

G. A. MEAD.
MANUFACTURE OF RAIL BONDS.
APPLICATION FILED NOV. 2, 1906.

930,674.

Patented Aug. 10, 1909.

Fig. 1.

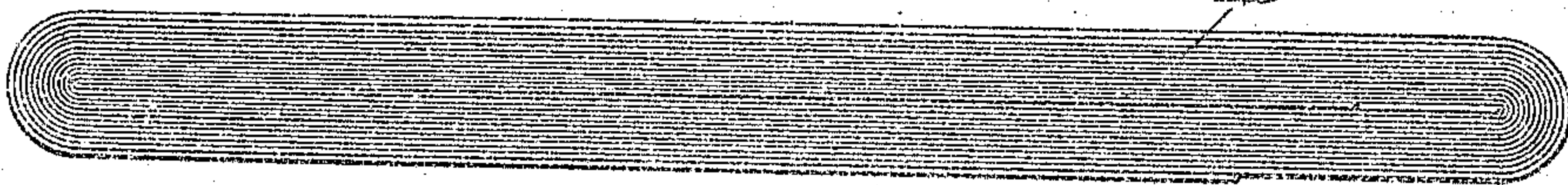


Fig. 2.

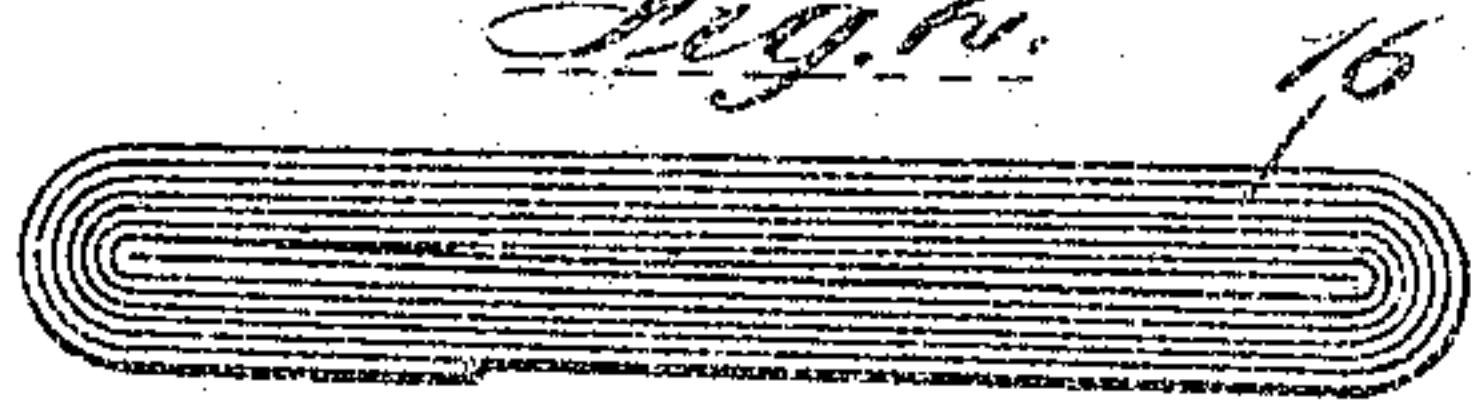


Fig. 3.

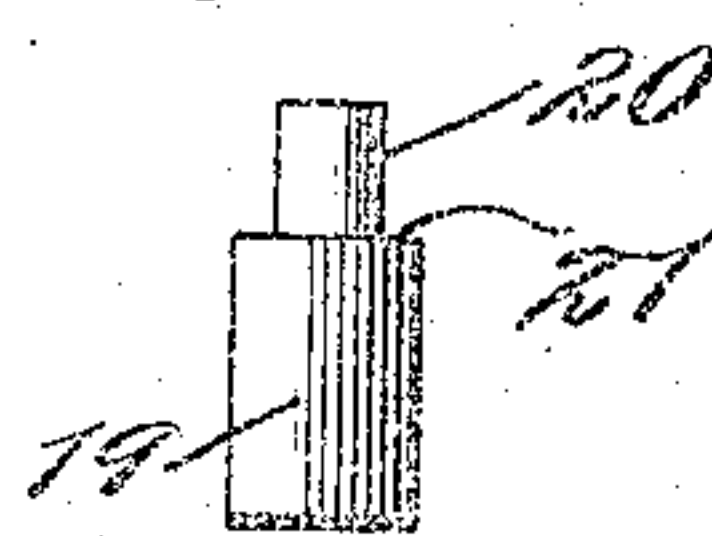


Fig. 4.

