No. 750,508. PATENTED JAN. 26, 1904.

W. H. WHERRY.

MOLD FOR CASTING TERMINALS FOR RAIL BONDS.

APPLICATION FILED NOV. 3, 1902.

NO MODEL.

Fig. IV

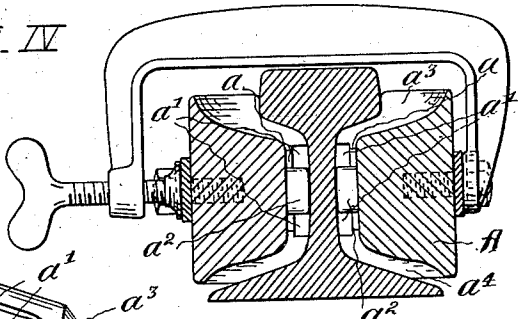


Fig. I

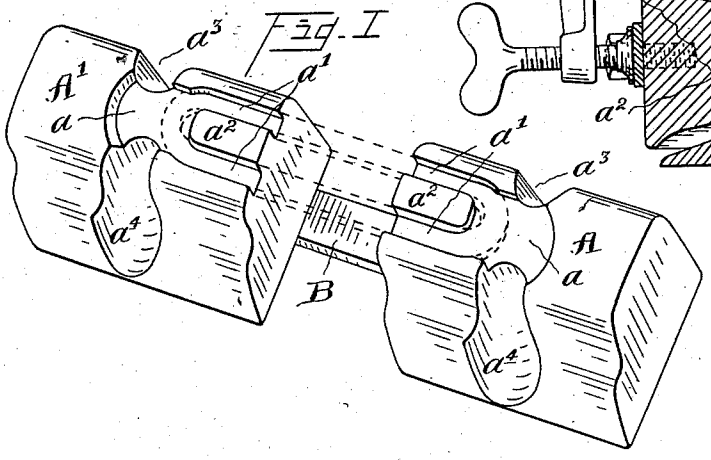


Fig. II

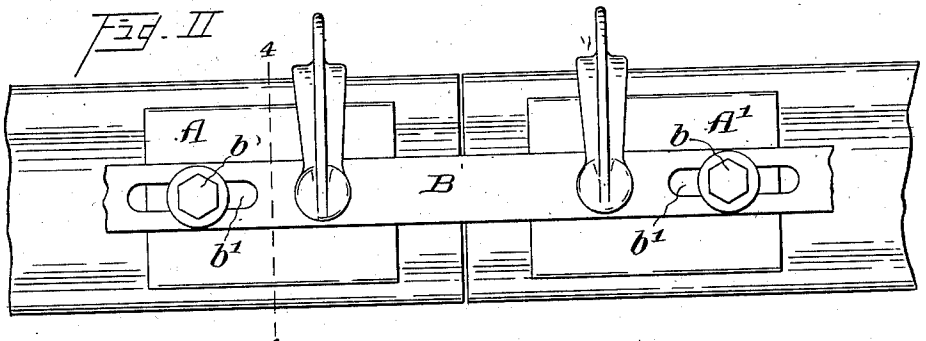
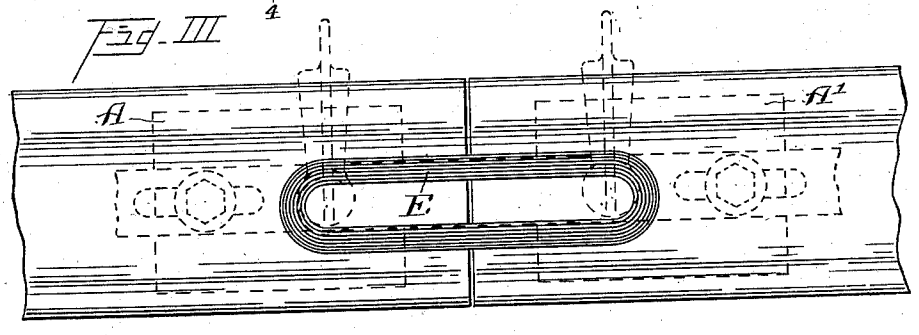


Fig. III



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 750,508. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM H. WHERRY, OF CLEVELAND, OHIO.

MOLD FOR CASTING TERMINALS FOR RAIL-BONDS.

SPECIFICATION forming part of Letters Patent No. 750,508, dated January 26, 1904.

Application filed November 3, 1902. Serial No. 129,798. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WHERRY, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Molds for Casting Terminals of Rail-Bonds, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to molds, and particularly to a mold part for casting copper terminals upon the ends of copper loops or other conductors and upon the flanges of abutting rail ends to form a rail-bond by uniting such loop and rail.

