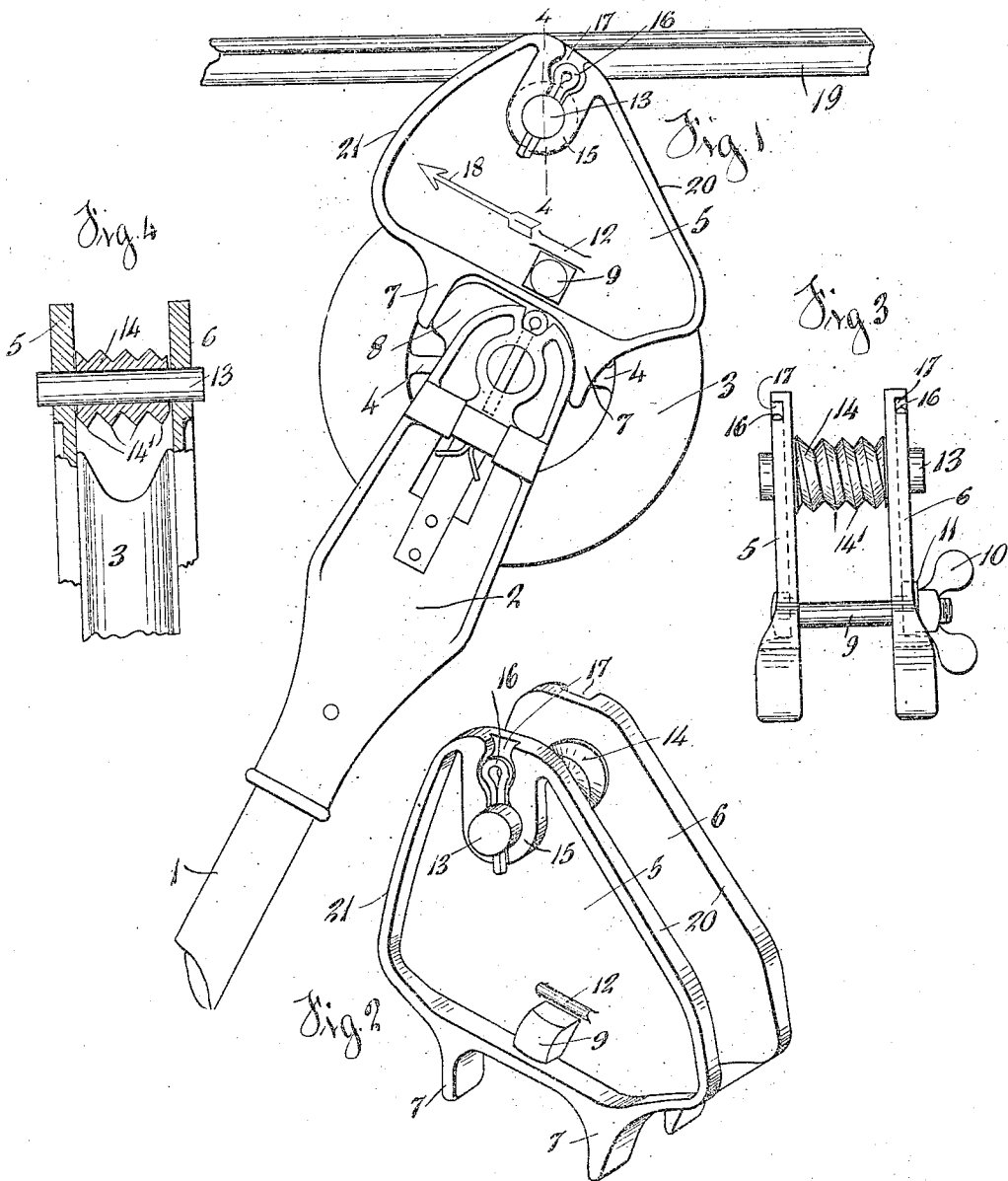


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 DEVICE FOR CUTTING SLEET FROM TROLLEY WIRES.
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DEVICE FOR CUTTING SLEET FROM TROLLEY-WIRES.

1,005,483.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed April 29, 1910. Serial No. 558,481.

To all whom it may concern:

Be it known that I, EUGENE SLINGLUFF, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Devices for Cutting Sleet from Trolley-Wires, of which the following is a specification.

My invention relates to devices for cutting the sleet from trolley wires.

The object of my invention is to provide a simple, efficient and inexpensive device which may be easily fastened to or detached from the trolley harp without removing the trolley wheel for removing the sleet and ice from the trolley wire.

My invention consists broadly of two clamping plates having a rotating cutter mounted between them, and a bolt adapted to clamp the trolley wheel between said plates.

My invention also consists in certain novel features which will hereinafter be set forth and claimed.

In the drawing which serves to illustrate my invention: Figure 1 is a side elevation of a portion of a trolley pole and trolley harp showing the trolley wheel in place and also showing my improved cutting device mounted thereon. Fig. 2 is an isometric view of my improved cutting device. Fig. 3 is an end elevation of my improved trolley cutter. Fig. 4 is a fragmentary sectional view taken on the line 4—4 of Fig. 1.