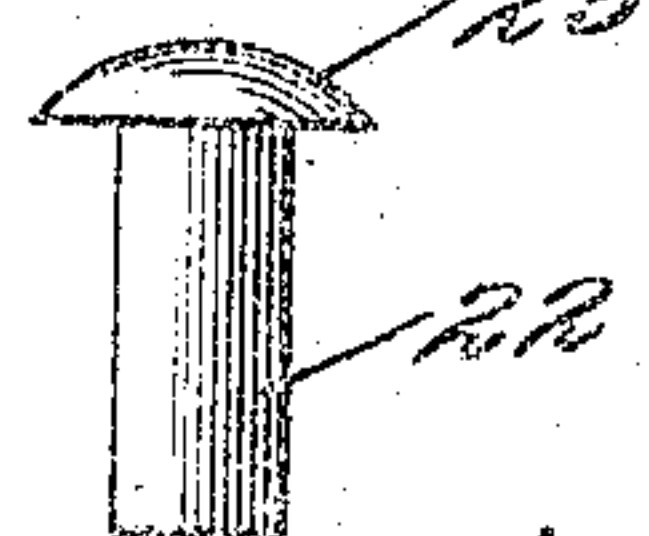


Fig. 5.

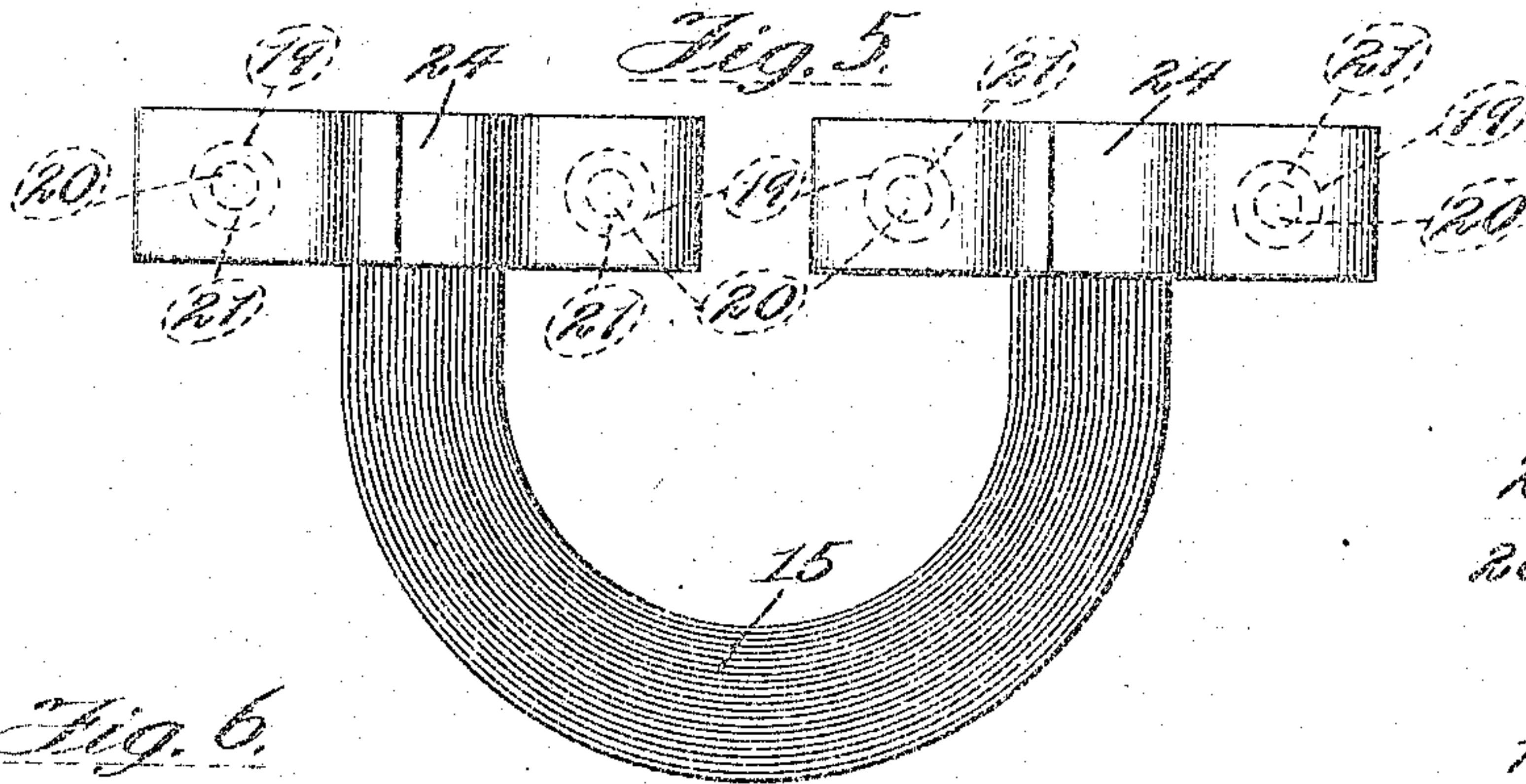


Fig. 6.

