No. 771,480. PATENTED OCT. 4, 1904.

O. LINK.

BELL OR SIGNAL CORD HANGER.

APPLICATION FILED JUNE 2, 1904.

NO MODEL.

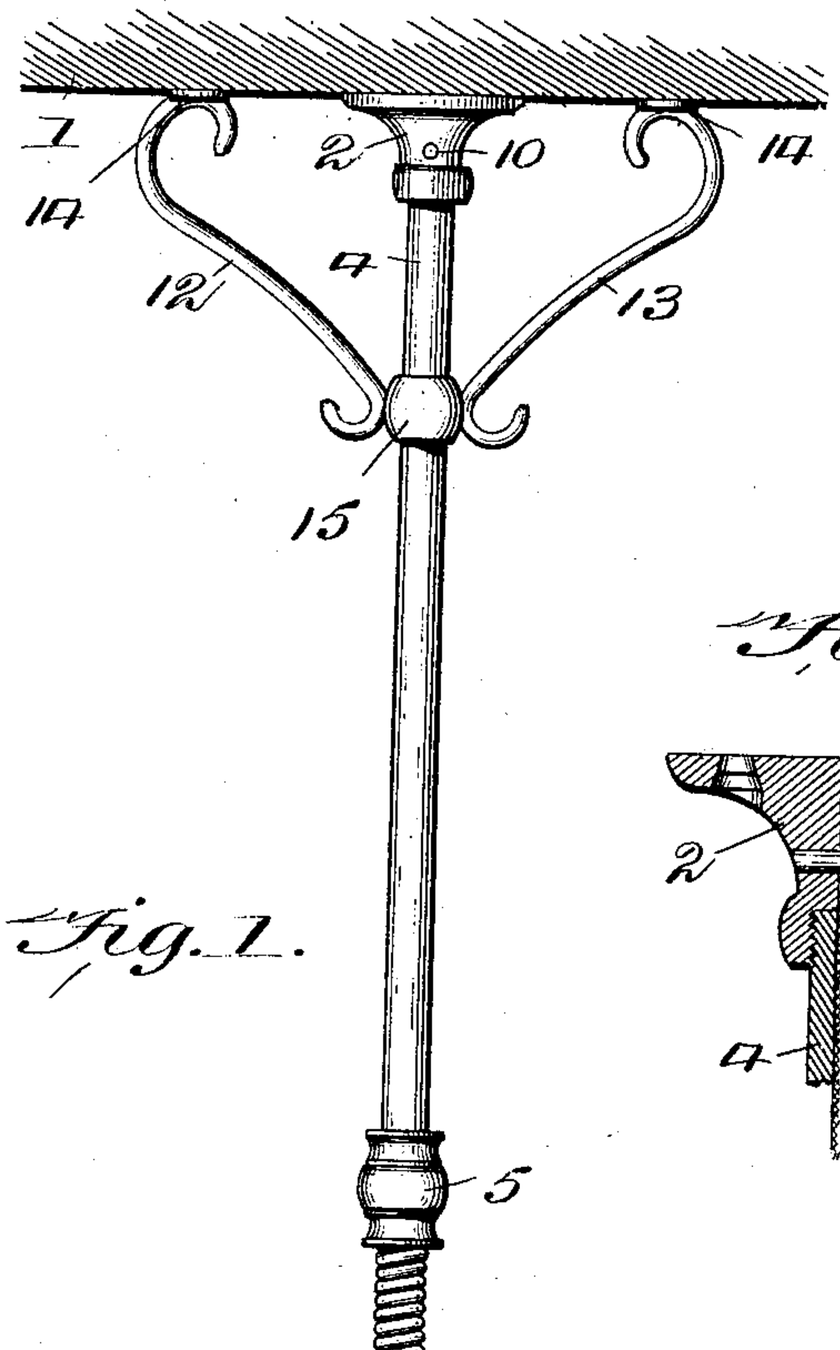

Fig. 1.

