

No. 654,448.

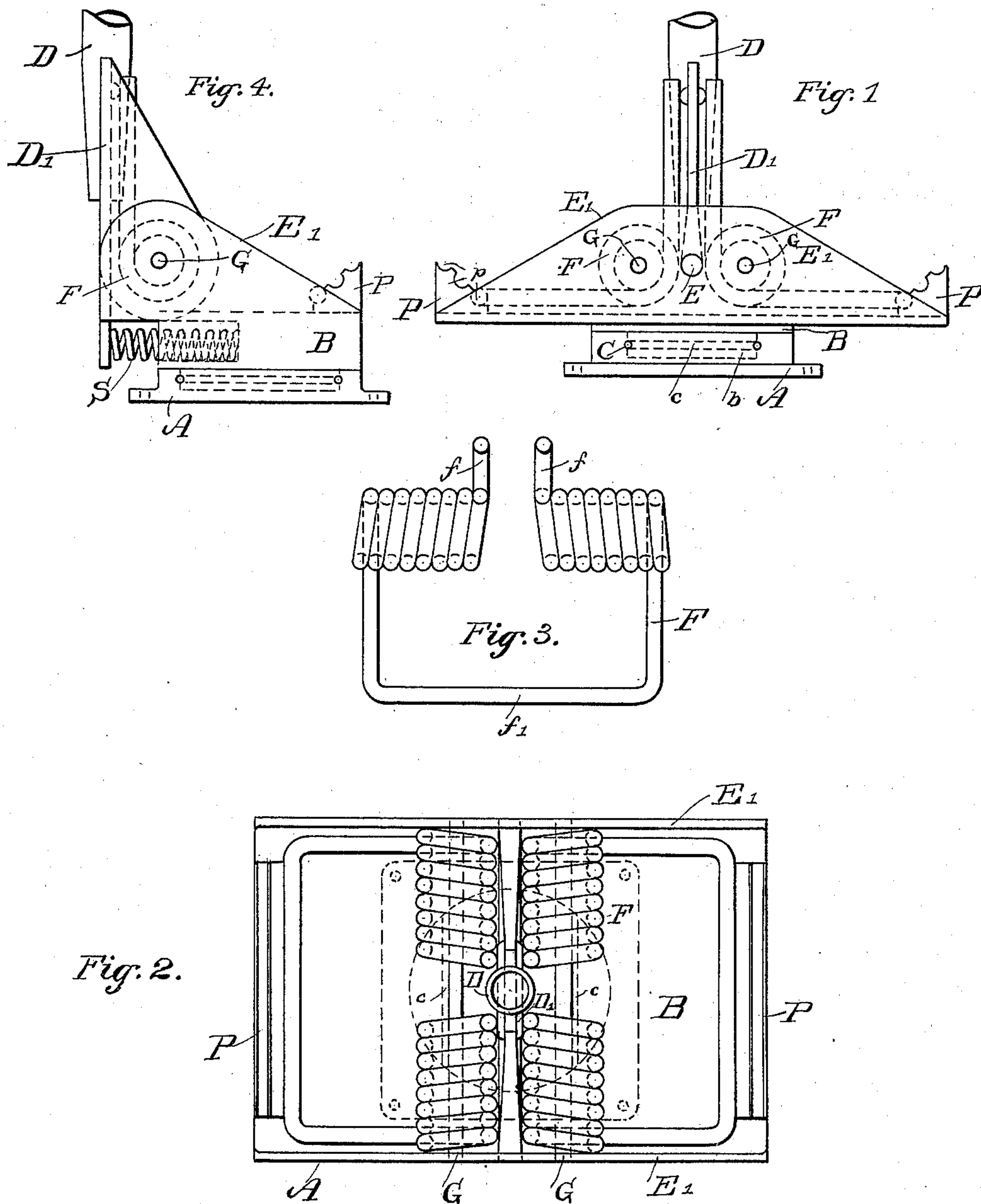
Patented July 24, 1900.

H. S. GOUGHNOUR.

TROLLEY BASE.

(Application filed Sept. 23, 1899.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

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TROLLEY-BASE.

SPECIFICATION forming part of Letters Patent No. 654,448, dated July 24, 1900.