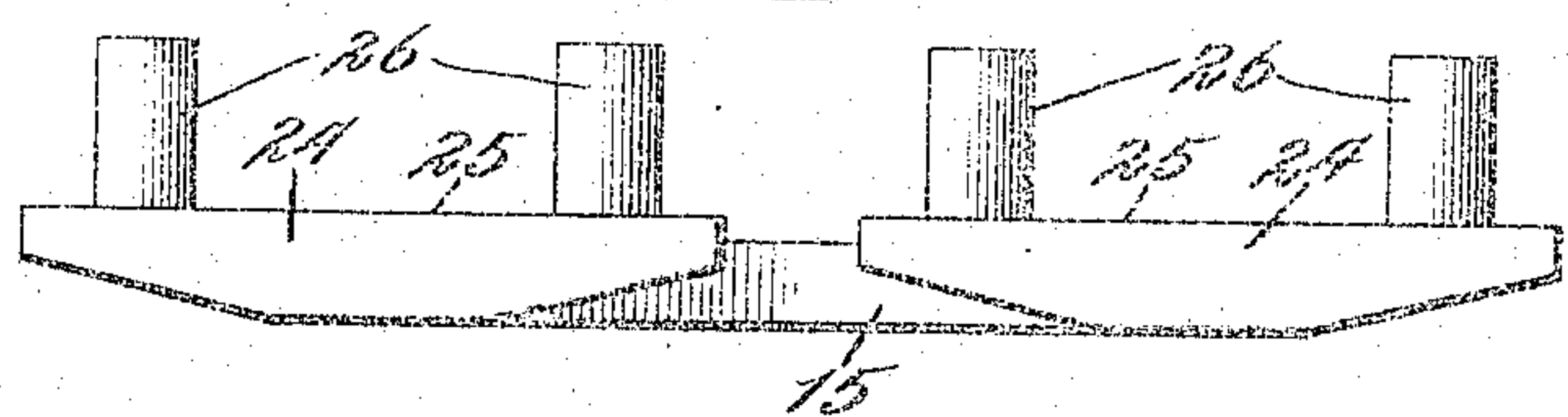


Fig. 7.

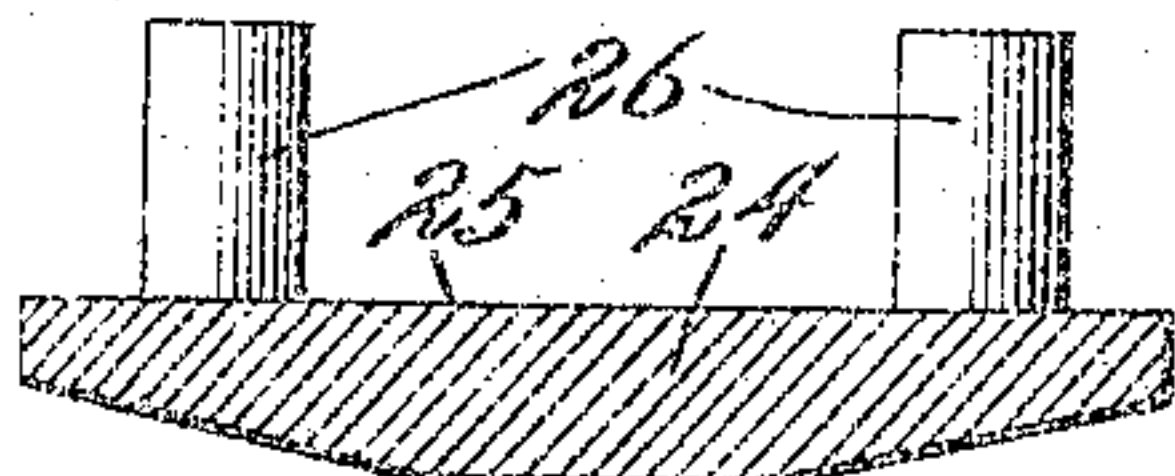


Fig. 8.