Referring more particularly to the drawing, I show at 1 a fragment of a trolley pole 1 having a trolley harp 2 mounted thereon. The trolley harp 2 is of the ordinary construction and forms no part of my invention.

3 illustrates the usual type of trolley wheel having spokes 4 therein.

My improved device for cutting the sleet from wires consists of the plates 5 and 6 which are adapted to clamp the trolley wheel 3 therebetween. On the lower side of the plates 5 and 6 I provide lugs 7 which may be of any particular shape or size and are adapted to engage the top of the trolley harp as shown in Fig. 1. I have illustrated my invention as applied to a specific construction of harp having a lug 8 adapted to engage one of the lugs 7, but my device may be applied to any style or form of harp.

A bolt 9 is provided which passes through suitable openings in the plates 5 and 6 and also through the trolley wheel 3 between its spokes 4 and is provided at one end with a wing nut 10 and lock washer 11. The plate 5 may be provided with a bead or raised portion 12 alongside of the opening through which the bolt 9 passes to prevent the bolt from turning. Placed between the plates 5 and 6 upon a shaft 13 I provide a rotating cutter 14 which is preferably corrugated as shown in Figs. 3 and 4 to form cutting edges 14', the corrugations running something after the manner of spiral or screw threads. The plates 5 and 6 may be strengthened by bosses 15 to allow the shaft 13 better bearing surface and I provide preferably cotter pins 16 to hold the shaft 13 in proper position. Recesses 17 may be placed in the bosses 15 in order that the cotter pins may not project outside the surface of the plates 5 and 6 and thereby give the device an ugly appearance.

My improved device may be mounted upon the trolley harp and trolley wheel very easily. It is simply necessary to place the device in the proper position upon the trolley harp and trolley wheel and then insert the bolt 9 and tighten the plates upon the wheel by means of the wing nut 10, a lock or spring washer being provided in order to lock the wing nut. Thus, when the trolley is raised to come in contact with the wire the cutter 14 will correspond to the trolley wheel and as it rotates the trolley wire will pass from side to side between the plates 5 and 6 and at the same time the corrugations of the cutter 14 will thoroughly clean the wire of all sleet or ice.

If it is desired, an arrow 18 may be cast upon the plate 5 in order to insure the plates being mounted upon the trolley harp in the proper manner, the arrow pointing in the direction of motion of the car.

In Fig. 1 I illustrate the device mounted upon the trolley pole and in engagement with the trolley wire 19.

It will be observed that the plates 5 and 6 are provided with a slanting surface or edges 20 and rounded edges or surfaces 21 on the forward end of the device. This is done to prevent the device from impairing the wires in case the trolley should be accidentally disengaged from the wire.

The cutter 14 is preferably made of a soft

material, such as brass, in order that it may not injure the wire. The construction of the cutter 14 is such that its position upon its bearing is reversible, it being immaterial how the same is mounted, and it will operate and remove the sleet from the wire whether the car is going forward or backward, the direction of movement of the car or of the cutter with relation to the wire being immaterial.

10 Many modifications of my invention may be made without departing from its spirit and scope, and I do not wish to be confined to the exact details shown.

What I claim as new and desire to secure by Letters Patent is:

1. A device for cutting sleet from trolley wires, comprising a trolley pole and harp, a trolley wheel on said harp, detachable plates clamped to the sides of said trolley wheel and bearing upon said trolley harp and a cutter mounted and adapted to rotate between said plates, substantially as set forth and for the purposes specified.

2. A device of the character described comprising plates, a rotating cutter mounted therebetween, a bolt adapted to pass through said plates and clamp said device to a trolley wheel, and means on said plates adapted to engage a trolley harp and hold said device rigidly thereon, substantially as set forth and for the purposes specified.

3. A device for cutting sleet from trolley wires, comprising metal plates spaced apart and separable, a detachable rotating cutter mounted between and engaging said plates,

said cutter having spiral corrugations upon its surface extending circumferentially of said cutter and substantially parallel with said trolley wire, and means whereby said plates may be clamped to the sides of a trolley wheel and trolley harp, substantially as set forth and for the purposes specified.

4. A device of the character described comprising plates, a rotating cutter mounted therebetween, a bolt adapted to pass through said plates and clamp said device to a trolley wheel, and lugs on said plates adapted to engage a trolley harp and hold said device rigidly thereon.

5. A device for cutting sleet from trolley wires, comprising plates and a rotating cutter therebetween, said rotating cutter having spiral corrugations extending circumferentially thereof upon its surface, substantially parallel to the trolley wire, whereby said wire is adapted to ride in and engage said corrugations, substantially as set forth and for the purposes specified.

6. A device for cutting sleet from trolley wires, comprising metal plates spaced apart, a corrugated cutter rotatably mounted between said plates, and a bolt and nut for fastening said plates upon the sides of a trolley wheel and trolley harp, substantially as set forth and for the purposes specified.

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