

No. 721,794.

PATENTED MAR. 3, 1903.

W. H. GOODYEAR.  
TROLLEY.

APPLICATION FILED MAR. 18, 1902.

NO MODEL.

Fig. 1.

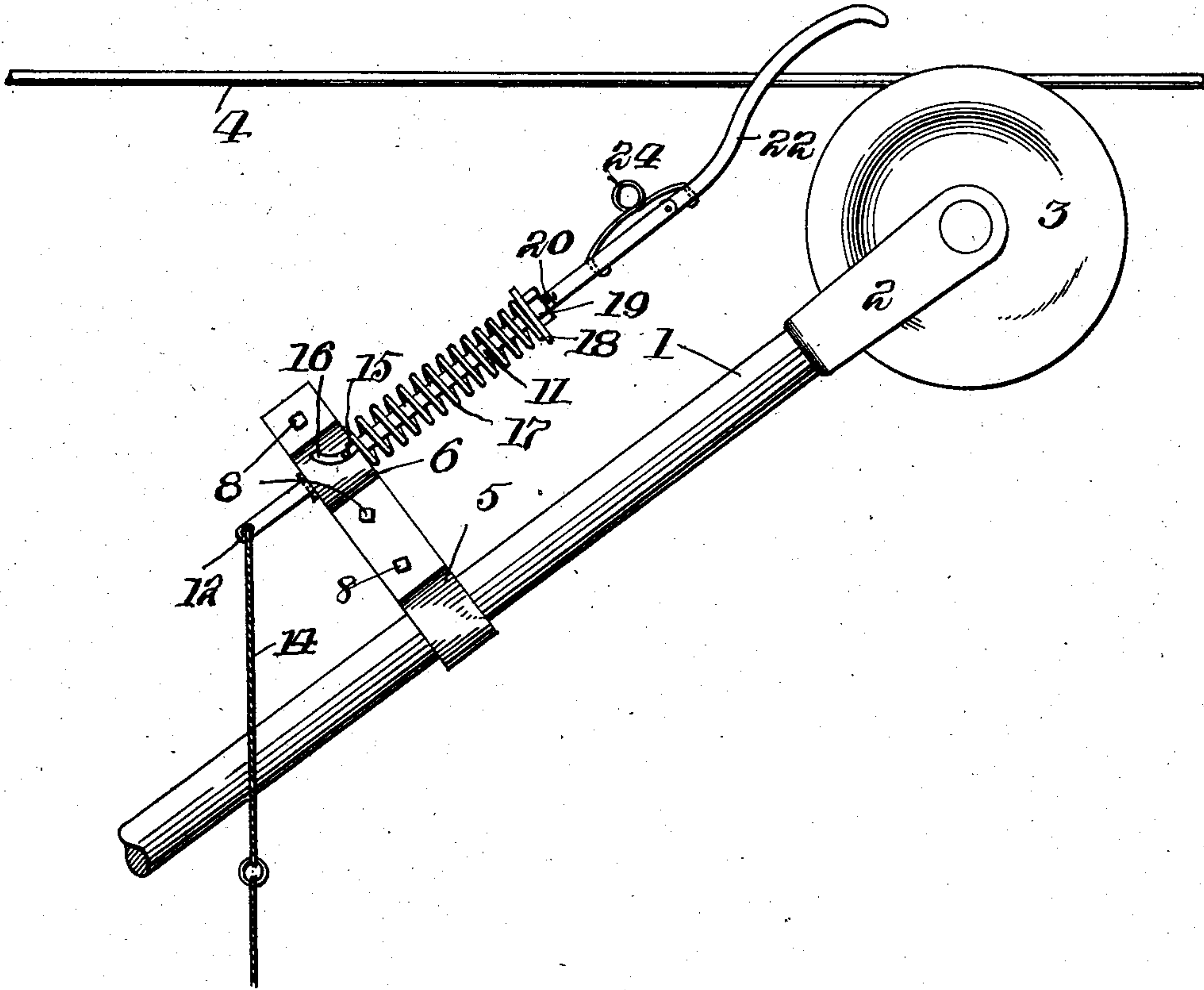


Fig. 2.

