

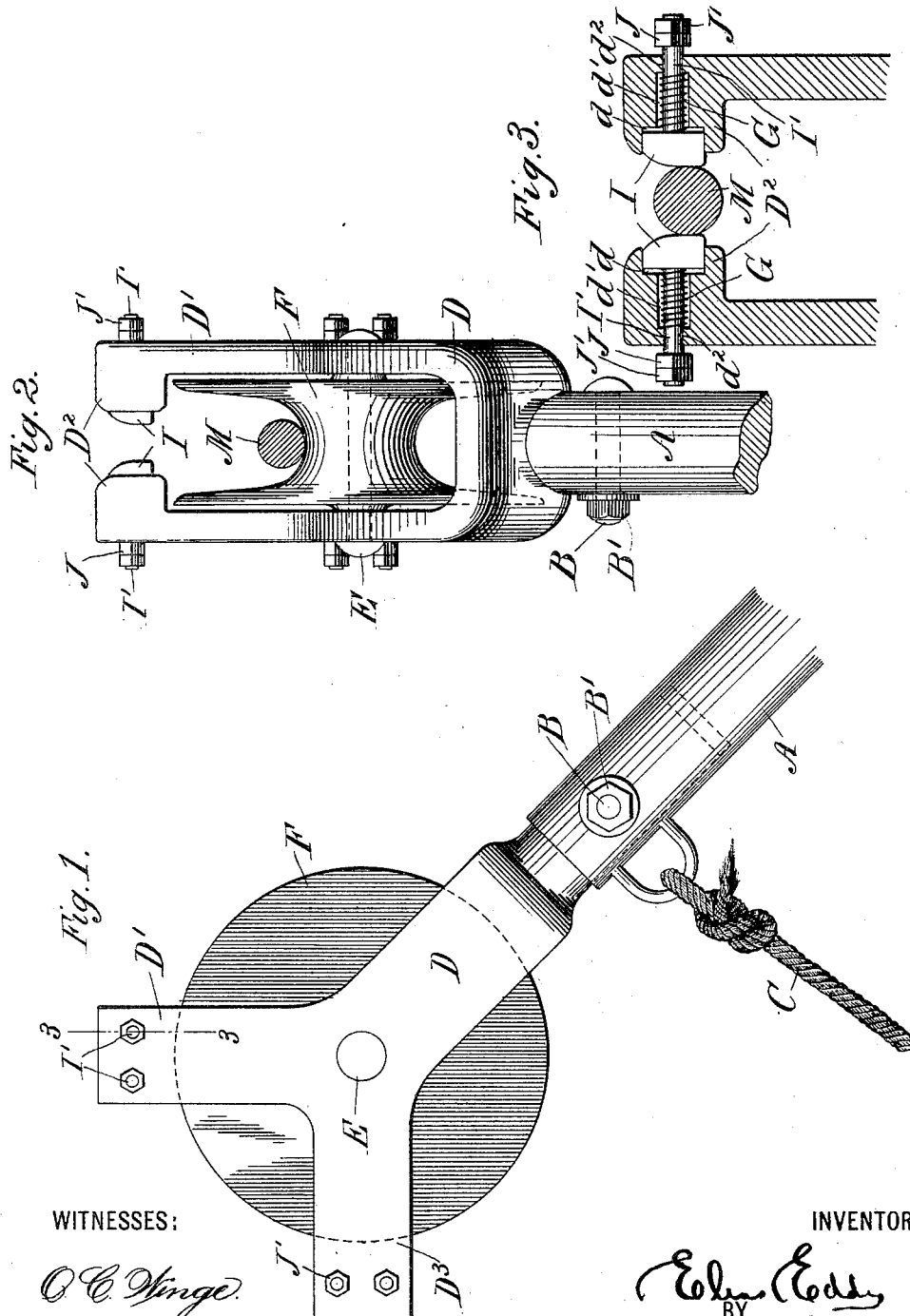
No. 647,624.

Patented Apr. 17, 1900.

E. EDDY.
TROLLEY FORK.

(Application filed Aug. 9, 1899.)

(No Model.)



WITNESSES:

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ELIAS EDDY, OF NEW YORK, N. Y.

TROLLEY-FORK.

SPECIFICATION forming part of Letters Patent No. 647,624, dated April 17, 1900.

Application filed August 9, 1899. Serial No. 726,633. (No model.)

To all whom it may concern:

Be it known that I, ELIAS EDDY, a citizen of the United States, residing in the borough of Bronx, in the city and State of New York, have invented a certain new and useful Improvement in Trolley-Forks, of which the following is a specification.

My fork retains the hold of the trolley upon the wire against the vibratory force to which it is subjected.

I can make the device single, but prefer to make it double, so as to allow it to be turned and used again successively when a part has been incapacitated from any cause, as by wear or fracture.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation, and Fig. 2 a front view. Fig. 3 is on a larger scale. It is a section on the line 3 3 in Fig. 1.

