No. 797,669. PATENTED AUG. 22, 1905.

H. DEMS.

TROLLEY WIRE REPAIR DEVICE.

APPLICATION FILED NOV. 11, 1904.

Fig. 1.

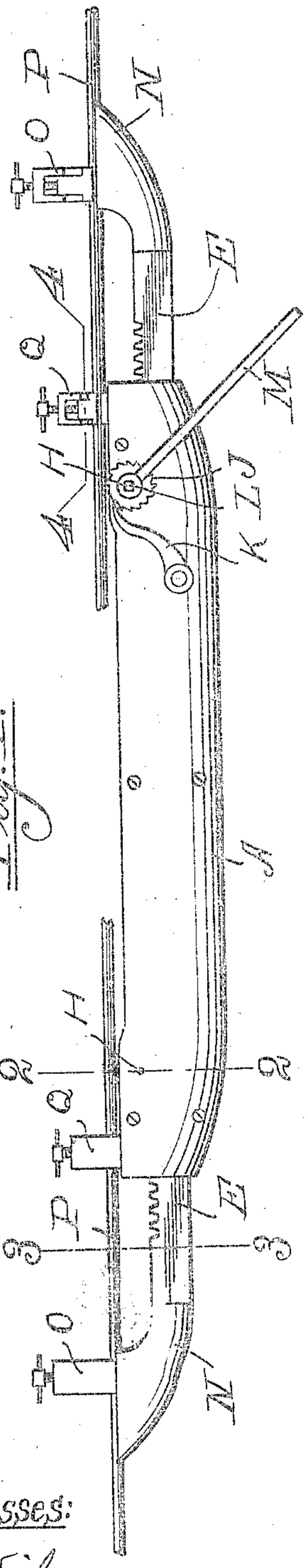


Fig. 4.

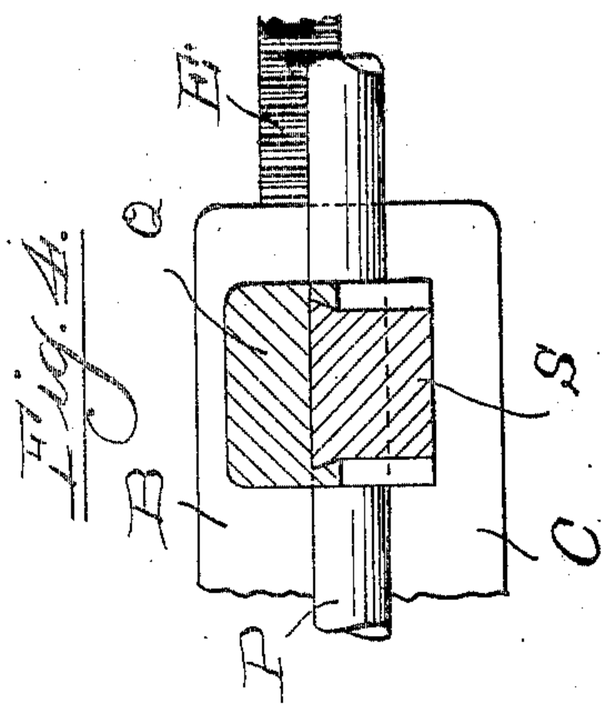


Fig. 3.

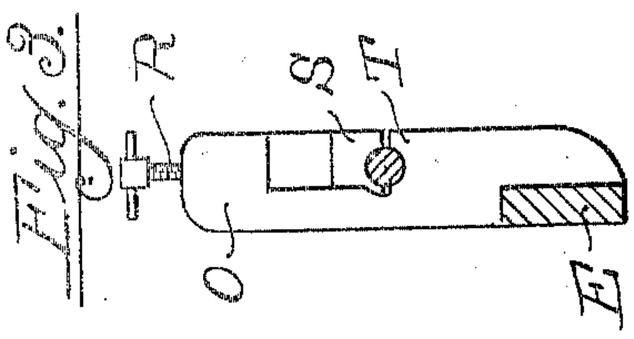
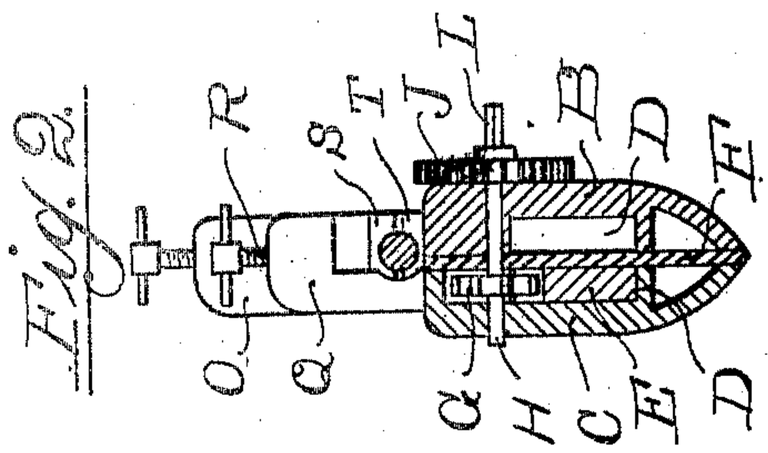


Fig. 2.



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HERMANN DEMS, OF CHICAGO, ILLINOIS.

