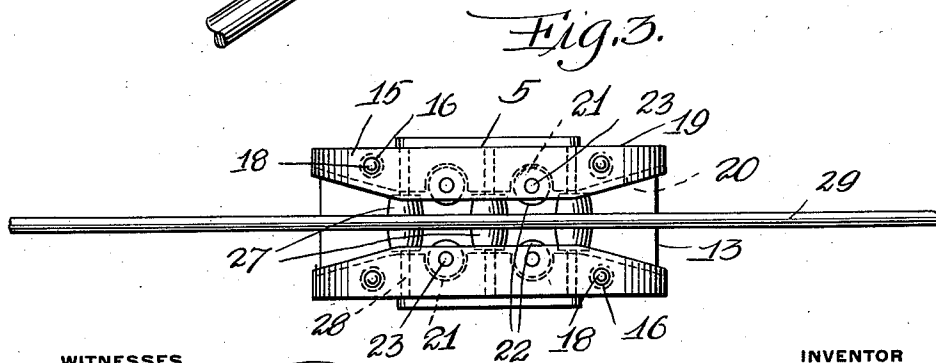
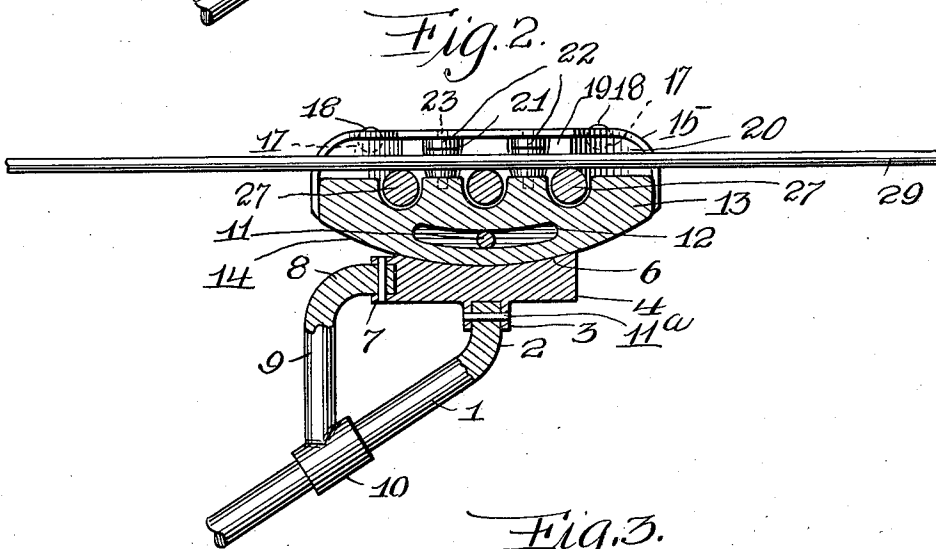
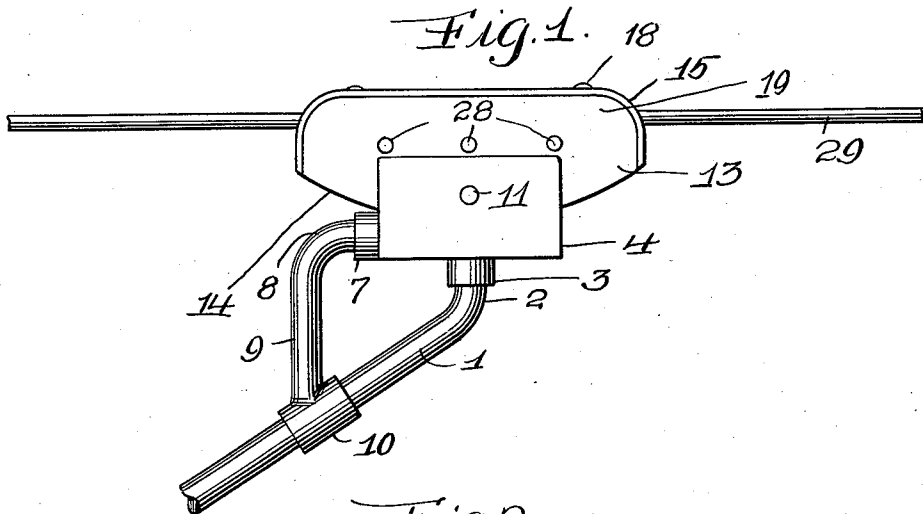


H. JOLLY.
TROLLEY.
APPLICATION FILED JAN. 10, 1911.

1,008,968.

Patented Nov. 14, 1911.



WITNESSES

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TROLLEY.

1,008,968.

Specification of Letters Patent.

Patented Nov. 14, 1911.

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To all whom it may concern:

Be it known that I, HARVEY JOLLY, a citizen of the United States of America, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Trolleys, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to trolleys, and the objects of my invention are to furnish a trolley with positive and reliable means in a manner as will be hereinafter set forth for establishing an electrical connection between
15 a trolley wire or conductor and a vehicle, and to provide trolley wheels that will adjust themselves and normally remain in engagement with the trolley wire irrespective of the rapidity of the car or vehicle equipped
20 with the wheels.