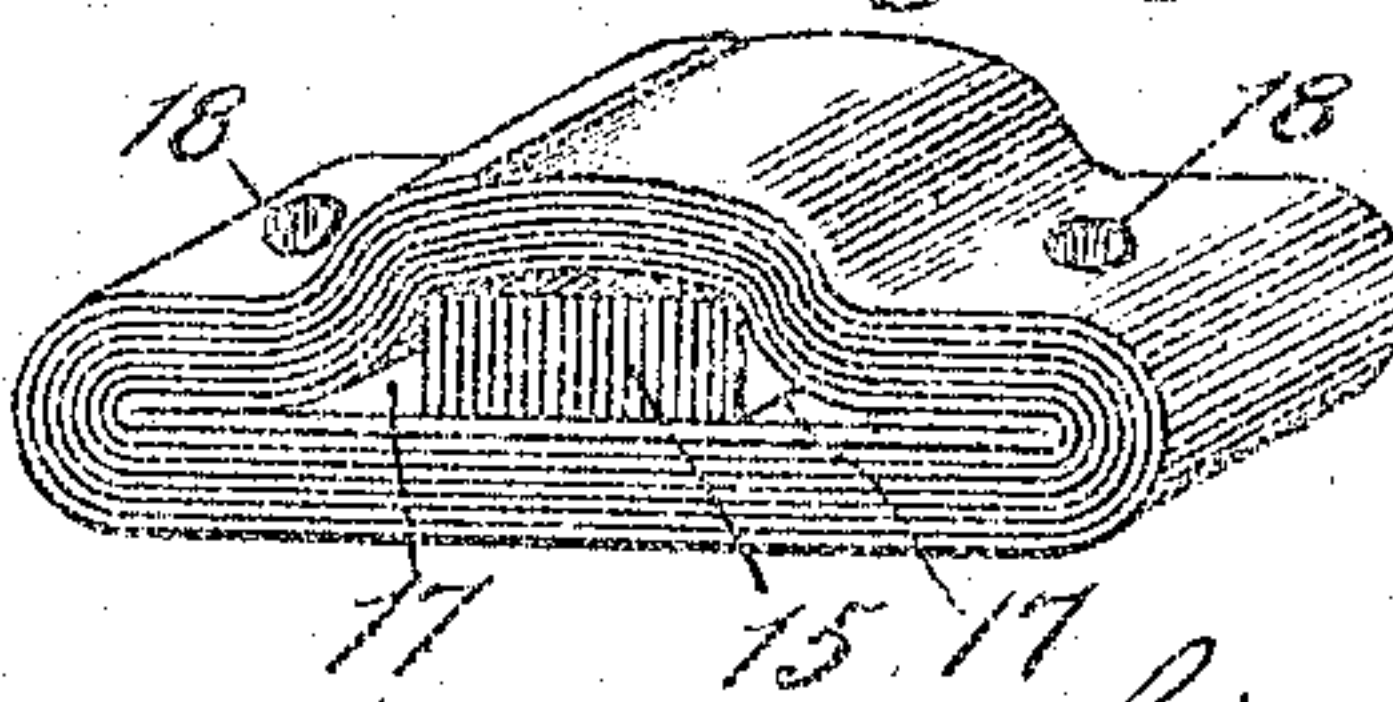