The object of my said invention is to render the bonding of rails more economical.

Said invention consists of means hereinafter described, and specifically set forth in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

Figure I represents two mold parts embodying my invention. Fig. II represents a side elevation of such mold parts applied to the rail ends. Fig. III represents in dotted lines a side elevation of the mold parts applied to the rails, showing a bond-loop in position therein. Fig. IV represents a transverse cross-section of two mold parts and the rail to which they are applied, taken upon the line 4 4, Fig. II, such construction being adapted to bonding the rail on both sides of the web.

The mold part consists of a cast-iron piece A, another part A′ being shown in the device disclosed, such parts being connected by means of a steel bar B. This bar is secured to the mold parts by means of screws b b, passing through elongated slots b' b', whereby the said two parts may be adjusted relatively to each other and the distances between them varied to correspond with varying lengths of bonds, as will be readily understood. Each such mold part is formed to snugly fit between the under surface of the rail-tread and the upper surface of the rail-flange, as shown in Fig. IV, and against the web. The inner surface thereof is provided with a terminal recess a and loop-recess a', the latter in the particular form illustrated being divided by a projection a^2. Recess a' is adapted to receive the end of the bond-loop, which snugly fits therein, so as to prevent metal from flowing therethrough, such recess being of a depth equal to the thickness of the loop. The outer end of projection a^4 is rounded to fit the interior curved surface of such loop. A loop E, located in the mold parts, is shown in dotted lines in Fig. II, whereby it is seen the loop projects a short distance into the recesses a a. Communicating at the top and bottom, respectively, with each recess a are two sprues a^3 and a^4, the sprue a^3 being somewhat enlarged at its outer end to facilitate the pouring of the copper therein. Recesses a a are made slightly deeper than recesses a' a'.

The mold part is clamped against the rail, as shown in Fig. IV, and when in such position is ready for the casting operation. In such operation the copper is poured into sprue a^3, from whence it flows into recess a and thence out through sprue a^4. This discharge continues until the web becomes sufficiently heated for the copper to unite with the steel, as described in a separate application for Letters Patent of the United States, Serial No. 129,796, filed November 3, 1902. When such heating is effected, the said sprue a^4 is stopped up and the copper allowed to set, as described in said application.

When it is required to bond the rail on both sides of the web, two mold parts are used simultaneously, as illustrated in Fig. IV.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed provided the means stated by any one of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention—

1. A mold part for casting rail-bond terminals, provided with a recess for receiving a

conducting-wire and a recess adjacent thereto for forming the bond-terminal, such mold part being provided with a suitable sprue for receiving the molten metal and communicating with such terminal-recess.

2. A mold part for casting rail-bond terminals formed to fit against the rail-web, the surface adapted to contact the latter being provided with a recess for receiving a conducting-wire, and a recess adjacent thereto for forming the bond-terminal, the mold part being further formed with sprues communicating with such terminal-recess.

3. Mold parts for casting rail-bond terminals, adjustably secured to each other, each such mold part provided with a recess for receiving a conducting-wire and a recess adjacent to such wire-recess for forming a terminal.

4. In molds for casting rail-bond terminals, a mold part adapted to fit between the rail tread and flange against the web, the surface adapted to contact the latter being provided with a recess for receiving a conducting-wire and a recess adjacent thereto for forming a terminal, such mold part being further provided with sprues communicating with said terminal-recess.

5. A mold part for casting rail-bond terminals, provided with a recess for receiving a conducting-wire and a recess adjacent thereto for forming the bond-terminal, such part being provided with a suitable sprue for receiving the molten metal and communicating with such terminal-recess, and a section of rail against which such mold part presses.

6. Mold parts for casting rail-bond terminals, adjustably secured to each other, each such part provided with a recess for receiving a conducting-wire, a recess adjacent to such wire-recess for forming a terminal, and a section of rail against which such mold part presses.

7. In molds for casting rail-bond terminals, a mold part provided with a recess for receiving a conducting-wire and a recess adjacent thereto for forming the bond-terminal, such part being provided with a suitable sprue for receiving the molten metal and communicating with such terminal-recess, a section of rail against which such mold part presses, and a conductor fitting within said conducting-wire recess.

8. Mold parts for casting rail-bond terminals consisting of, two mold parts adjustably secured to each other, each such part provided with a recess for receiving a conducting-wire, a recess adjacent to such wire-recess for forming a terminal, a section of rail against which such mold part presses, and a conductor fitting within said conducting-wire recess.

Signed by me this 1st day of November, 1902.

WILLIAM H. WHERRY.

Attest:
D. T. DAVIES,
A. E. MERKEL.