

W. D. REIST.  
 TROLLEY PLACER.  
 APPLICATION FILED AUG. 26, 1910.

1,002,755.

Patented Sept. 5, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

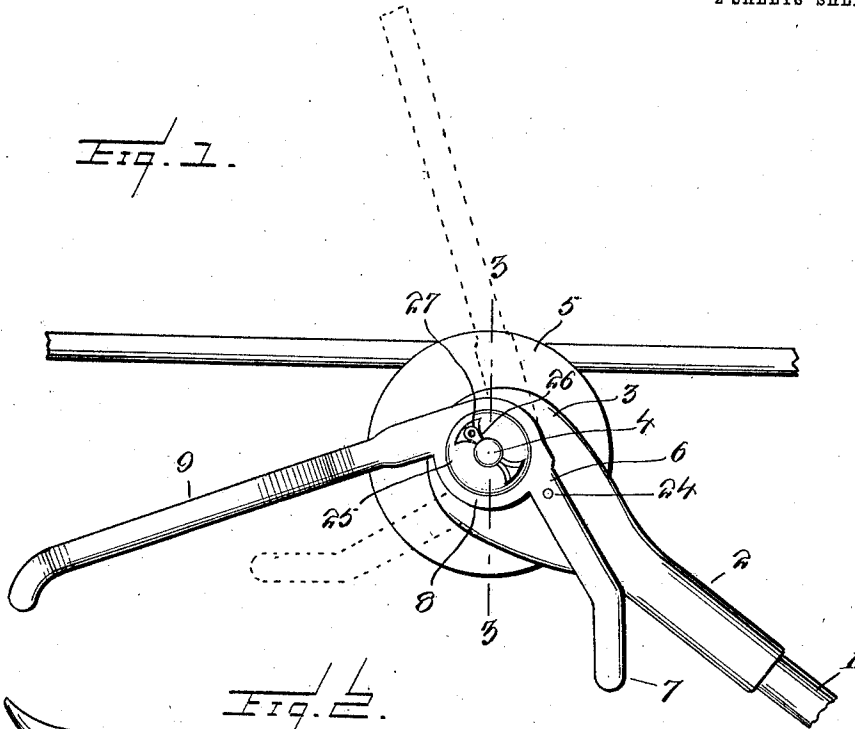
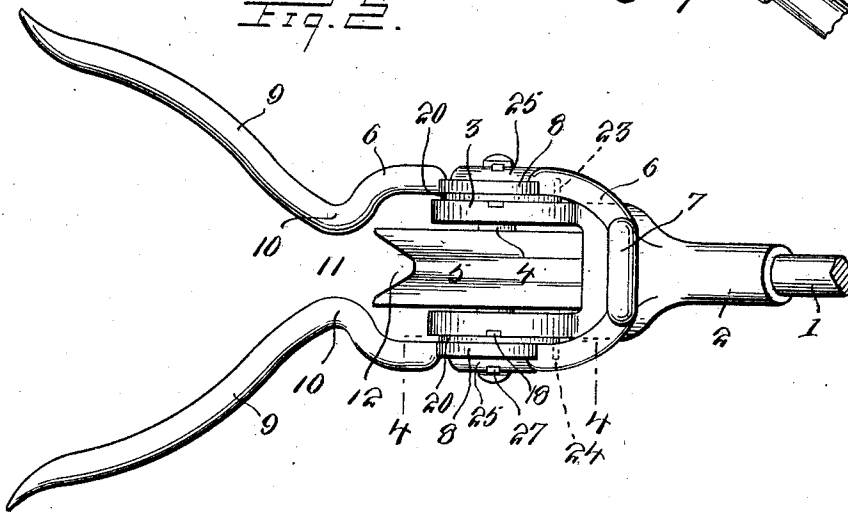


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

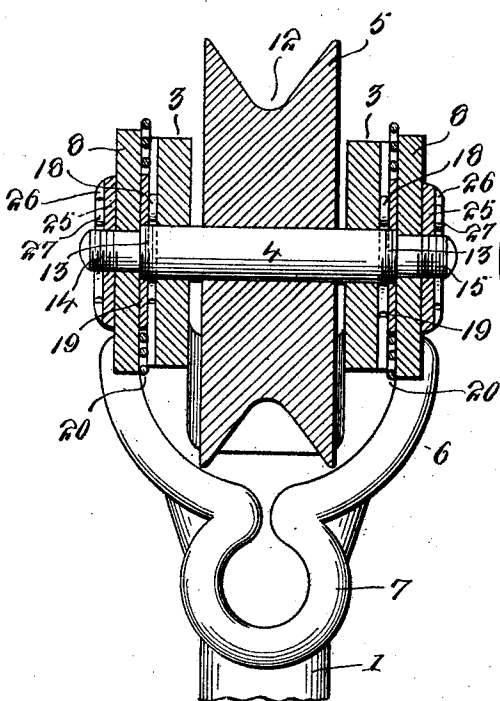


Fig. 4.

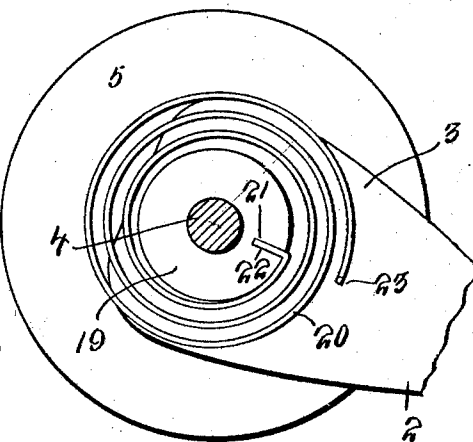


Fig. 5.

