(No Model.)

W. H. CARR.

TROLLEY HEAD.

No. 555,674. Patented Mar. 3, 1896.

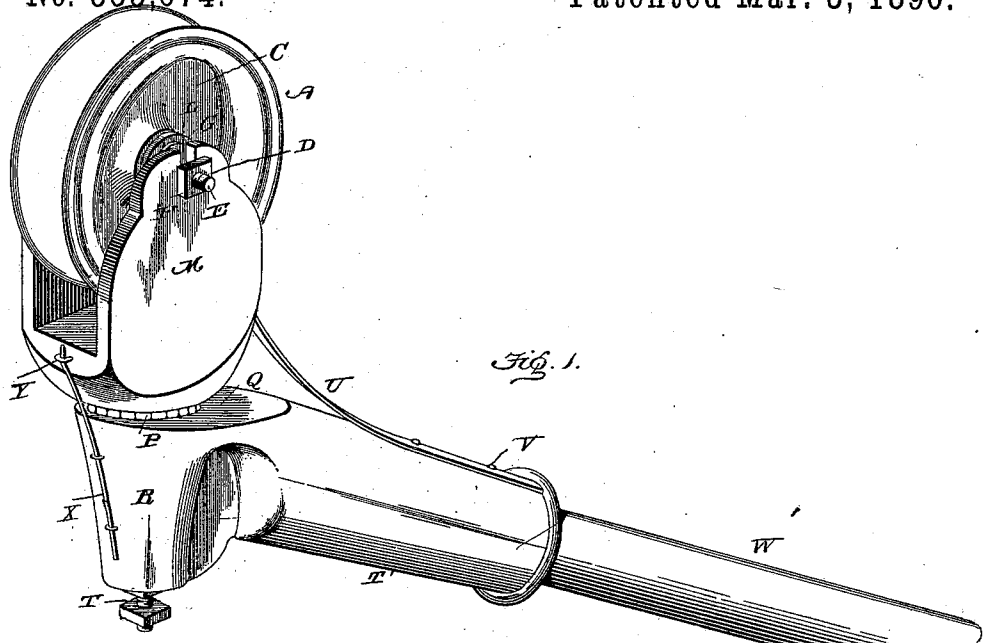

Fig. 1.

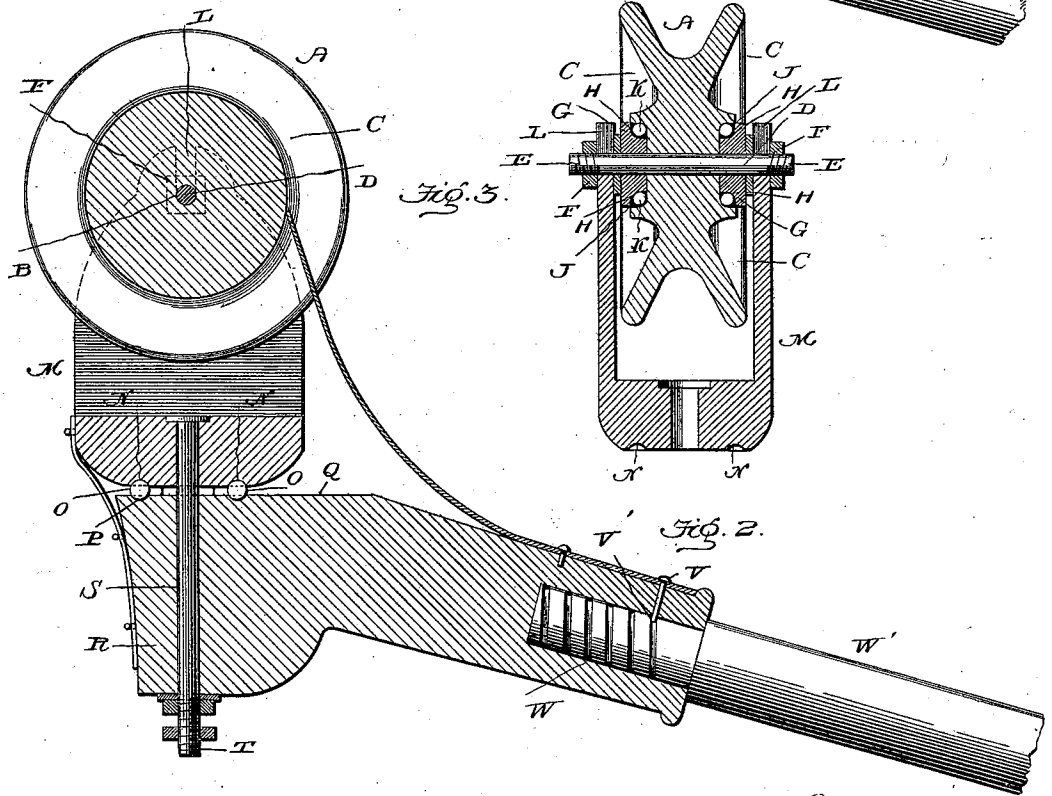

Fig. 2.