Application filed September 23, 1899. Serial No. 731,483. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. GOUGHNOUR, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Trolley-Bases, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to overhead trolleys, and more particularly to a base or mounting for connecting the trolley arm or pole to the roof of the car.

The invention is designed to provide a "low" trolley base or mounting—that is to say, one which projects but a slight distance above the roof of the car, so that the latter may pass under bridges and other overhead structures where there is but little clearance room between the structure and the car. It is also designed to provide novel spring means for maintaining upward pressure of the pole or arm, together with means whereby the tension of the spring or springs may be readily adjusted.

With these objects in view my invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved base or mounting with a portion of the pole. Fig. 2 is a plan view of the same; Fig. 3, a detail view of one of the springs, and Fig. 4 a side view showing a modification.

The letter A designates a plate or support which is rigidly secured to the roof of the car and is formed with a circular socket to receive a circular boss *b* on the under side of a swivel member B. The boss *b* is fitted to turn loosely but neatly in the said socket and is retained therein by means of cylindrical pins C, which engage coincident grooves *c* in the periphery of the boss and the wall of the socket. Any other suitable means of swivel connection between the members A and B may, however, be employed.

D designates the trolley arm or pole, whose lower end is secured in a socket-piece D', piv-

oted upon a transverse pin E, seated in suitable lugs or flanges E', rising from the member B.

F F designate two similar springs, each of which is made, preferably, from a single piece of wire formed near each end portion into a helical coil, the two coils having a common axis about which they are wound from the outer ends toward the center, the two end portions of the wire from the respective coils being extended to form the parallel adjacent arms *f*. The intermediate portion of the wire, leaving the respective coils from the under side of their outer ends, is bent into the bail form *f'*. One of these springs is placed upon each side of the lower end of the pole D, its coils being seated upon a transverse pin or bolt G, secured in the lugs E'. The arms *f* are turned upwardly into engagement with a bearing rib or projection on adjacent sides of the piece D, and the bail portions *f'* lie horizontally upon the top of the member B. It will be readily seen that downward movement of the trolley-arm in either direction will put the corresponding spring F under torsion. For the purpose of adjusting the tension of said springs I provide wedges P, which are inserted under the bails *f'* to a greater or less extent. The upper faces of the wedges are preferably provided with a series of grooves *p*, designed to seat the transverse arms of the bails in different adjustments of the wedges. Instead of forming the two coils of each spring from a single piece of wire it is obvious that they may be formed separately and be provided with separate adjusting-wedges.

In the modification shown in Fig. 4 there is but one spring F, the action being single instead of double. Cushion springs or buffers S are provided to check and relieve the impact of the pole when the wheel leaves the wire.

Inasmuch as the coils of the spring or springs F may be of comparatively-small diameter, it will be readily seen that the base need project but slightly above the roof of the car.

I do not wish to be limited to non-essential details of construction, as these may be

changed considerably without affecting my invention or departing from its spirit and scope.

Having thus described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In a trolley, the combination with a pivoted trolley arm or pole, and a member to which it is pivoted, of a torsion-spring having an arm extending from one end of its coil and bearing upwardly against the arm or pole, an arm extending from the opposite end of its coil and bearing downwardly against the said member, and an adjusting-wedge seated between the said member and the last-named arm.

2. In a trolley, the combination with a base member, and a pole pivoted thereto, of a torsion-spring having two coils wound from opposite ends about a common axis, arms extending from the inner ends of the said coils and bearing upwardly against the said pole, and a bail portion connecting the outer ends

of said coils, together with an adjusting-wedge interposed between the said bail portion and the base member and provided with a series of grooves to seat an arm of said bail portion.

3. In a trolley the combination with a base member, and a pole pivoted thereto, of a torsion-spring having two coils wound from opposite ends about a common axis, arms extending from one end of the said coils, and bearing upwardly against the pole, a horizontally-extending bail portion connecting the other ends of the two coils, and an adjusting device upon which said bail portion has a downward bearing, substantially as described.

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

HENRY S. GOUGHNOUR.

Witnesses:

MYRTLE E. SHARPE,
H. W. SMITH.