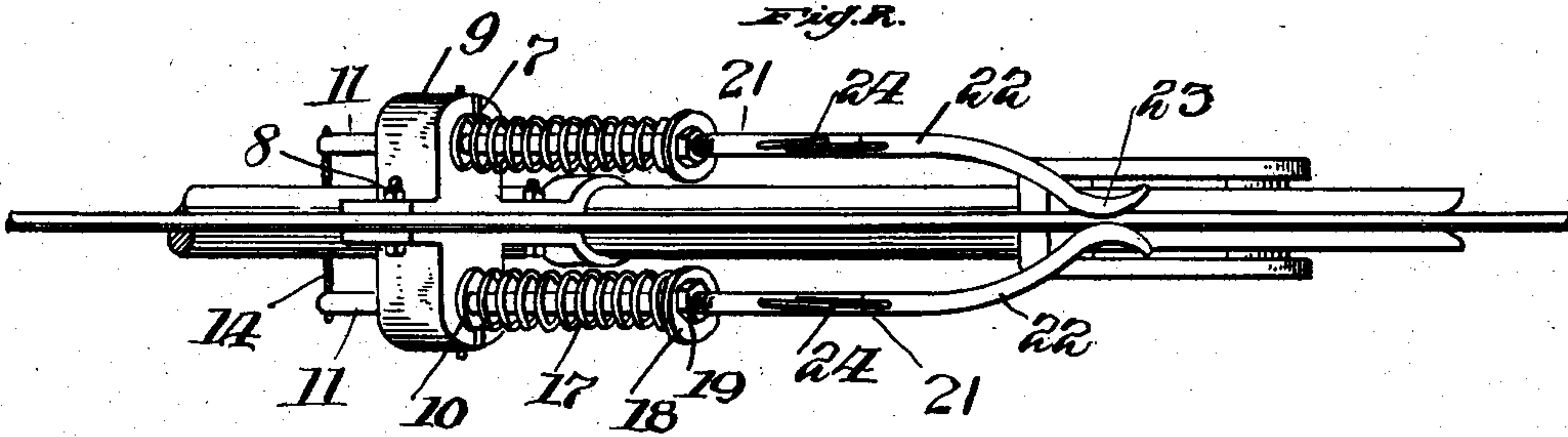
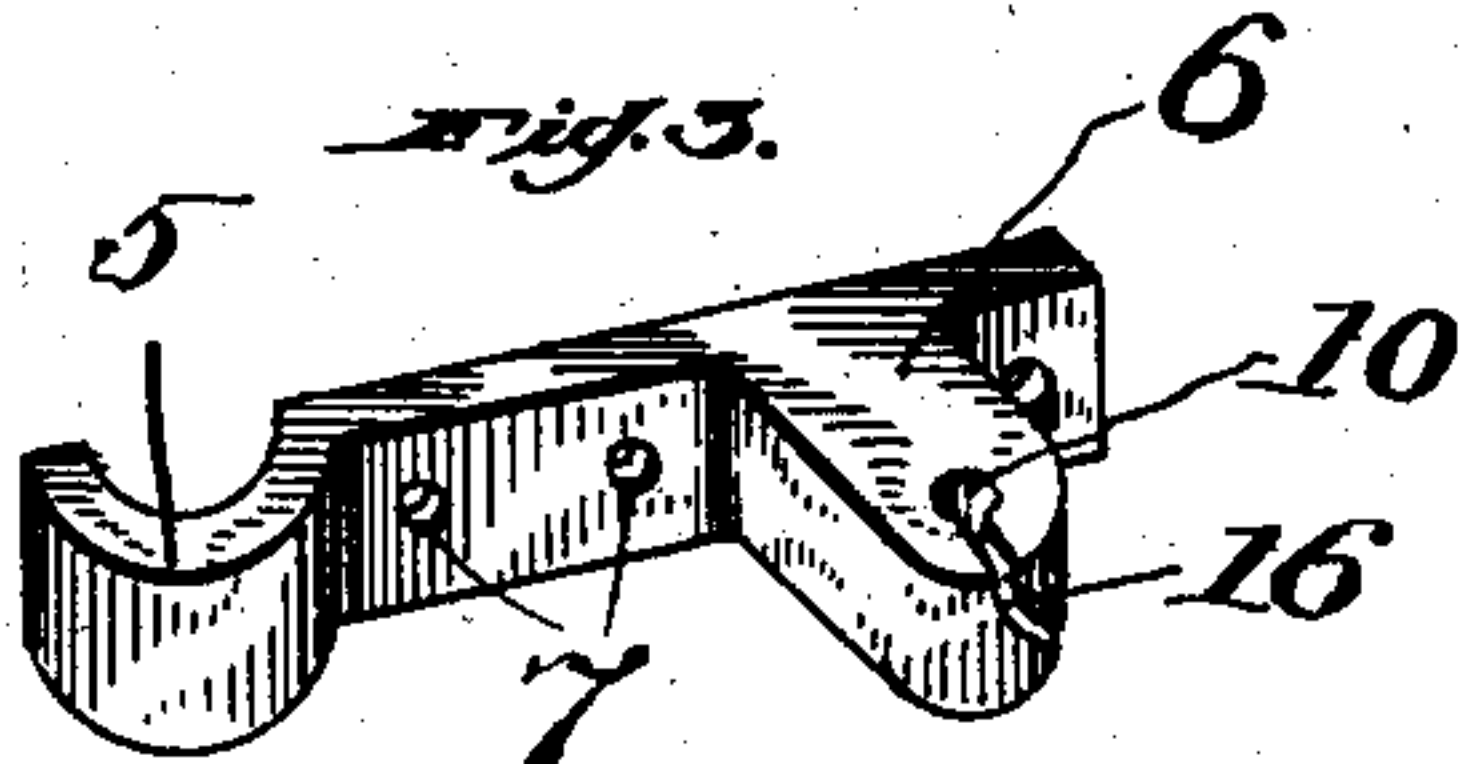


