J. J. HAMMER.

STRAP HANGER.

APPLICATION FILED APR. 23, 1913.

1,067,916. Patented July 22, 1913.

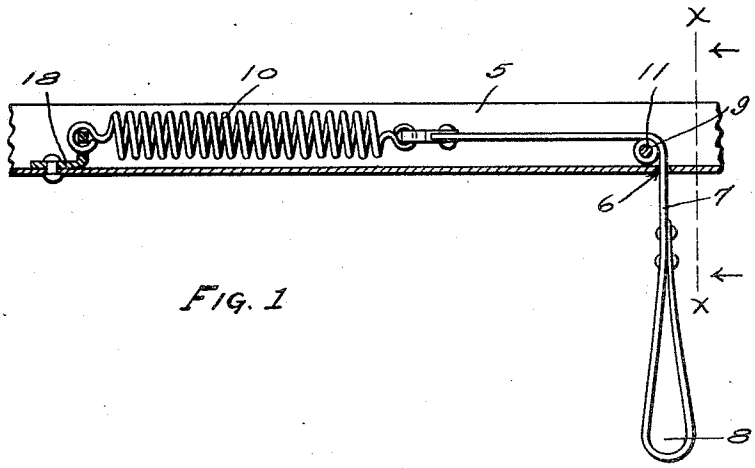


FIG. 1

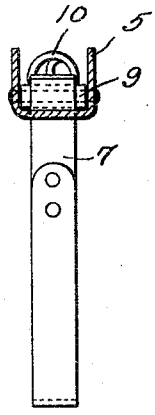


FIG. 2

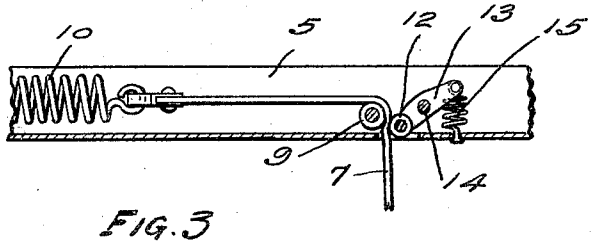


FIG. 3

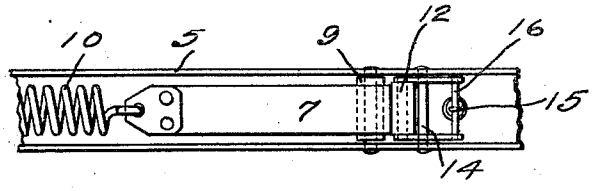


FIG. 4

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STRAP-HANGER.

1,067,916. Specification of Letters Patent. Patented July 22, 1913.

Application filed April 23, 1913. Serial No. 763,080.

To all whom it may concern:

Be it known that I, JOSEPH J. HAMMER, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a certain new and useful Improvement in Strap-Hangers, of which the following is a specification.

My invention relates to improvements in strap-hangers of street railway cars and like vehicles that are used for transporting passengers, and the object of my improvement is to provide a strong and simple strap-hanger for such passenger cars that shall have such elasticity as will obviate the unpleasant effects upon passengers hands and arms due to the rocking, lurching, turning the curves of a roadway and the sudden stopping or starting of a car. I attain this object by devices illustrated in the accompanying drawings, wherein—

Figure 1 shows one form of a structure embodying my invention as associated with a fragment of a strap-hanger bar of a car, which bar is shown with a side portion removed to disclose more clearly the principal features of my invention, Fig. 2 shows the same in vertical cross-section on broken line *x*, *x* of Fig. 1, Fig. 3 is a view in side elevation of a device embodying my invention associated with means for preventing the strap-hanger from snapping back quickly when it is released from tension, and Fig. 4 is a plan view of the same.

Like reference numerals indicate like parts throughout the drawings.

In the preferred form of my invention, a strap-hanger bar 5 made of channel iron may replace the usual strap rod disposed near the top of either side of an ordinary street railway car, said bar 5 being provided with a hole 6 in its bottom side through which extends a strap 7 to hang downwardly in the form of a loop 8 for a passenger to grasp. This strap 7 above the hole 6 turns at an angle to run over a roller 9 that is mounted on a shaft 11 that extends between the side walls of bar 5 with which roller 9 the strap 7 engages to extend horizontally and parallel with the bottom of the bar 5 and between the side walls thereof to connect with the end of a strong spiral spring 10 of suitable material as of steel, such spring 10 having its other end secured to a right angled bracket 18 which is riveted to the bottom of the bar 5, as shown in Figs. 1 and 2. As thus constructed the loop 8 may be grasped and held by a standing passenger's hand whereby he may be elastically supported against any tendency to be thrown by rocking, lurching, turning, stopping and starting of the car, and any sudden strain or jerk upon his hand is obviated by reason of the yielding action of the strong spring 10.

In Figs. 3 and 4 I have illustrated means for preventing the strap 7 with its loop 8 from snapping or flying back with great force if the said loop 8 be suddenly released from one's hand, which means may be used if desired and which means comprises an auxiliary roller 12. An auxiliary roller 12 is mounted between two lever arms 13, 13 which lever arms 13, 13 are pivotally mounted on a pin 14 within the bar 5, which arms 13, 13 are associated with a tension spring 15 attached to a cross-bar 16 which connects to their outer ends. The roller 12 is so disposed that it bears on the strap 7 below the point where the strap 7 bears on the roller 9 thus to tend to bind on the strap 7 when said strap 7 is drawn upwardly by the spring 10. Manifestly, other well known forms of retractile means may be substituted for the spring 10.

Obviously, minor changes in the details of construction of my strap-hanger may be made within the scope of the appended claims without departing from the spirit of my invention or sacrificing any of its advantages.

What I claim is:

1. In a strap-hanger of the class described, the combination with a horizontally disposed bar, of a spiral spring having one of its ends securely fastened by suitable means to said bar and disposed parallel therewith, a shaft associated with said bar in a position at a right angle thereto, a roller mounted to be rotatable on said shaft, a strap-hanger securely fastened to the other end of said spring and disposed to extend to and to engage with said roller and thence to extend vertically downward therefrom.

2. In a strap-hanger of the class described, the combination with a strap sup-

porting bar, of a roller pivotally associated with said bar, retractile means having one of its ends securely attached to said bar, a strap-hanger attached to the other end of said retractile means and disposed to extend therefrom to and to engage with said roller and thence to extend downwardly therefrom, and means associated with said strap and said roller for retarding the retractile effect of said retractile means.

In witness whereof, I, hereunto subscribe my name this 9th day of April A. D., 1913.

JOSEPH J. HAMMER.

Witnesses:
A. HASKINS,
F. C. MATHENY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."