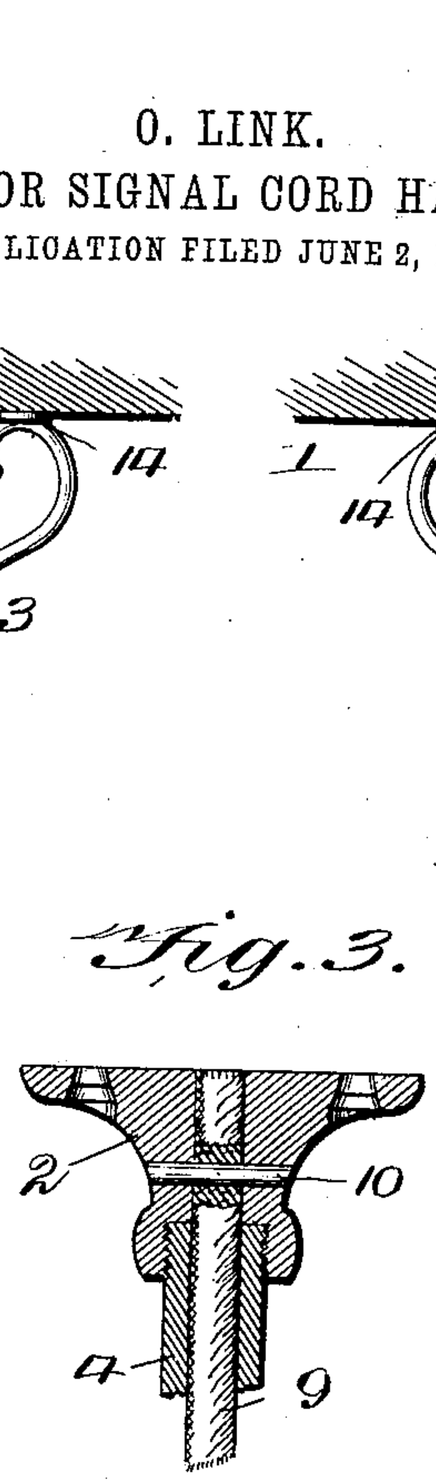

Fig. 3.

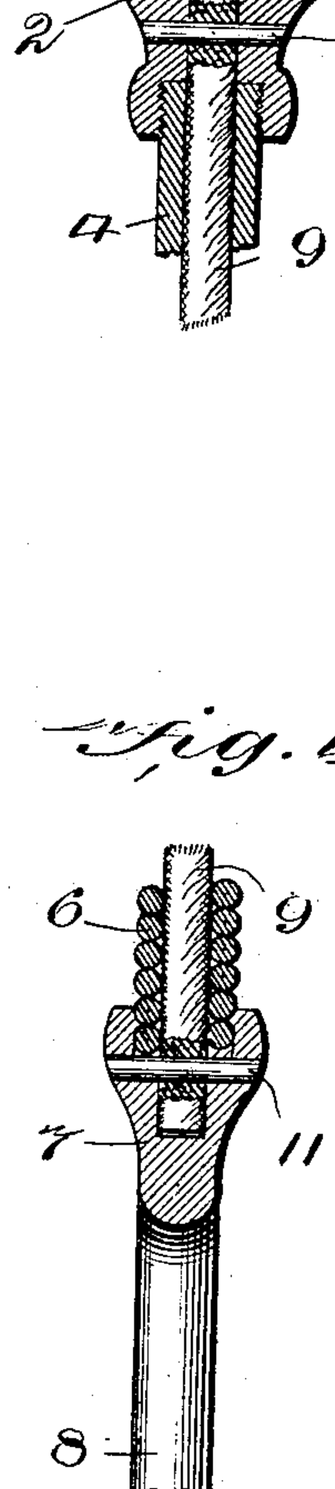

Fig. 4.