Other objects of my invention are to provide a trolley that will adjust itself to the irregularities and curvatures of a trolley wire, and to provide a trolley that will not
25 interfere with trolley hangers, guard boards or other overhead structures of an electric railway system.

Further objects of the invention are to provide a trolley that can be advantageously
30 used upon suburban lines, and to accomplish the above results by a mechanical construction that is simple, durable, free from injury by ordinary use and highly efficient for the purposes for which it is intended.

35 These and such other objects as may hereinafter appear are attained by the novel construction, combination and arrangement of parts to be presently described in detail and then claimed.

40 Reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claims.

45 In the drawing:—Figure 1 is a side elevation of the trolley, Fig. 2 is a longitudinal sectional view of the same, and Fig. 3 is a plan of the trolley.

The reference numeral 1 denotes a portion of a trolley pole having the upper end thereof bent upwardly, as at 2 to receive a depending sleeve 3 carried by a housing 4,

which is rectangular in plan and provided 55 with a longitudinal seat or groove 5 having the bottom thereof concave, as at 6. The rear end of the housing 4 is provided with an additional sleeve 7 for the upper curved end 8 of a vertical brace 9, said brace being 60 supported upon the trolley pole 1 by an angle connection 10 shrunk or otherwise mounted upon the pole 1. Pins or other fastening means 11^a can be employed for retaining the ends of the pole 1 and the brace 9 in 65 the sleeves 3 and 7 respectively.

The housing 4 is provided with a transverse pin 11 intermediate the ends thereof and which extends through a segment-shaped slot 12 provided therefor in a harp 70 13, said harp having the under side thereof convex, as at 14 to engage the concave seat 6. The harp has the sides thereof provided with vertical flanges 19 and these flanges have the confronting faces thereof at the 75 forward and rear ends beveled, as at 20. The confronting sides of the flanges 19 are provided with recesses 21 and revolubly mounted in said recesses are vertical anti-friction rollers 22, said rollers being retained 80 within said recesses by vertical pins 23 and straps 15, said straps being mounted over the upper edges of the flanges 19. The straps 15 are provided with openings 16 registering with recesses 17 in the tops of 85 the flanges 19, and arranged in said recesses and openings are anti-friction balls 18.

Revolubly mounted between the flanges 19 are a plurality of transverse double cone-shaped rollers 27, these rollers being revolubly supported by transverse pins 28. The rollers 27 are adapted to normally contact with a trolley wire 29 and the vertical rollers 22 are adapted to prevent the trolley wire from contacting with the confronting 95 sides of the flanges 19, while the balls 18 prevent the upper edges of the flanges from injuring the overhead work of an electric railway system, particularly guard boards arranged to carry a trolley wire under 100 bridges.

The beveled ends of the flanges 19 facilitate the placing of the trolley upon the trolley wire, and as the harp 15 can shift in the housing 4, it is obvious that the harp will 105 adjust itself relatively to the wire 29 whereby the pole 1 can be held at a desired inclination.

The trolley in its entirety can be made of strong and durable metal and of various sizes.

What I claim is:—

5 1. The combination with a pole, of a housing carried by the upper end thereof and provided with a concave seat, a harp mounted in the seat of said housing and having vertical side flanges, said harp having a
10 relatively long longitudinally extending segment shaped slot at its lower portion, a transversely extending pin carried by the housing and projecting through said slot, a plurality of rollers revolubly mounted be-
15 tween the flanges of said harp, vertical rollers revolubly mounted in the flanges of said harp, and balls revolubly mounted in the tops of the flanges of said harp.

20 2. The combination with a pole, of a housing carried by the upper end thereof and provided with a concave seat, a harp movably mounted in the seat of said housing and having vertical side flanges, a plu-
25 rality of rollers revolubly mounted between the flanges of said harp, vertical rollers revolubly mounted in the flanges of said harp, balls revolubly mounted in the tops of the flanges of said harp, said harp having a

relatively long longitudinally extending segment shaped slot at its lower portion, a 30 transversely extending pin carried by the housing and projecting through said slot, and a vertical brace connecting one end of said housing to said pole.

3. In combination with a pole, of a 35 housing carried at the upper end thereof, a harp movably mounted in said housing and having vertical side flanges projecting above the housing, transversely-extending double cone shaped rollers revolubly mounted be- 40 tween the flanges of the harp, vertically disposed cylindrical rollers revolubly mounted in the flanges of the harp and interposed between the ends of the cone shaped rollers and projecting into the space between the flanges, 45 balls revolubly mounted in the tops of the flanges of the harp at the ends of said flanges, and means carried by the housing and extending through the bottom of the harp for retaining the latter in the housing. 50

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

HARVEY JOLLY.

Witnesses:

MAX H. SROLOVITZ,
CRISSY T. HOOD.

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