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## TROLLEY.

SPECIFICATION forming part of Letters Patent No. 721,794, dated March 3, 1903.

Application filed March 18, 1902. Serial No. 98,717. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. GOODYEAR, a citizen of the United States, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Trolleys, of which improvement the following is a specification.

This invention relates to certain new and useful improvements in trolleys, and relates more particularly to that class that will not come off the wire or become accidentally disengaged therefrom.

The invention has for its object the provision of novel means whereby a trolley-wheel may be constantly engaged with the trolley-wire and wherein an accidental displacement of the same will be impossible; furthermore, to provide novel means whereby the trolley-wheel may be easily disengaged from the wire when desired and properly operated.

With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of my improved trolley as it appears when in actual use. Fig. 2 is a top plan view thereof. Fig. 3 is a perspective view of one of the sections of the clamp in which the attachment is mounted.

In the drawings the reference-numeral 1 indicates the trolley-pole, and 2 the trolley-harp; and 3 indicates the trolley-wheel. The trolley-wire is represented by the reference-numeral 4.

Upon the trolley-harp 1 is secured a clamp 5, formed in two sections, forming a bracket 6, said bracket having openings 7 formed therein to receive suitable fastening means, such as nuts and bolts 8. Lugs 9 are formed integral with each section of the bracket, and in these lugs 9 openings 10 are formed, in which the arms 11 are slidably secured. At the lower end of said arms 11 are provided

loops 12 to receive the operating cord or rope 14. Upon the arms 11 are also secured pins 15, which operate in curved grooves 16, communicating with the openings 10, formed in the lugs 9. In order to give the arms 11 a rotary movement when operated downwardly by operating-cord 14, these arms 11 are encircled by spiral springs 17, the lower ends of which rest against the upper face of the brackets 9, and the upper ends of the spiral springs bear against washers 18, which are secured in position by means of nuts 19 upon the screw-threaded portion 20 of the arms. The upper ends of the arms 11 are bifurcated, as shown at 21, to receive spring-pressed fingers 22, these spring-pressed fingers being curved inwardly, as shown at 23, and are normally retained in position by means of springs 24, forming a connection with the fingers 22 and arms 11.

The operation of my improved trolley is as follows: The trolley being placed in position, as shown in Figs. 1 and 2 of the drawings, the arms and fingers will prevent the trolley-wire disengaging the trolley-wheel and will retain the same normally in the trolley-wheel 3. When it is desired to release the trolley-wheel, the operating-cord 14 is drawn downwardly, thereby compressing the spiral spring 17, and the pins 15, riding in the grooves 16, will partially rotate the arms 11, carrying the fingers 22, and will open the same, allowing the trolley-wire to be easily disengaged from the wheel. As soon as the cord is released the spring 17 will automatically close the fingers to their former position. It will be noted that an independent movement is also obtained by the fingers 22.

The many advantages obtained by the use of the improved trolley will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a trolley, the combination of a bracket, arms secured on said bracket, spring-pressed

fingers carried by said arms, and means whereby said arms and fingers are partially rotated, substantially as described.

2. In a trolley, the combination of a bracket,  
5 arms slidingly secured in said bracket, springs surrounding the said arms, fingers pivotally secured at the end of said arms, springs connecting said arms and fingers, and an operating-cord secured to the end of said arms, all

parts being arranged substantially as described and for the purpose set forth.

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

WILLIAM H. GOODYEAR.

In presence of—

JOHN GROETZINGER,  
M. HUNTER.