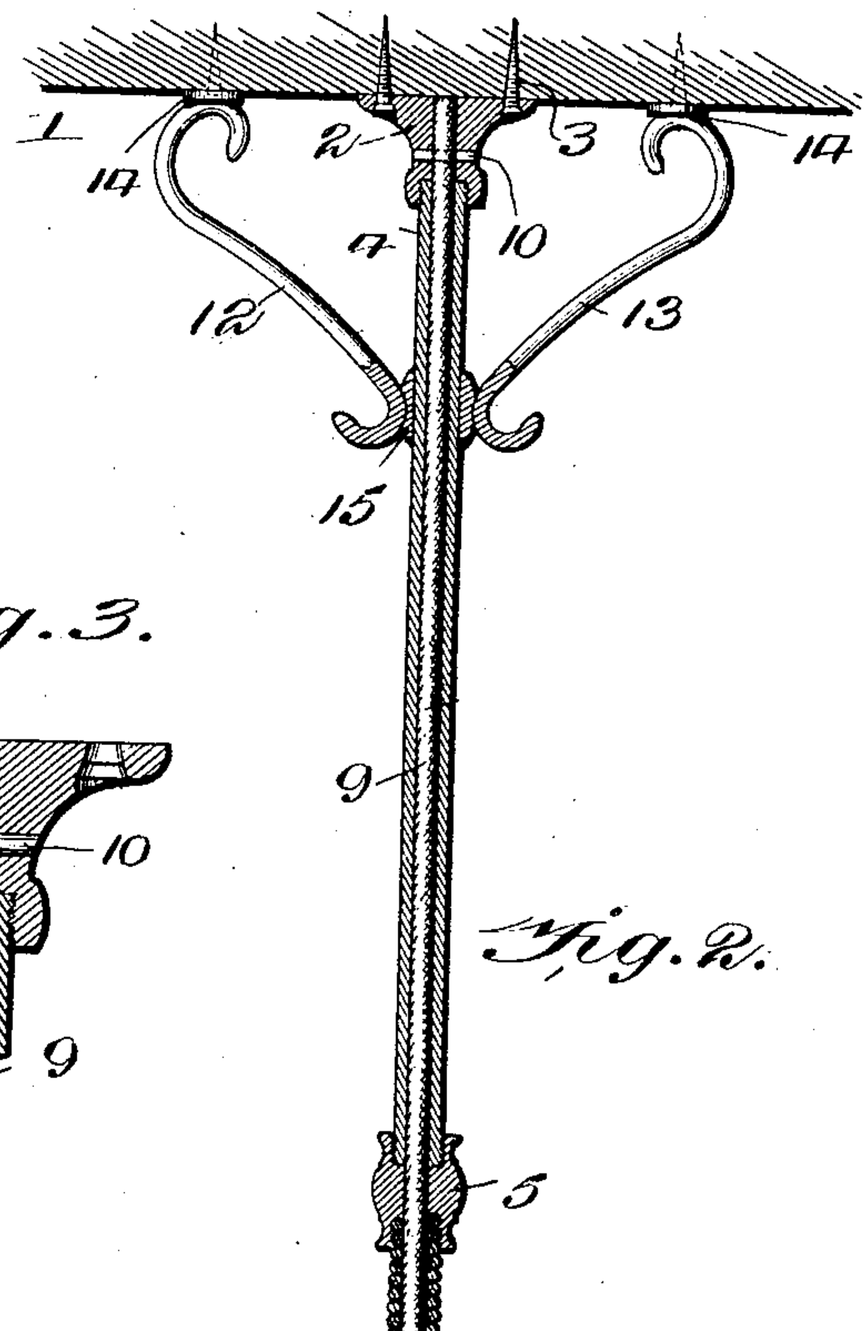

Fig. 2.

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No. 771,480. Patented October 4, 1904.

UNITED STATES PATENT OFFICE.

OLIVER LINK, OF ST. CHARLES, MISSOURI.

BELL OR SIGNAL CORD HANGER.

SPECIFICATION forming part of Letters Patent No. 771,480, dated October 4, 1904.

Application filed June 2, 1904. Serial No. 210,906. (No model.)

To all whom it may concern:

Be it known that I, OLIVER LINK, a citizen of the United States, residing at St. Charles, in the county of St. Charles and State of Missouri, have invented certain new and useful Improvements in Bell or Signal Cord Hangers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to what is commonly designated a bell or signal cord "hanger" or "support;" and it consists of certain novel features of construction and arrangement of parts the preferred form whereof will be hereinafter clearly set forth, and pointed out in the claims.

The prime object of my invention, among others, is to provide a support for the bell or signal cord commonly employed in railway-cars whereby communication may be had by the conductor with the engineer or other attendant thereon, my said support being flexible in character and at the same time reliably efficient in the performance of its office of holding the bell or signal cord in proper position to be grasped by the conductor or other person.

A further object of my invention is to provide a flexible support for a bell or signal cord which, while jointless or without pivot-points, will prevent undue strain upon the parts thereof connected to the car-ceiling, as is now common when railway-cars are traveling rapidly upon an uneven road-bed or passing around sharp curves.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a side elevation of my invention complete as attached to a car-ceiling and in readiness to receive and support the bell or signal cord. Fig. 2 is a longitudinal central section of Fig. 1. Fig. 3 is a detail view showing one of a variety of means of connecting the anchoring-terminal to the rigid portion or tubular shaft constituting the upper portion of my bell or signal cord hanger or support, while Fig. 4 is a detail view showing in section the lower end of my bell or signal cord hanger, said view representing substantially the normal size of the parts illustrated.

The various details of my invention and cooperating accessories will be designated by numerals, the same numeral applying to a corresponding part throughout the several views, and, referring to the numerals on the drawings, 1 designates the ceiling of a railway-car, while 2 designates the anchoring-terminal of my bell or signal cord hanger, which is preferably provided with apertures to receive the anchoring screws or bolts 3. The lower end of the anchoring member 2 is suitably recessed and internally threaded to receive the threaded end of the rigid body portion 4, the lower end of said tubular body portion being threaded into the upper end of the union or connecting member 5, said member 5 being open at its lower end and designed to receive the upper end of the flexible member 6, which, as will be observed, consists of a closely-coiled wire of suitable character and material, the said parts being permanently united in any preferred way, as by brazing, soldering, or the like.

