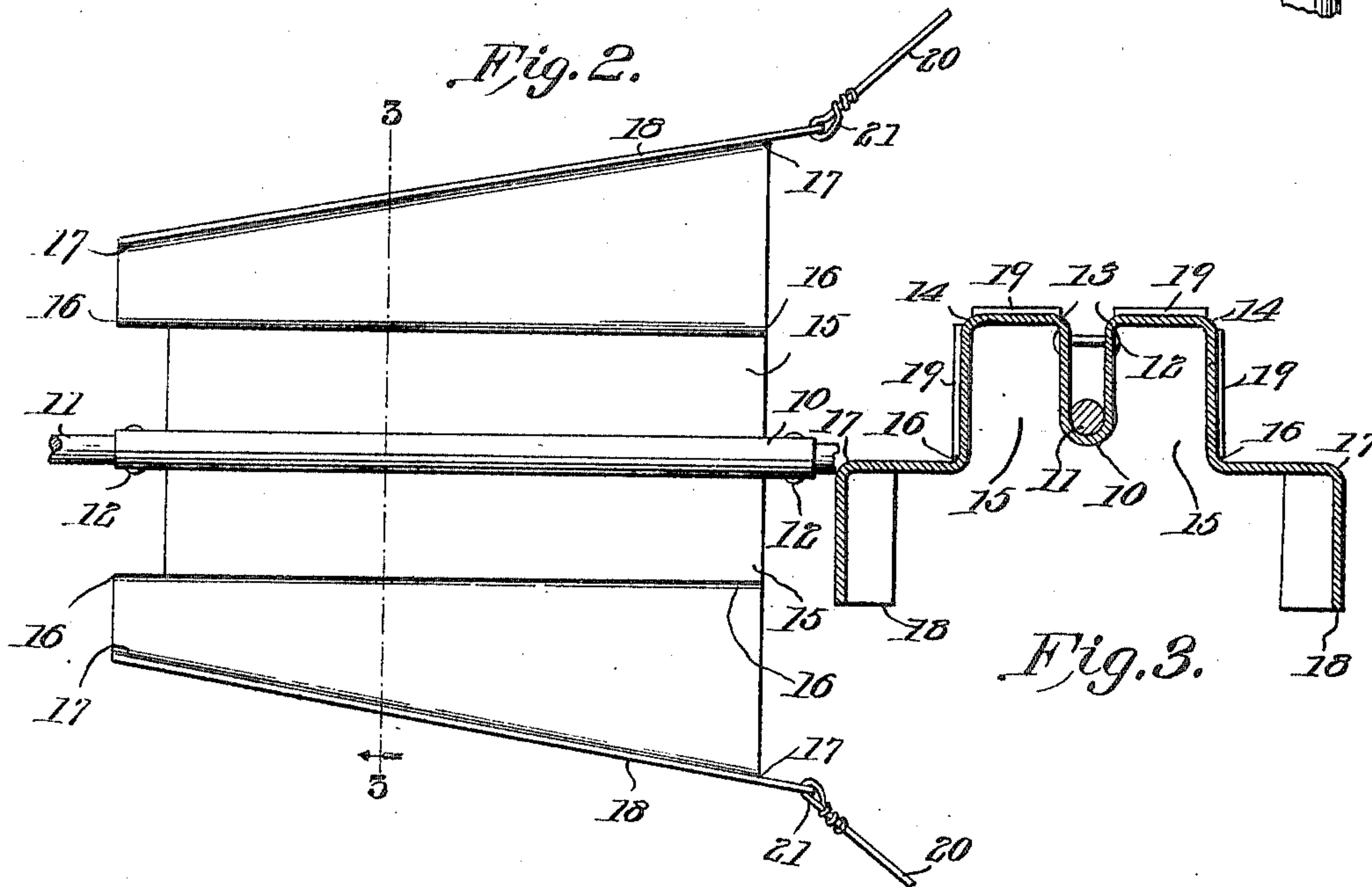