Similar letters of reference indicate like parts in all the figures where they appear.

A is a trolley-pole, and B B' an ordinary bolt and nut. These parts may be of the usual construction.

D is the shank of the fork-piece, and D D' are forks forged or otherwise formed integral therewith and carrying the bolt E, on which turns the trolley-wheel F, which receives the trolley-wire M in the ordinary manner.

The ends of the forks are peculiar. Each is formed with an offset D² on the inner face. The faces of these offsets lie so near each other as to leave but a little excess beyond the thickness of the trolley-wire, which they are required to take in and let out at intervals. In the inner face of each of these offsets D² is a deep rectangular recess *d*. In the bottom of each of these recesses are two holes *d'*, extending nearly through to the outer face of the fork. Beyond each a smaller hole extends, as indicated by *d*². Helical springs G are inserted in the large portions *d'* of the holes.

I I are cheek-pieces fitted in the recesses *d* and provided each with pins I', formed integral with the cheek-pieces and coinciding in position with and extending through the respective holes *d'*. The outer end of each of these pins carries a nut and jam-nut J J'.

The tension of the springs G urges the cheek-pieces I inward toward each other; but their motion is restrained by the nut and jam-nut J J'. The position at which it rests may be adjusted by turning the nut and jam-nut. These parts should be set so that the inner faces of the pieces I are a little nearer together than the diameter of the trolley-wire.

The trolley-pole, with its attachments, is depressed in the ordinary manner by a cord C, operated by the conductor, as required. The trolley-pole may be urged upward by a spring of the ordinary tension. When the operator slackens the cord C and allows the pole to rise, making several efforts, if necessary, in order to catch the wire correctly between the forks, the forks rise past the wire, the cheek-pieces I being allowed to move apart by the yielding of the springs G. So soon as they have passed the wire the springs assert themselves and move the cheek-pieces promptly inward.

The fork works in all respects like the ordinary one, the space within the fork below the offsets D² allowing the passage of any irregularities and splices in the wire. The trolley can only be pulled down to get it clear from the wire when a smooth continuous part of the wire is reached. Then on pulling down vigorously on the cord C the wire is again received between the cheek-pieces I I with such force as to again move them outward against the tension of their springs G and allow the wire to pass.

When my fork is in use and the device is moved under inequalities in the wire or any other condition obtains which tends to throw the trolley-pole and its connections downward, the under side of the offsets D² are likely to strike the wire and arrest the descent. A slight inclination of the trolley-pole to one side or the other will cause one offset or the other to engage on the wire. In case it shall be thrown directly downward the wire will be received between the cheeks I I; but unless the downward motion is very strong it will be arrested by being gripped between these cheeks. When the conductor pulls on the cord C with a continuous tension, he can without severe effort move the forks down past the wire; but the success of the movement depends on the continuity of the

effort. When the trolley-pole is thrown down by any vibrating action, the effect is so brief that my device will usually retain the grip thereon, and when the force of the vibration is spent the pole rises again to bring the wheel F again into proper contact.

The forks D' D' are set at an angle to the shank D, so that the forks are upright when the trolley-pole is at its usual angle for working. I provide an additional pair of forks D³ D³, corresponding in all respects to these except that they extend at the same angle below instead of above the inclined line of the axis of the shank. These latter forks are of no service so long as they are in their present position; but when through any cause it becomes desirable to change and use the forks which are now extending downward this may be effected by simply removing the nut B', withdrawing the bolt B, turning the shank half around, and again securing it. This reverses the arrangement, so that the forks previously in use are inclined downward and the forks previously idle are now in the erect position and can serve successfully in the same manner as before described.

The upper faces of the offsets D² and also the upper corners of the cheek-pieces I are beveled inward. This aids in guiding the fork when it is being allowed to rise into engagement with the wire. I avoid any corresponding bevel on the under side to make the restraining effect of the offsets as great as may be. It is rarely difficult for the operator to detach the device by a continuous downward pull, aided, if necessary, by a little shaking motion of the rope C.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention.

Parts of the invention can be used without the whole.

I can dispense with the additional forks D³, and in such case the device will be cheaper and lighter; but there will be no reserve fork to serve in emergencies.

I claim as my invention—

1. A trolley-fork provided with rigid internal offsets D², in combination with cheek-pieces I loosely fitted and movable laterally therein, and springs G acting on such pieces, all arranged to serve substantially as herein specified.

2. A trolley-fork provided with internal offsets D², in combination with cheek-pieces I loosely fitted therein, and springs G acting on such pieces, and with pins I' and nuts J adapted to adjustably limit the approach of the cheek-pieces together, all arranged for joint operation substantially as herein specified.

3. A trolley-head comprising two pairs of forks D' D', D³ D³, located at an angle with respect to each other, and a trolley-wheel F mounted at the intersection of said two pairs of forks to serve in connection with either, substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

ELIAS EDDY.

Witnesses:

J. B. CLAUTICE,
M. F. BOYLE.