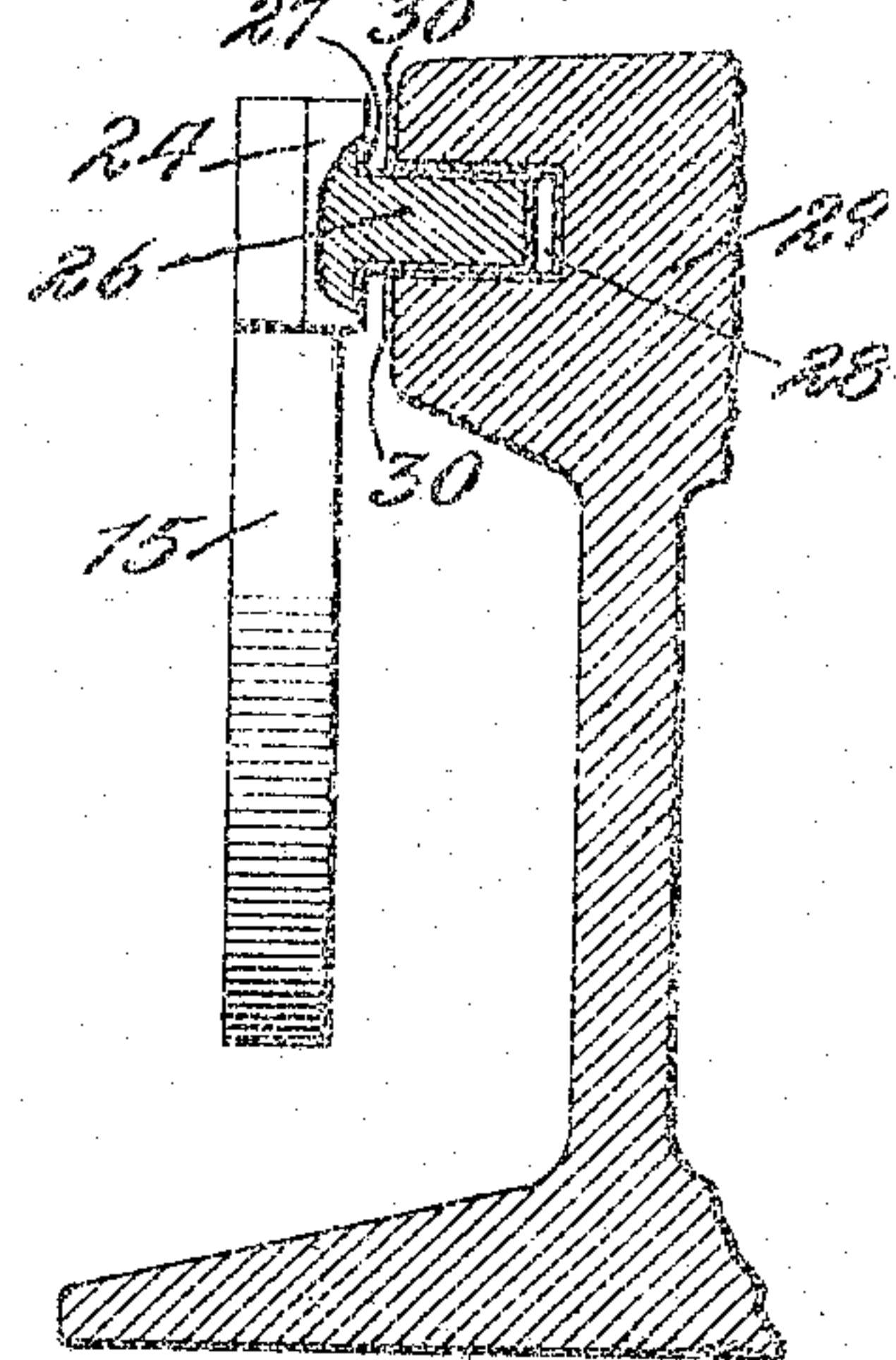