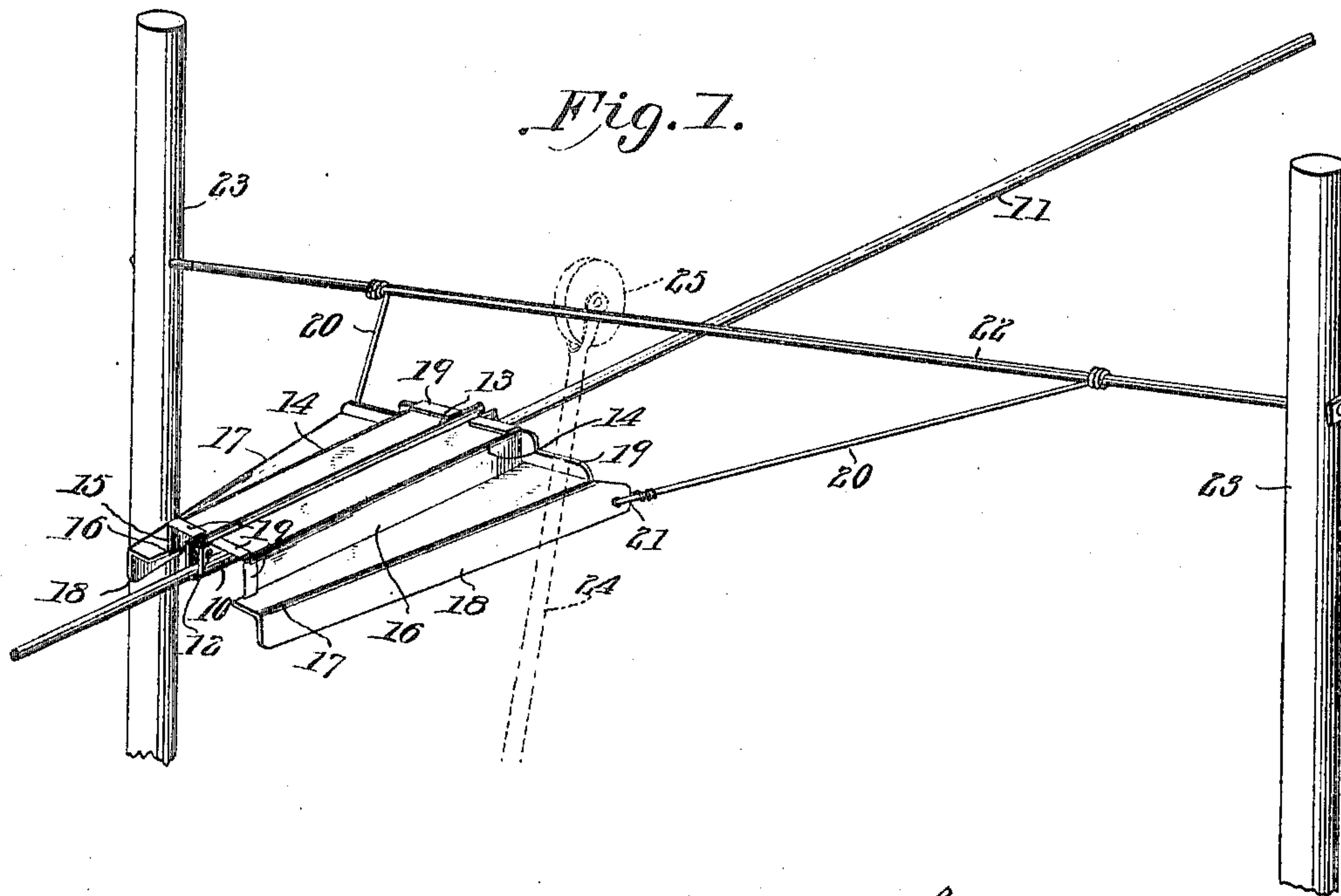


