

No. 751,195.

PATENTED FEB. 2, 1904.

J. W. NELSON.
RIVETING TOOL.
APPLICATION FILED JULY 2, 1903.

NO MODEL.

Fig. 1,

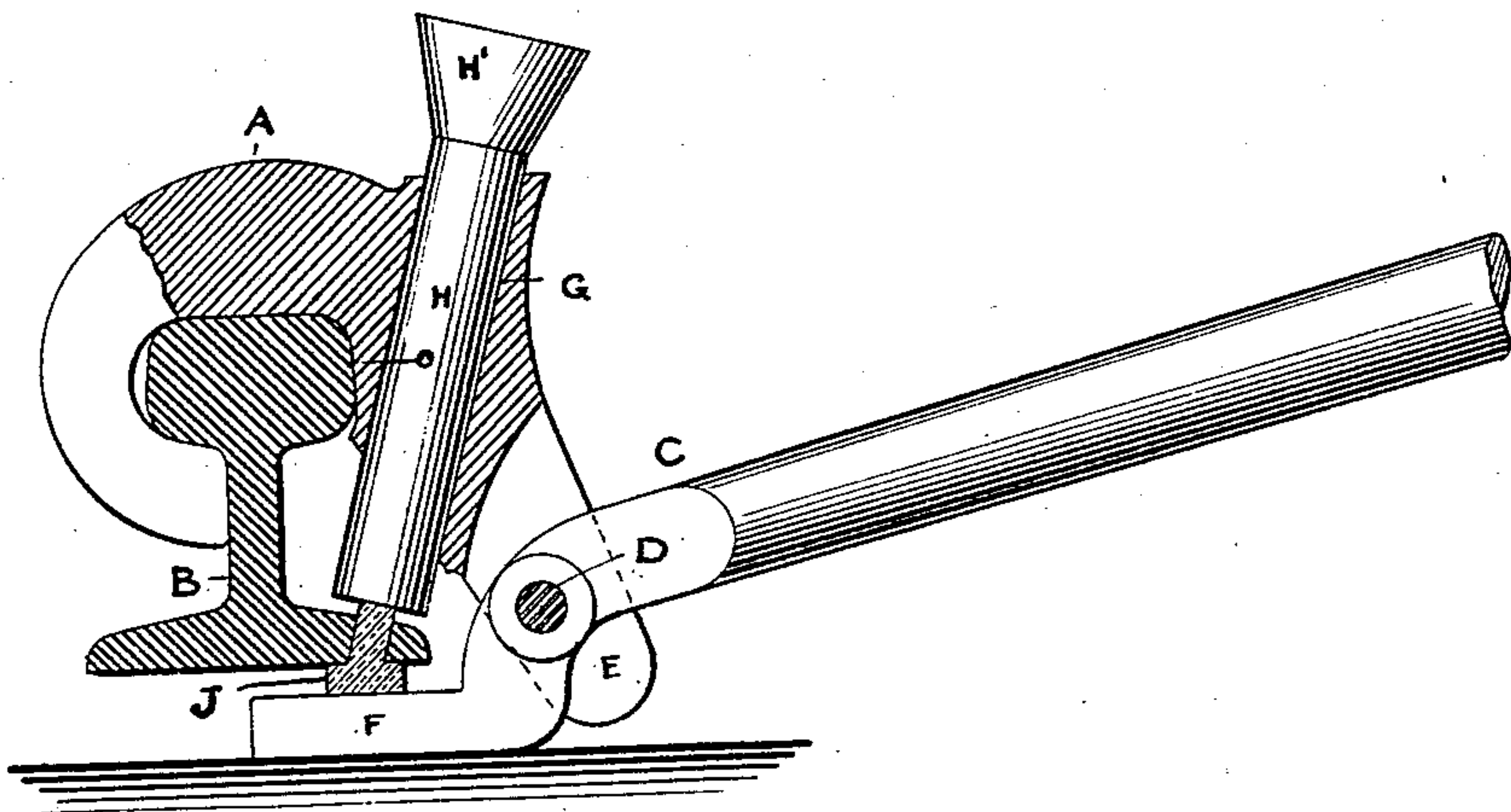
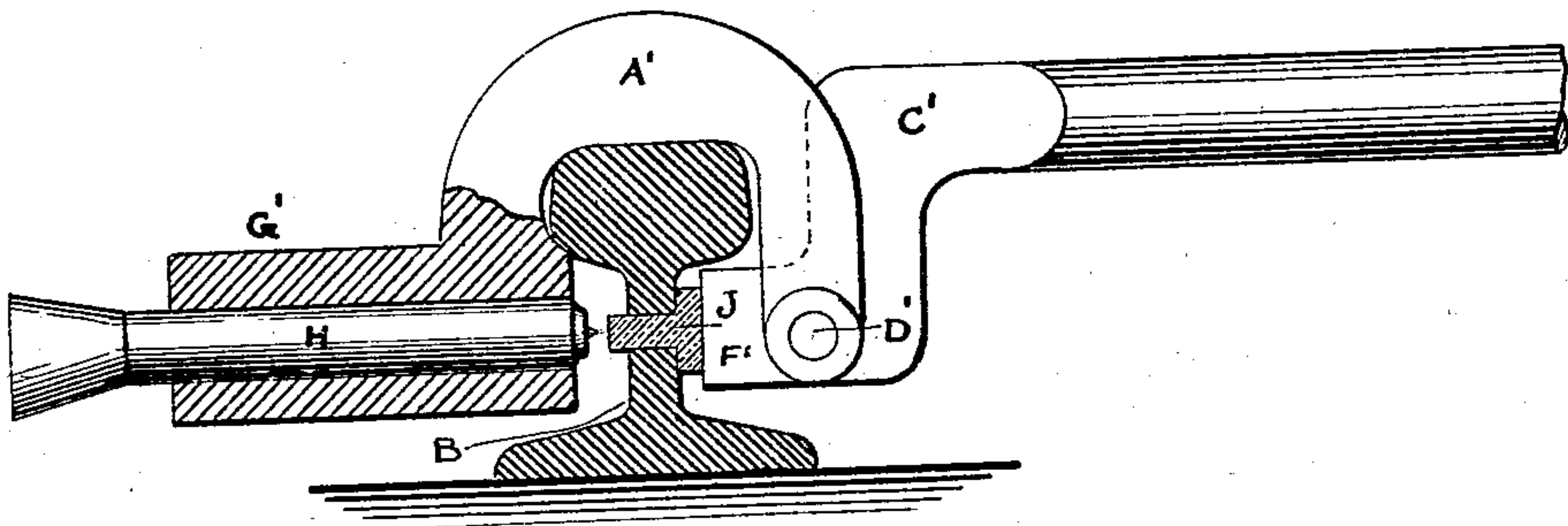