Fig. 9.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE A. MEAD, OF MANSFIELD, OHIO.

MANUFACTURE OF RAIL-BONDS.

No. 930,674.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed November 2, 1906. Serial No. 341,638.

To all whom it may concern:

Be it known that I, GEORGE A. MEAD, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in the Manufacture of Rail-Bonds, of which the following is a full, clear, and exact specification.

This invention relates to improvements in the manufacture of rail bonds, and particularly to that class of bonds provided with terminal lugs, which latter are adapted to be seated and secured within an aperture in the rail, and the object of the same is to provide an improved device of this character which will be simple and durable in construction, cheap to manufacture, and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawings, illustrating an exemplification of the invention, and in which—

Figure 1 is a view of the body portion of this improved bond; Fig. 2 is a view of the terminal member; Figs. 3 and 4 are views of two forms of terminal lugs; Fig. 5 is a top plan view of the body portion, terminal members and terminal lugs assembled; Fig. 6 is an elevation of the finished bond; Fig. 7 is a view, partly in section, of the finished terminal and lugs; Fig. 8 is a perspective view of the terminal member shaped to receive the extremity of the body portion, and with the body portion in position; Fig. 9 is a view, partly in section, showing this improved bond secured to a rail.

Referring more particularly to the drawings, and in this exemplification of the invention, the numeral 15 designates the body portion of this improved bond which may be formed in any desired manner, preferably by winding or bending a continuous strip or ribbon of suitable material, such as copper, or the like, of the required width, upon itself to form a stranded or laminated body of any desired length. The terminal members may also be constructed in any suitable manner, preferably by winding or bending a continuous strip of suitable material 16 upon itself

to form a body portion comprising superposed laminations, and of a size to give the necessary electrical capacity.

If desired, the terminal member may be first formed, as shown in Fig. 2, and then the strands or laminations separated, as shown in Fig. 8, to form an aperture 17, adapted to receive the extremity of the body portion 15; or the aperture 17 may be formed therein during the formation of the terminal member. After the terminal member is thus formed, suitable holes or apertures 18 are formed through the laminations or strands, preferably on each side of the aperture 17, and adjacent the ends of the terminal member.

Suitable lugs 19 having a reduced portion 20 to form a shoulder 21, may be secured to the terminal member 15, by inserting the reduced portion 20 into the aperture 18, so that the shoulder 21 will engage the lower face of the member 15, and said reduced portion 20 is preferably of a diameter to be retained by friction in the aperture 18.

If desired, lugs 22 having a head 23, may be employed, and when employed the body portion 22 is inserted into the aperture 18 from the top, so that the head 23 will rest upon the top of the terminal member.

After the terminal member 16 and lugs 19, or 22, have been thus assembled, the extremity of the body portion 15 is inserted into the aperture 17, as shown in Figs. 5 and 8, and the said extremity, terminal member, and lugs, are brought to a welding heat, and then compressed in any suitable manner, such as by means of a die (not shown) into a solid homogeneous mass 24, of the desired configuration, having a flat contact face 25 and lateral projecting terminal lugs 26.

If desired, the terminal lugs 26 and the adjacent face 25 of the member 24, may be coated with any suitable preserving material 27, such as tin or the like.

Suitable apertures 28 may be provided in the rail 29 and these apertures 28 and the surface of the rail surrounding the apertures may also be coated with a suitable material 30, such as tin or the like.

The bonds may be secured in position by placing the terminal lugs 26 into the aperture 28, and bringing the rail and bond to the proper temperature to melt the tin within the apertures and on the bond terminals.

The body portion 15 of the bond being of flexible material may be bent into any desired shape to meet the required necessities.

In order that the invention might be fully understood, the details of an embodiment thereof have been thus specifically described, but

What I claim is:

10 1. A rail bond comprising a body portion, stranded terminal members, and terminal lugs, all of said parts being separate from each other and united.

15 2. A rail bond, comprising a stranded body portion, stranded terminal members, and terminal lugs, all of said parts being separate from each other, and united.

20 3. A rail bond comprising a body portion, terminal members comprising a strip of material folded upon itself, and provided with an aperture into which the extremities of the body are inserted, said terminal members being also provided with apertures on each side of the body portion, and projecting lugs seated in the last said apertures.

25 4. A rail bond comprising a flexible body portion, separate stranded terminal members, the extremities of the body portion being interposed between the strands of the terminal members, and separate lugs attached to the terminal with the extremities of the members projecting laterally beyond the sides of the body members.

5. The improved method of manufacturing rail bonds, which consists in forming the body portion, then shaping the terminal 35 members, then perforating said members and inserting terminal lugs in said perforations, then applying the terminal members to the extremities of the body, then bringing said extremities, terminal members and lugs to a 40 welding heat, and finally compressing the same into a solid homogeneous mass.

6. The improved method of manufacturing rail bonds, which consists in forming the body portion, then shaping the terminal 45 members by folding a continuous strip of material upon itself, then perforating said terminal members, then inserting terminal lugs in said perforations, then applying the members to the body by interposing the 50 extremities of the body between the strands of the said members, then bringing the lugs, members and the extremities of the body to a welding heat and finally compressing the same into a solid homogeneous mass. 55

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 30th day of October A. D. 1906.

GEORGE A. MEAD.

Witnesses:

WALTER H. WILLIAMS,
FRANK W. MILLER.