Fig. 3.

Witnesses:
Wm. H. Cashiell
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Inventor;
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Atty.

UNITED STATES PATENT OFFICE.

WARREN H. CARR, OF BATH, MAINE, ASSIGNOR OF FIVE-EIGHTHS TO WILLIAM L. WHITE, ALBERT H. SHAW, AND CHARLES R. DAWNELL, OF SAME PLACE.

TROLLEY-HEAD.

SPECIFICATION forming part of Letters Patent No. 555,674, dated March 3, 1896.

Application filed October 15, 1895. Serial No. 565,711. (No model.)

To all whom it may concern:

Be it known that I, WARREN H. CARR, a citizen of the United States, residing at Bath, in the county of Sagadahoc and State of Maine, have invented certain new and useful Improvements in Trolley-Heads; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in trolley-heads; and the object of my invention is the provision of a head of simple and inexpensive construction which will insure an easy and smooth running of the trolley-wheel and also cause the wheel with its frame to turn easily around curves in the conductor and thus insure an easy running and thoroughly practical device of this character.

To attain the desired objects the invention consists of a trolley-head embodying novel features of construction and combination of parts, substantially as disclosed herein.

Figure 1 represents a perspective view of my improved trolley-head. Fig. 2 represents a vertical longitudinal sectional view, and Fig. 3 represents a vertical transverse section.

In the accompanying drawings, the letter A designates the trolley-wheel provided with the central opening B and the annular channels or grooves C, and in said central opening fits the axle or shaft D, having the threaded ends E to receive the adjusting and securing nuts F, and on the ends of said shaft fit the caps G, having the curved rim H, which, in connection with the recesses or grooves of the trolley-wheel, form a cone-bearing J to receive the balls K, thus forming for the trolley-wheel a perfect ball-bearing, and insuring a perfect running of the wheel or trolley. The ends of the shaft which extend beyond the trolley-wheel are mounted in the open bearings L of the trolley carrier or frame M, which has its lower portion made perfectly flat and provided with an annular groove or channel N, in which fits the ball-bearing O, and said ball-bearings also rest in a groove P, formed on the platform Q of the ferrule R, which is formed with a central opening S, which receives the stem T of the trolley-carrier.

From this construction it will be seen that the spool or ferrule which has the upper flat portion is in a perfectly straight or vertical line with reference to the trolley carrier or frame and that the upper portion of the ferrule is flat and thus a perfect bearing between the carrier and ferrule is provided, and furthermore the trolley-wheel being arranged in a vertical plane also bears reliably at all times upon the conductor.

Formed integral with the spool or ferrule and at an angle or incline with reference thereto is the socket-piece T′, to which is connected the plate U, which prevents undue or improper movement of the trolley-wheel, and the fastening V of said plate passes into the socket and forms a rib V′, which receives the thread W on the reduced end of the trolley arm or rod W′, and thus makes a secure fastening between the socket and said trolley rod or arm. To the forward portion of the ferrule is connected the lower end of the spring-arm X, the upper end whereof engages the loop or eye Y, attached to the front portion of the trolley-wheel carrier or frame. The purpose of this spring-arm is to prevent wabbling or improper movement of the trolley-wheel as it moves along over the conductor.

From the foregoing description taken in connection with the drawings it is evident that I provide a trolley-head in which the trolley has a perfect vertical bearing and also by reason of the ball-bearings between the wheel and frame and the frame and ferrule all friction is avoided and a smooth and easy motion of the conductor is assured. It will also be understood that the angle of the socket-piece and the vertical arrangement of the ferrule and trolley-carrier with reference thereto makes a reliable bearing of the trolley-wheel on the conductor and the spring-arm prevents wabbling of the trolley frame or carrier and the plate connected to the socket-piece prevents the trolley from leaving the conductor.

I claim—

The combination of the rod having the threaded end, the head having the socket to receive said end, the flat flexible plate secured to said head and having one of the securing-bolts engaging the threads in the end of the rod, the trolley-carrier pivoted on said head, ball-bearings between the head and carrier, the trolley mounted in the carrier, the ball-bearings for said trolley, and the spring having one end connected rigidly to the front of the head and the other end loosely engaging the front of the trolley-carrier.

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

WARREN H. CARR.

Witnesses:
WM. D. MUSSENDEN,
O. B. MUSSENDEN.