No. 811,919.

PATENTED FEB. 6, 1906.

R. B. HIGGINS.
TROLLEY REPLACER.
APPLICATION FILED AUG. 14, 1905.



Robert B. Higgins

Witnesses

E. J. Stewart
L. J. Morrill

Inventor

by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

ROBERT BARNEY HIGGINS, OF ST. LOUIS, MISSOURI.

TROLLEY-REPLACER.

No. 811,919.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed August 14, 1905. Serial No. 274,132.

To all whom it may concern:

Be it known that I, ROBERT BARNEY HIGGINS, a citizen of the United States, residing at St. Louis, State of Missouri, have invented
5 a new and useful Trolley-Replacer, of which the following is a specification.

This invention relates to trolley-replacers, and has for its object to provide a device of the class embodying new and improved fea-
10 tures of cheapness, durability, and reliability.

A further object of the invention is to provide a device for attachment to a trolley-wire which when encountered by a trolley-pole will move the trolley down and force it
15 to seek and engage the wire.

A further object of the invention is to provide a plate secured to the trolley-wire and having downturned converging flanges which engage an unseated trolley and force it to-
20 ward and to seek and engage the wire.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter fully described, shown in the accom-
25 panying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportions, size, and minor details may be made without departing from the spirit or sacrificing any of
30 its advantages.

In the drawings, Figure 1 is a perspective view of the improved trolley-replacer as seen from above and mounted upon a trolley-wire and in operative position. Fig. 2 is a bot-
35 tom plan view of the improved trolley-replacer. Fig. 3 is a transverse sectional view of the improved trolley-replacer and taken on line 3 3 of Fig. 2.

Like characters of reference designate corresponding parts throughout the several views.

In its preferred embodiment the improved trolley-replacer forming the subject-matter of this application comprises a plate folded or
45 cast to form a central longitudinally-disposed fold 10, adapted to be secured upon the trolley-wire 11 in any approved manner, as by the rivets 12. The material from the central fold is bent outwardly at 13 and again down-
50 wardly at 14 to form the longitudinal channels 15. At a line somewhat below the edge of fold 10 the material is bent outwardly to form the shoulders 16 and again bent downwardly at 17, a line oblique to the fold 10 and
55 forming converging downturned flanges 18. If folded, the ends of the device may be

strengthened by folds of the material, as 19, at each end. In addition to being clamped upon the wire by the rivets 12 guy-wires 20 may be secured to the device in any approved
60 manner, as by the loops 21 engaging within holes in any convenient place, as the flanges 18, and secured to any convenient support, as the cross-wire 22, carried upon the posts 23.

When mounted upon the wire, the wider
65 end of the replacer is presented to the oncoming trolley-pole 24, which is drawn into contact with the replacer by the guy-wires 20, so that the trolley 25 is engaged within the flanges 18, and as the car advances the
70 converging flanges draw the trolley over the trolley-wire, with which it engages at or before passing from the narrower end of the device.

From the foregoing description it is be-
75 lieved that the operation of the device will be fully and clearly understood, and it will be obvious that with the devices secured at sufficiently near intervals along the trolley-wire, and especially at those points where the trol-
80 ley is most likely to leave the wire, the trolley will be automatically returned to the wire, no matter how widely it may have been swung away therefrom.

Having thus described the invention, what
85 is claimed is—

1. A trolley-replacer for application to a trolley-wire and comprising a plate having a pair of shoulders arranged on opposite sides of, and spaced from the wire, the outer sides
90 of the shoulders being provided with inclined flanges for directing a trolley-wheel into engagement with the wire.

2. A trolley-replacer comprising a plate se-
95 cured at its middle line to the trolley-wire and having flanges on each side adjacent the wire at one end and receding from the wire and from each other toward the opposite end, and shoulders disposed between the flanges
100 and the wire.

3. The combination with a trolley-wire, of a member having a shoulder extending longi-
tudinally thereof and adjacent to and below the wire, the said shoulder widening later-
105 ally throughout its length and provided along its outer longitudinal edge with a downturned flange.

4. The combination with a trolley-wire, of a member provided with a groove embracing the wire, means for clamping the groove upon
110 the wire, a shoulder extending parallel with the groove and adjacent and below the wire

the said shoulder widening laterally throughout its length and provided along its outer longitudinal edge with a downturned flange.

5 5. The combination with a trolley-wire, of
a member provided with a longitudinal groove
embracing the wire and means for clamping
the wire within the groove, a shoulder ex-
tending parallel with the groove and adja-
cent to and below the wire and separated
10 therefrom by a longitudinal channel, the said
shoulder widening laterally throughout its
length and provided along its longitudinal
edge with a downturned flange.

15 6. The combination with a trolley-wire, of
a member provided with a central longitudi-
nal fold embracing the wire, means for clamp-
ing the wire within the fold, longitudinal

shoulders adjacent to and parallel with and
upon opposite sides of and below the wire
and separated therefrom by longitudinal 20
channels, the said shoulders widening later-
ally throughout their lengths, and guy-wires
secured to the sides of the member and ar-
ranged to hold the member horizontal and
from longitudinal displacement upon the trol- 25
ley-wire.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature
in the presence of two witnesses.

ROBERT BARNEY HIGGINS.

Witnesses:

MORRIS SALE,
JOHN CHARTER.