

(No Model.)

G. E. DRAPER.
RAILWAY SWITCH.

No. 497,913.

Patented May 23, 1893.

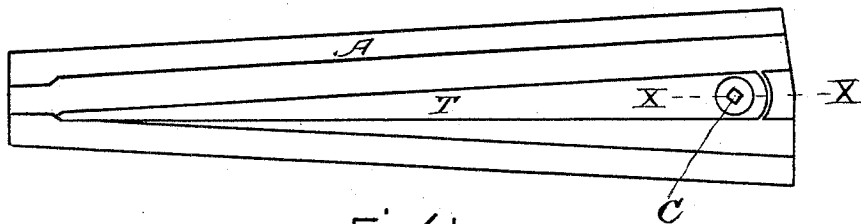


Fig. 1.

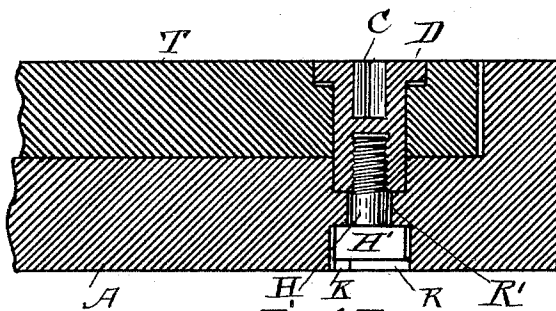


Fig. 2.

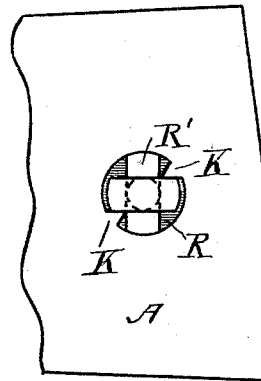


Fig. 3.

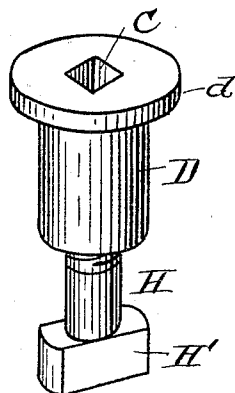


Fig. 4.

WITNESSES
Edward S. Day
Frank H. Parker.

INVENTOR
George E. Draper

UNITED STATES PATENT OFFICE.

GEORGE E. DRAPER, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO CHARLES W. HAWES, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 497,913, dated May 23, 1893.

Application filed December 12, 1892. Serial No. 454,931. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. DRAPER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Street-Railway Switches, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to a method of connecting the tongue of a street railway switch to the base piece. Heretofore the tongue has been connected to the base piece by a pivot-bolt, fastened upon the under side in such a manner that the tongue, when worn or injured so as to become unserviceable, could not be taken out, except by taking up the entire switch.

The object of my invention is to so construct the pivot bolt that it can be readily removed, and the tongue taken up or replaced without disturbing the switch base. This object I attain by means of the mechanism shown in the accompanying drawings, in which—

Figure 1 is a plan of a switch having my improved pivot-bolt. Fig. 2 is a vertical section taken on line $x-x$ of Fig. 1. Fig. 3 is a view from the under side, showing the lower end of the pivot-bolt, and the recess made in the under side of the base piece for its reception. Fig. 4 is a perspective view, showing the pivot-bolt.

I have represented the base or body of the switch by A in the drawings, and the tongue by T. The base and tongue may be made in any required style and dimensions; my invention relates to the pivot-bolt only.

The pivot-bolt D, H, is shown in full in Fig. 4. The upper part consists of a cylindrical part which forms the body, and a flange part d . For convenience in turning it, a square hole is made at C. The lower part consists of the cross-headed screw H, the head H' being

formed as shown, and adapted to fit into the recess R (see Figs. 2 and 3). This recess is made in the under side of the base piece, and is circular, except that it has inwardly projecting buttresses K, K, against which the ends of the head of the screw H rest, and thus prevent it from turning around. The hole through the base A is made in the form shown at R', Fig. 3, so that when the cross-head of the screw H is turned in the right direction, it will pass through the base of the switch, and thus admit of the removing of the bolt and also of the tongue, but when the head is turned crosswise of the opening R', then it is held, and cannot be rotated, as it is checked by the buttresses K, K.

To remove a tongue, the user may turn the bolt backward, thus loosening the screw H, when it will turn until its position corresponds with that of the opening R; then the entire pivot-bolt may be drawn out, thus freeing the tongue, which may be repaired and replaced, or a new tongue may be substituted for it. If for any reason the pivot-bolt is injured or worn, it may be replaced without taking up the base of the switch, or in case it becomes loose, it can readily be tightened or adjusted.

I claim—

In a switch, the combination of the switch tongue T and the detachable bolt D: with the cross headed screw H H' adapted to fit the recess R, the recess R having buttresses K K as described, and the body A of the switch, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of December, A. D. 1892.

GEORGE E. DRAPER.

Witnesses:

FRANK G. PARKER,
EDWARD S. DAY.