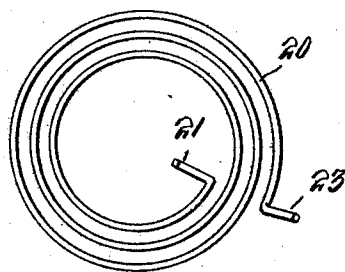
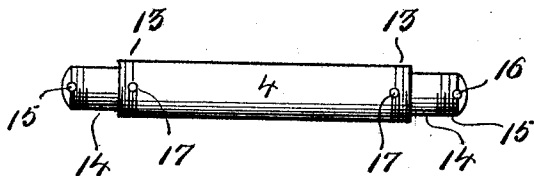


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## TROLLEY-PLACER.

1,002,755.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed August 26, 1910. Serial No. 579,048.

*To all whom it may concern:*

Be it known that I, WARREN D. REIST, a citizen of the United States, residing at Williamsville, in the county of Erie and State of New York, have invented new and useful Improvements in Trolley-Placers, of which the following is a specification.

This invention relates to trolley placers and guides and the object of the invention is the provision of a simple and efficient placing device which will facilitate the placing of the trolley wheel upon the trolley wire.

Heretofore this type of devices have been extremely complicated, it was necessary to provide a specially constructed harp and they frequently caught in the trolley wire, cross over, or supporting arm, thus damaging either of these parts or the trolley harp itself.

It is the object of this invention to avoid these difficulties and broadly speaking consists in a placer which may be attached to the ordinary type of trolley harp and which operated will readily guide the trolley wheel to the trolley wire.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawing forming a part of this application, and in which:

Figure 1 is a side elevation showing in full lines the device in inoperative position and in dotted lines the position of the placer when operative. Fig. 2 is a bottom plan view. Fig. 3 is a section taken on the line 3—3 of Fig. 1. Fig. 4 is a section taken on the line 4—4 of Fig. 2. Fig. 5 is an elevation of the wheel shaft. Fig. 6 is a perspective view of one of the springs used.

Referring more particularly to the drawing 1 represents the trolley pole and 2 the harp which is attached thereto and which is of the ordinary type. The upper end of the harp has the usual bearing heads 3 which are apertured to permit the passage of the wheel shaft 4 upon which the trolley wheel 5 is journaled. The placer which is mounted upon the harp consists of a length of heavy spring steel wire 6 which has its respective sides connected together at one end by a loop 7 which is connected to the trolley retrieving cord. This loop normally lies against the under side of the harp as shown in Fig. 1 and has the sides diverging therefrom so as to provide sufficient space

for the heads 3 of the harp. The sides are flattened at their ends into substantially circular heads 8 through which the end of the shaft 4 is adapted to pass, and extending from the heads at substantially right angles to the plane of the sides 6 are the placer fingers 9 which converge at 10 for a predetermined distance and for a purpose which will be hereinafter explained. At the end of the convergence the fingers diverge so as to produce a relatively wide opening for the ready engagement of the trolley wire. This convergence and divergence of the fingers forms a narrow neck or opening 11 which is somewhat narrower than the width of the trolley wheel so that the wire will be guided directly into the groove 12 of said wheel.

The shaft 4 is provided with screw threads 13 adjacent its end and the extremities of the shaft are reduced as at 14 and threaded at 15. The reduced portion of the shaft is provided with cotter holes 16 and immediately adjacent the threaded portion 13 there are cotter holes 17.

As shown in Fig. 3, the heads 3 of the harp are longitudinally recessed on opposite sides of the shaft aperture so as to receive the cotter pins 18 which lock the shaft to the head, and prevent its rotation with the wheel. Washers 19 are threaded upon the portions 13 between the heads 3 and 8 and are surrounded by coiled springs 20 which have their inner ends 21 bent laterally to engage notches 22 in the washers 19 and their outer ends formed into hooks 23 to engage apertures 24 in the sides 6. These springs normally tend to hold the loop 7 against the under side of the trolley harp and hold the fingers 9 depressed below the level of the trolley wire. The placer is held upon the harp by means of washers 25 which are recessed as at 26 to receive cotter pins 27 passed through the holes 16 in the reduced portions of the shaft. These washers 25 are threaded on the portions 15 and the cotter pins are countersunk therein so as to prevent the catching of the device upon the trolley wire, cross arm or cross over all parts of the device have their corners rounded so as to prevent such accidents.

The springs 19 are sufficiently strong to hold the parts in the position shown in full lines in Fig. 1, but when the retrieving rope is pulled upon the fingers 9 will be thrown to the position shown in dotted lines and as

long as any strain is kept upon the rope these fingers will be held in such position. However, upon the release of the rope the springs will return the fingers to the position shown in full lines in Fig. 1 and the springs are sufficiently strong to support the weight with the retrieving rope and thereby prevent the raising of the fingers to spacing position so that when the trolley is upon the wire the fingers will not be in position to engage the cross arm or supporting hangers.

Having thus described the invention, what is claimed is—

15 In a device of the class described, the combination with a harp, a threaded shaft mounted therein, and a wheel journaled on the shaft, of a pair of washers threaded on the shaft, means arranged between the  
20 washers and the harp for keying the shaft

to the harp, a trolley replacer comprising a pair of diverging arms pivotally mounted upon said shaft, recessed washers threaded upon said shaft, cotter pins engaging the shaft and lying in the recesses of said washer, springs interposed between said replacer and harp and surrounding said first named washers, said springs being connected to the first named washers and to the replacer for normally throwing the latter to inoperative position, and means connecting the arms of the replacer and adapted to receive a retrieving rope.

In testimony whereof I affix my signature in presence of two witnesses.

WARREN D. REIST.

Witnesses:

EMMA C. SWEITZER,  
HOWARD G. BRITTING.

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