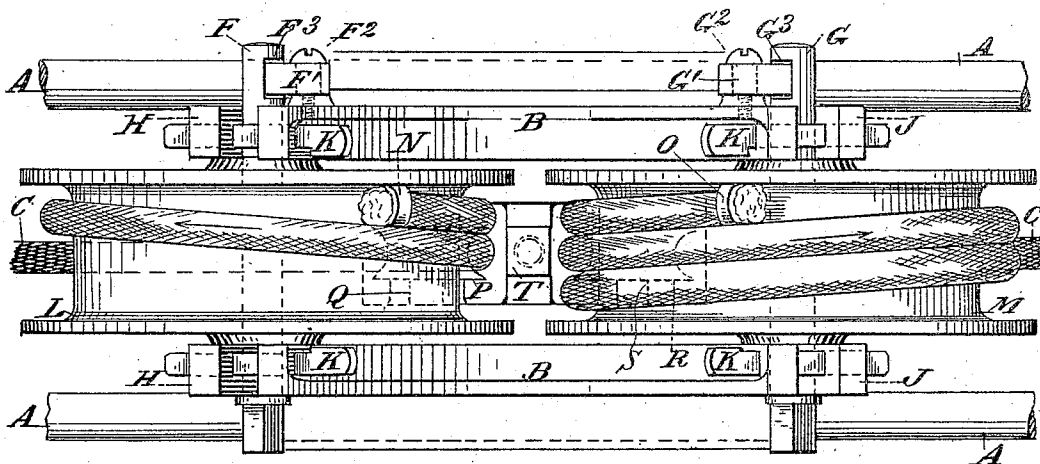


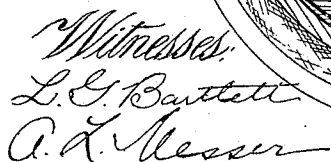
Fig. 2

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944,565.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES R. LIBBY, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO LAMSON CONSOLIDATED STORE SERVICE COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

AUTOMATIC TRAVELING TAKE-UP FOR CABLE CONVEYING APPARATUS.

944,565.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed May 16, 1908. Serial No. 433,197.

To all whom it may concern:

Be it known that I, CHARLES R. LIBBY, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Automatic Traveling Take-Ups for Cable Conveying Apparatus, of which the following is a specification.

My invention relates to improvements in an automatic traveling take-up for cable conveying apparatus and its object is to provide means which is connected with and travels with the driving cable for automatically taking up the slack and maintaining a sufficient tension upon said cable.

In the accompanying drawings is illustrated a form of construction embodying my invention in which,—

Figure 1 is a side elevation of the device showing the same in operating connection with the driving cable of a cable conveying apparatus. Fig. 2 is a top plan view of Fig. 1. Fig. 3 is a central longitudinal section of Fig. 1 showing the spring mechanism for operating the take-up drums. Fig. 4 is an end elevation of the device.

Like letters of reference refer to like parts throughout the several views.

A represents the tracks of the ordinary cable conveying apparatus upon which the carriers are adapted to travel and C represents the usual traveling cable for propelling the carriers which are attached to said cable.

B represents the frame of the cable take-up device and carries secured to the same by means of screws E a fiber plate D having grooves or recesses F adapted to cooperate with and guide the device on tracks A.

F and G are shafts mounted respectively in the bifurcated ends of the extensions H and J of the frame B and are rotatably confined therein by suitable cotter pins K.

L is a drum rotatably mounted over the shaft F and has secured thereto at N one end of the cable C and M is a similar drum mounted over the shaft G and carries secured thereto at O the other end of said cable C.

P is an idler or guide for the end of the cable C secured to the drum L and is fixed to the shaft Q which is rotatable in bearings P' secured to frame B and projecting through a slot in the fiber plate D.

R is a similar idler fixed to a shaft S rotatable in bearings R' secured to frame B

and which idler is adapted to support and guide the end of the cable C secured to drum M.

T is a block secured to the frame B and located adjacent the idlers P and R to prevent the cable C from jumping the grooves in said idlers.

Secured at one end to the inside of the drum L by a screw L² is a spiral spring L', said spring being fixed at its opposite end to the shaft F by a screw L³. This spring is so mounted that when wound it will tend to actuate the drum L in the direction indicated by the arrow to take up the slack and apply tension to the end of the cable secured to said drum. The drum M has a similar spiral spring M' secured thereto at one end by a screw M² and which is secured at its opposite end by a screw M³ to the shaft G, said spring being adapted to actuate the drum M in the direction indicated by the arrow, the reverse of drum L, to take up the slack and maintain a tension upon the opposite end of the cable C.

The shafts F and G are each squared at one end to receive a key for winding up its respective spring and F' and G' are pawls pivoted on the shoulder screws F² and G² respectively, the pawl F' being adapted to engage a notch F³ in the end of shaft F to hold said shaft against the tension of spring L' and the pawl G' adapted to engage a similar notch G³ in the end of the shaft G to retain said shaft against the action of the spring M'. F⁴ and G⁴ are springs adapted to retain the pawls F' and G' respectively in position to engage the notches F³ and G³.

The device is adapted to travel with the cable along the tracks A the slack being automatically taken up at both ends of said cable by the drums L and M which also apply and maintain sufficient tension upon the cable to hold the same taut, the tension being regulated by means of a suitable key applied to the squared ends of shafts F and G to wind up the springs L' and M' to the required degree.

Having thus described my invention and set forth a construction embodying the same, what I claim as new and desire to secure by Letters Patent of the United States is,—

1. In a cable conveying apparatus, a track or way, a driving cable adapted to propel

carriers along said track or way, and means traveling on said track and adapted to take up the slack and maintain a tension on said cable.

5 2. In a cable conveying apparatus, a track or way, a driving cable adapted to propel carriers along said track or way, and means connected with said cable and adapted to travel on said track or way for automatically taking up the slack and maintaining a ten-
10 sion on said cable.

3. In a cable conveying apparatus, a track or way, a driving cable adapted to propel carriers along said track or way, means con-
15 nected with said cable and adapted to travel on said track or way for automatically taking up the slack and maintaining a tension on said cable, and means for regulating said tension.

20 4. In a cable conveying apparatus, a track or way, a driving cable adapted to propel

carriers along said track or way, and spring actuated means connected with said cable and adapted to travel on said track or way for automatically taking up the slack and
25 maintaining a tension on said cable.

5. In a cable conveying apparatus, a track or way, a driving cable adapted to propel carriers along said track or way, and means traveling along said track and interposed in
30 and secured to each end of said cable for taking up and maintaining a tension on said cable.

In testimony whereof, I have signed my name to this specification in the presence
35 of two subscribing witnesses, this second day of May A. D. 1908.

CHARLES R. LIBBY.

Witnesses:

L. G. BARTLETT,
A. L. MESSER.