TROLLEY-WIRE-REPAIR DEVICE.

No. 797,669. Specification of Letters Patent. Patented Aug. 22, 1905.

Application filed November 11, 1904. Serial No. 232,299.

To all whom it may concern:

Be it known that I, HERMANN DEMS, a citizen of Germany, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trolley-Wire-Repair Devices; 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 a novel construction in a device adapted for use in repairing trolley-wires and which is particularly adapted to remain fixed to a broken wire as a temporary repair until the wrecking-crew can reach the point at which the break occurs and repair the same, the object being to provide a simple and efficient device of this character; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure is a side elevation of a repair device constructed in accordance with my invention. Fig. 2 is a vertical transverse section of same on the line 2 2 of Fig. 1. Fig. 3 is a vertical transverse section on the line 3 3 of Fig. 1. Fig. 4 is a detail horizontal section on the line 4 4 of Fig. 1 on an enlarged scale.

My said device comprises a member A, which is composed of two plates or bars B and C, each of which is provided in its inner face with a longitudinal groove or recess D, in which a rack-bar E is adapted to be received and is longitudinally movable. Between said members or bars B and C a plate F is interposed, which serves to isolate said recesses from each other and to form a bearing-plate for the inner faces of said rack-bars E. Mounted in each of said recesses adjacent one end of the bar is a pinion G, which is rigidly mounted on a transversely-disposed shaft H, passing through both of said plates B and C and which at one of its outer ends carries a ratchet-wheel J, adapted to be engaged by a pawl K, pivotally mounted on each of said plates or bars adjacent one end thereof. The extreme outer end of said shaft H is squared, as at L, to receive a wrench M, by means of which said shaft is turned to impart longitudinal movement to said rack-bars E. The said plates or bars B and C are bolted or otherwise secured together and on their lower edges are slightly curved so as to terminate in a V-shaped convex edge, over which the trolley-wheel is adapted to travel. The extreme outer ends of said rack-bars E are enlarged to provide an upwardly-extending projection N, on which is mounted a suitable clamping device or vise O to engage one end of the wire P. On the upper edge of each of said bars B and C and at opposite ends of the member A, I also provide a vise Q, which is likewise adapted to receive and engage one end of the broken wire. The said vises O and Q each comprise a vertically-disposed standard or guide member, in the overhanging upper end portion of which a set-screw R is mounted, which bears upon a vertically-movable block or shoe S, mounted in guides in said standard and which coacts with a block T to receive and engage the wire, each of said members S and T being provided with a semicircular groove to receive said wire. The said projections N of said rack-bars E are relatively offset so as to bring the vises or clamping members O and Q in perfect alinement with each other.

The operation of my device is as follows: The said device is designed to be carried on the trolley-cars to enable the crews to make temporary repairs without waiting or relying on the wrecking crew, and thus wasting a great deal of very valuable time. When the break occurs, members of the crew ascend to the roof of the car and by means of any suitable device first secure hold of one end of the broken trolley-wire and clamp the same in one of said vises or clamping devices O, the rack carrying same having been previously moved to the outer limit of its movement. The other rack-bar E is then likewise moved to the outer limit of its movement and both the pawls K thrown into engagement with the ratchet-wheels J to prevent such rack-bars from being entirely pulled out of said member A. When thus extended, my said device covers considerable length, and by then engaging the other end of the broken wire and clamping same in the vise O of the second rack-bar the said rack-bars may obviously be drawn to the inner limits of their movement and the ends of the wire thus brought closer together. It is obviously desirable that the wire should be stretched so that it will not sag, as this renders the passage of the car more difficult. Hence when both ends of said wire have been brought together as close as possible by the rack-bars E the ends thereof are secured in said vises Q and clamped therein. The vises O are then released and the rack-

bars E again moved toward the outer limit of their movement and the wire again clamped in said vises O and then released from said vises Q and the rack-bars then again moved toward the inner limits of their movement. This operation is repeated until the trolley-wire has attained the desired tension. Then it is preferably firmly engaged by both sets of vises O and Q, and the said member A is thus firmly mounted thereon and remains a part of the trolley-wire temporarily. The wire can thus be temporarily repaired with great ease and rapidity, and thus long delays which are a source of great inconvenience to passengers and loss to traction companies avoided.

I claim as my invention—

1. A device of the kind specified comprising in combination a member provided with two parallel longitudinal passages, a rack-bar movable longitudinally in each of said passages, and carrying at its ends clamping devices for engaging the ends of the wires to be joined, crank-shafts journaled in said member and carrying pinions engaging said rack-bars, ratchet-wheels on said cranks, pawls on said member engaging same, and clamping devices at the ends of said member adapted to receive the ends of the wires as the same are brought together, said last-named clamping devices being so disposed that the extreme ends of the wires may be joined between the same.

2. A device of the kind specified comprising in combination a member having two parallel longitudinal passages and curved at the ends of its lower edge, rack-bars movable in said passages and having curved upwardly-offset ends, clamping devices carried on the upper portions of said offset ends, clamping devices on the ends of said member in alinement with said clamping devices on said rack-bars, crank-shafts journaled in said member and carrying gear-pinions meshing with said rack-bars, ratchet-wheels on said crank-shafts and pawls on said member adapted to engage said ratchet-wheels.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

HERMANN DEMS.

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