To the lower end of the flexible spring member 6 I secure in any preferred way the upper end of the member 7, the lower portion of which is fashioned into a ring 8, preferably somewhat elongated in form, as clearly shown in Fig. 1, and in order that the said parts may be more reliably united I form in the members 2 and 5 a suitable bore coinciding in size with the diameter of the bore in the members 4 and 6, whereby a reinforcing-core, as a strongly-formed sash-cord 9 or the like, may extend from the member 2 to the member 7, the upper end of the core member 9 being reliably secured in union with the member 2 by the rivet 10, while the lower

end of the core member is similarly secured in union with the member 7 by the rivet 11 or equivalent thereof.

The relation of the rivets to the reinforcing-core member 9 is more clearly illustrated in Figs. 3 and 4, and it therefore follows that the various parts are all reliably united together independently of other means employed to hold them in union, while at the same time the said core member 9 will prevent undue extension or collapse of the coiled spring or flexible member 6, as will be clearly obvious.

Inasmuch as the greater part of the strain placed upon the rigid member 4 incident to a swinging movement of the car will be to one side or laterally relative to the car, suitable reinforcing-brackets 12 and 13 are employed, each having suitable apertured ears 14, adapted to be connected to a contiguous part of the ceiling, while the lower ends thereof are integrally formed with or otherwise united to the collar 15, fitting around the rigid tubular member 4, substantially as shown in the drawings.

The brackets 12 and 13 therefore not only serve a useful purpose, but may be so formed as to add attractiveness to the hanger.

The object of the flexible section 6, as will be clearly apparent, is to compensate for the swinging movement of the car and at the same time prevent a violent swinging or movement of the bell or signal cord, as would otherwise be the case if a swinging form of supporting arm or hanger were employed.

The members 6 being flexible also yieldingly conforms to any strain placed thereon incident to pulling upon the bell or signal cord and at the sume time insuring that said flexible member 6 will automatically resume its normal position, whereby it will lie in a continuation of the longitudinal plane of the rigid member 4.

It will thus be seen that I have provided a reliably efficient supporting appliance for a bell or signal cord of a railway-train of such character that the bell or signal cord will always be held near the middle portion of the car or within easy reach of the attendant, and while I have described the preferred construction and combination of parts I wish to comprehend such substantial equivalents as fall fairly within the scope of my invention, inasmuch as it is obvious that any suitable means for lending flexibility to the lower portion of the bell or signal cord hanger may be adopted without departing from the spirit of my invention.

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

1. The herein-described bell or signal cord hanger comprising the rigid member 4 and means to connect the same to the ceiling of a car, in combination with a universally-flexible extension carried by the lower end of the rigid member and having a member 7 at its lower end adapted to engage the bell or signal cord, said flexible member being so formed that it will normally lie in a continuation of the longitudinal plane of said rigid member, substantially as specified and for the purpose set forth.

2. A bell or signal cord hanger, comprising a rigid section and means to connect it to the ceiling of the car, in combination with a flexible extension connected to the lower end of the rigid member, the said flexible extension consisting of a spring-wire coiled closely upon itself and having at its lower end a rope-engaging member, substantially as specified and for the purpose set forth.

3. The herein-described bell or signal cord hanger comprising the rigid portion 4; an anchoring member 2 and a closely-coiled spring-wire connected to the lower end of the rigid member and having at its lower end a ring-like terminal for engaging the bell or signal cord, substantially as specified and for the purpose set forth.

4. A bell or signal cord hanger comprising a rigid portion; an anchoring-terminal 2 connected to the upper end of the rigid section; a flexible member formed of closely-coiled spring-wire; a rope-engaging ring connected to the lower end of said coil and a reinforcing flexible core extending through said parts and having its ends anchored in or secured to said terminal sections, all substantially as specified and for the purpose set forth.

5. The herein-described bell or signal cord hanger comprising the anchoring member 2; a rigid tubular section 4 connected therewith; a union carried by the lower end of the rigid member; a coiled spring fitting the lower end of said union; a ring-like terminal 8 secured to the lower end of the coiled spring and a reinforcing-core of strong non-extensible material having its ends firmly connected with said ring-like terminal and anchoring-section whereby all of said parts will be reliably united together substantially as specified and for the purpose set forth.

6. A bell or signal cord hanger comprising a rigid portion and means to connect the upper end thereof with the car-ceiling in combination with a coiled spring member 6 connected to the lower end of said rigid portion and having a ring-like terminal 8 at its lower end whereby the rope passing through said ring will be normally held in a position to intersect a continuation of the longitudinal plane of the rigid section and at the same time left free to be swung laterally by the compensating movement of said spring member substantially as specified and for the purpose set forth.

7. A bell or signal cord hanger comprising a tubular rigid section and a tubular flexible section having a rope-engaging terminal, said flexible section consisting of a coiled spring-wire, in combination with a reinforcing-core and means to secure said parts together to the ceiling of the car, substantially as specified and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OLIVER LINK.

Witnesses:
J. EDW. WHITE,
EDW. SCHREIBER.