Fig. 2,



WITNESSES:
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UNITED STATES PATENT OFFICE.

JAMES W. NELSON, OF NEW YORK, N. Y.

RIVETING-TOOL.

SPECIFICATION forming part of Letters Patent No. 751,195, dated February 2, 1904.

Application filed July 2, 1903. Serial No. 164,010. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. NELSON, a citizen of the United States, residing at the city of New York, borough of Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Riveting-Tools, of which the following is a specification.

This invention relates to improvements in riveting-tools, and especially to riveting-tools which are to be used for riveting the rail-bonds of electric railways to the rails.

The object of my invention is to provide a new and improved riveting-tool which is simple in construction, can easily be conveyed from place to place, readily applied to rails for riveting a bond-rivet through the base-flange or web and does not contain any complicated machinery apt to get out of order.

In the accompanying drawings, in which like letters of reference indicate like parts in both figures, Figure 1 is a vertical sectional view through one construction of my improved riveting-tool as applied on a rail for upsetting a bond-rivet in the base of the rail. Fig. 2 is a similar view showing the device as constructed and applied on a rail for upsetting a bond-rivet in the web of the rail.

The riveting-tool is provided with a metal frame or block A, adapted to hook on, clamp, or otherwise engage the head of the rail B. As shown in Fig. 1, the frame A is provided with a hook adapted to engage the rail-head at one side and underneath, the main body of the frame resting upon the head of the rail. That end of the frame opposite to the one provided with the hook is forked or otherwise shaped to form or support a fulcrum point for a pivoted anvil-lever C. This lever C, as shown in Fig. 1, is pivoted by a pivot D in the forked portion E of the frame A, and the lever is so extended beyond the pivot D that its anvil part F is beneath the base of the rail B.

In the frame A an opening G is formed which serves to guide a punch H, projecting both from the upper and lower end of this opening, and preferably having a head H' formed on its upper end. The rail is provided with drilled or punched holes in its base for receiving the bond-rivets J, which are made of malleable metal, preferably copper,

and are attached to the bonds. These bond-rivets are provided with a head and are inserted from the bottom through the openings in the base of the rail, so that the upper ends of the shanks or stems of these rivets project from the upper surface of the rail-base. The frame A is hooked on the rail in the manner shown, the anvil F passing beneath the head of the rivet J. By exerting a downward pressure on the outer end of the anvil-lever the rivet is held securely in place by the anvil F, and the lower end of the punch H rests upon that end of the rivet projecting beyond the upper surface of the base.

By means of a hammer or a pneumatic tool or any other suitable implement blows are delivered on the upper end of the punch H, whereby the projecting upper end of the rivet-stem is flattened out, so as to form a head on the upper surface of the rail-base and whereby the rivet is secured firmly in the rail-base. The lower end of the punch can be recessed or shaped according to the desired shape of the head to be formed.

When the rivet J is to be secured in the web of the rail, the frame A' is made substantially U-shaped and is so applied on the rail as to rest on the head and against part of the under side of the head. The anvil-lever C' is also pivoted to one end of the frame, and on the end of this anvil-lever the anvil F' is formed. The pivot D' is so arranged in relation to the anvil that the end of the anvil is at the side of the web of the rail. That end of the frame A' opposite the one to which the anvil-lever is pivoted is provided with a lateral extension G', in which the punch is guided to move horizontally toward the side of the web. To secure a bond-rivet in place, the rivet is inserted, and the frame is applied in the manner shown in Fig. 2. The outer end of the anvil-lever C' is pressed down, so as to press the anvil F' against the head of the rivet, the free end of the stem of the rivet projecting from the opposite side of the web. Then the free end of the rivet shank or stem is spread or upset or shaped into a head by delivering blows on the punch in the manner previously described.

The above-described tool can be readily ap-

plied on a rail at the proper place, and by means of it the bond-rivet can be rapidly provided with a head for securing it in place. Bond-rivets can be secured in the lateral flange
5 of a rail in the same manner as in the base.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 1. In a riveting-tool, the combination with a frame shaped to engage a railway-rail or conductor-rail, of an anvil-lever pivoted to said frame, an anvil formed on one end of said lever and a punch mounted in said frame movable toward the anvil, substantially as set forth.

15 2. In a riveting-machine, the combination with a frame shaped to rest on the head of a

railway-rail or conductor-rail and to engage the under side of said head, a lever pivoted to said frame, with one end extending beneath said frame, an anvil on said end of the lever, 20 the frame being provided with a punch-guide and a punch mounted in said frame to move toward and from the anvil, substantially as set forth.

In testimony whereof I have signed my name 25 to this specification, in the presence of two subscribing witnesses, this 30th day of June, 1903.

JAMES W. NELSON.

Witnesses:

OSCAR A. GUNZ,
SOPHIE M. BAEDER.