(No Model.)

T. C. PAULSEN.

RAIL CONNECTION.

No. 517,884. Patented Apr. 10, 1894.

Fig. 1.

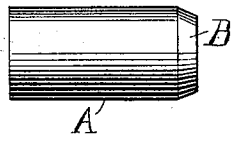


Fig. 2.

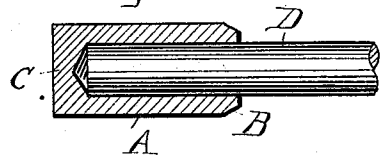


Fig. 3.

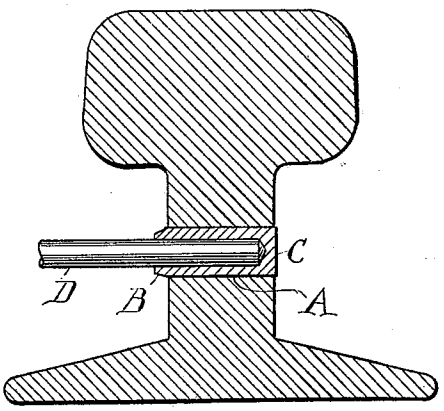


Fig. 4.

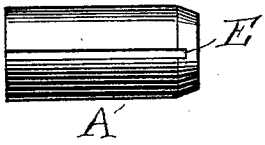
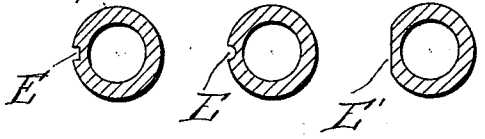


Fig. 5. Fig. 6. Fig. 7.



WITNESSES

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RAIL CONNECTION.

SPECIFICATION forming part of Letters Patent No. 517,884, dated April 10, 1894.

Application filed December 29, 1893. Serial No. 495,081. (No model.)

To all whom it may concern:

Be it known that I, THEODORE C. PAULSEN, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Rail Connections, of which the following is a specification.

My invention relates to rail connections, and has for its object the production of an improved device by which the rails are electrically connected, or by which any large and small conductor may be connected together.

Referring to the accompanying drawings, Figure 1 is a view of my device. Fig. 2 is a longitudinal section of same. Fig. 3 is a cross section of a rail with connector in position. Figs. 4, 5, 6, and 7 are views of the same with modifications which may not always be used.

Like letters refer to like parts throughout the several figures.

Fig. 1 is a view of my connector which consists of the hollow cap A, preferably of wrought iron, turned down for a short distance at the open end, so as to form the conical shaped part B.

Fig. 2 is a longitudinal section through my device with conductor D in position. It will be noticed that the hole in the cap A ends up at the solid end C, so as to make the hole conical shaped for a short portion of its length. This allows the conductor D room for expansion when it is compressed by the cap A. The solid end C of the cap presents a good surface to the hammer for driving, and prevents the connector from being injured as is the case when they are made in the usual way, viz., as a hollow tube. Since one end of the cap A is closed, there is less chance of any dirt or foreign substance getting in so as to lessen the efficiency of the connection.

Fig. 3 shows the connector in position.

Figs. 4, 5, 6 and 7 are different views of modifications in detail. Such modifications are used when the metal in the cap is comparatively thick, and the device is the same as Fig. 1 with the addition of a groove E or flattened portion E′ to weaken the metal so it will clamp the conductor D. This groove only extends partially through the metal of the cap. Instead of the groove the flattened cap may be used.

It is evident that the device may be somewhat altered in shape and construction without departing from the spirit of my invention, and I therefore do not wish to be limited to the exact construction shown.

The use and operation of my device is as follows: If it is desired to connect two rails or other heavy conductors together, a hole is bored in each and a cap A with the conductor D in position is driven in each hole. The conical end B is made short so that the cap can be started and as the cap is driven in the metal gives way toward the center, and clamps the conductor D. The hole in the rail is made a little smaller than the cap. A, and the conductor D just fits into the hole in said cap. I have found that when these conditions are fulfilled, and the thickness of the metal of the cap is not over say one-sixteenth of an inch, a perfect and durable connection is made. The solid end of the cap prevents it from being injured in the driving, and keeps out the dirt and other foreign substances.

If it is desirable to use large caps in which the metal is comparatively thick, they can be weakened by the grooves E or the flat portion E′ as described.

I claim—

1. The combination of two large conductors having holes therethrough with caps closed at one end and a wire having one end inserted into each cap, whereby when said caps are driven into said holes, said conductors will be electrically connected together, substantially as described.

2. The combination in an electrical connection of two rails with holes therethrough, caps inserted in such holes, said caps closed at one end and provided with a groove extending only part way through the metal, and a wire having one end in each of said caps, substantially as described.

3. The combination in a rail connector of two caps closed at one end, with a wire having one end inserted into the opening of each cap, said caps having the metal partially cut away on one side substantially as described.

THEODORE C. PAULSEN.

Witnesses:
WALTER J. GUNTHORP,
JNO. H. COULTER.