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2,544,180

MULTIPLE ELECTRICAL RAIL BOND

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FIG 1

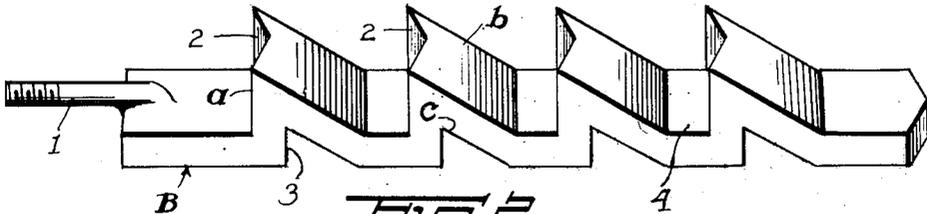


FIG 2

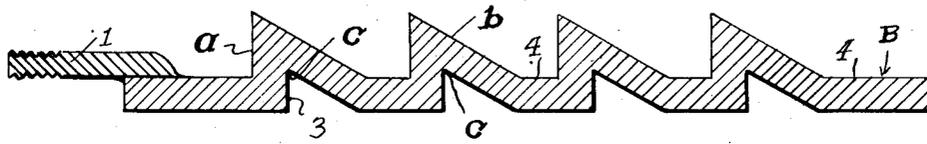


FIG 3

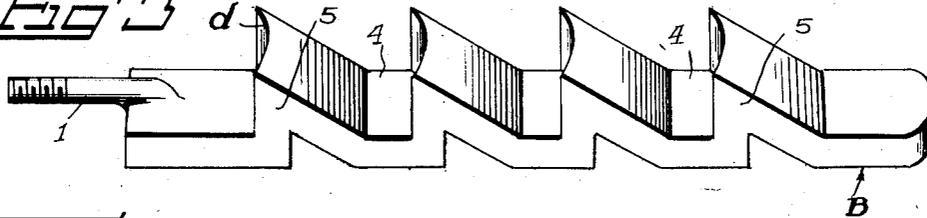


FIG 4

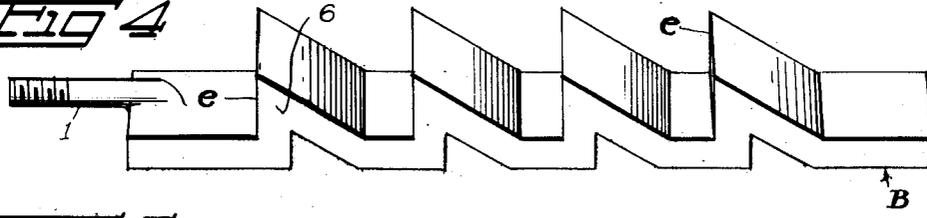


FIG 5

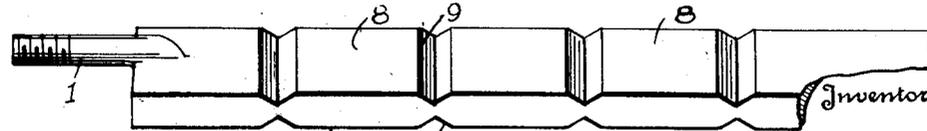
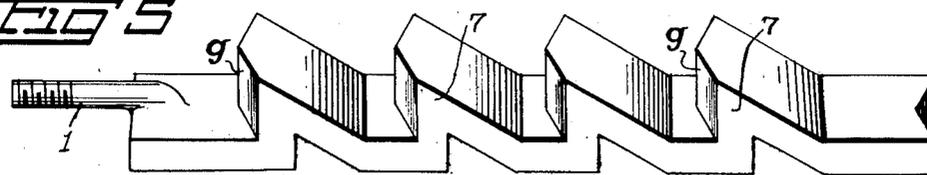


FIG 6

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MULTIPLE ELECTRICAL RAIL BOND

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7 Claims. (Cl. 173—324)

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This invention relates to a multiple electrical rail bond and it is primarily an object of the invention to provide an article of this kind that is adapted to be spot welded into desired operative position and which is so constructed as to be readily reused.

A further object of the invention is to provide a bond particularly designed and adapted for use in connection with rails and the like and which is of a character to permit the bond to be used more than the one time and thereby materially reduce the expense connected with the use of bonds.

A more particular object of the invention is to provide a bond constructed in a manner to provide a series of sections suitable for welding and whereby one of said sections can be readily removed to allow an adjacent or succeeding section to be employed so that a further use of the bond may be had.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved multiple bond, whereby certain advantages are attained, as will be hereinafter more fully set forth.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a view in perspective of a bond constructed in accordance with an embodiment of the invention;

Figure 2 is a longitudinal sectional view taken through Figure 1;

Figure 3 is a view in perspective illustrating a bond embodying another form of the invention;

Figure 4 is a view in perspective of a still further embodiment of the invention;

Figure 5 is a view in perspective of an additional embodiment of the invention; and

Figure 6 illustrates a still further embodiment.

In the embodiment of the invention as illustrated in Figures 1 and 2, the bond comprises an elongated body B of desired dimensions and produced from a suitable alloy possessing sufficient hardness to assure a good weld to the work but sufficiently soft to permit its severance for reasons later to be described.

One end of the body B of the bond at its transverse center is provided with an outstanding terminal member 1 to allow a desired operative connection with an electrical conductor.

At points spaced lengthwise of the body there are pressed outwardly therefrom the protuberances 2 which extend entirely across the body B.

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Each of these protuberances 2 has a wall *a* substantially at right angles to the body B proper and faces toward the terminal member 1. Each of the protuberances has a second wall *b* disposed on a desired angle from the outer margin of the wall *a* to the body B. These protuberances 2 extend beyond what may be termed the top or outer face of the body B and the walls *a* and *b* are of such dimensions to provide an under recess or notch 3 which has a pointed portion *c* disposed beyond the outer or top face of the body B.

The portions of the body B between the protuberances 2 constitute sections adapted to have close contact with rails or other work to which the bond is to be welded. Initially, the welding occurs at the outermost section 4 and when it is desired to remove the bond, it is only necessary to grind, saw or otherwise remove the outer portion of the adjacent protuberance 2 until the notch or recess 3 or the like formed by such protuberance is reached. This results in the portion of the body B in advance of the secured section 4 becoming free and thereby permitting a reuse of the bond. As each used section 4 is separated, a further use of the bond can be had.

In this form of the invention, the wall *a* is V-shape in plan with its apex inwardly directed.

In the embodiment of the invention as illustrated in Figure 3, the construction is substantially the same as in Figures 1 and 2, except that the vertical wall *d* of the protuberance 5 is disposed on an inbow of a predetermined radius and in the embodiment of the invention as illustrated in Figure 4, the structure of the bond is substantially the same as in the preceding forms except that the inner wall *e* of each of the protuberances 6 is substantially straight and at right angles to the longitudinal axis of the body.

In the embodiment of the invention as illustrated in Figure 5, the structure of the bond is also substantially the same as hereinbefore set forth except that the inner vertical wall *g* of each of the protuberances 7 is V-shaped in plan but with its apex outwardly disposed.

In the embodiment of the invention as illustrated in Figure 6, the body A is divided into a plurality of differing welding sections 8 by the transversely disposed grooves or channels 9 at the opposite sides of the body A with the grooves or channels on both sides V-shaped in cross section with their apices inwardly directed.

In this last embodiment of the invention, one section 8 can be readily separated from the remainder by cutting through the bond along the

opposed apices of the grooves or channels 9 which divide the section from the remainder.

From the foregoing description it is thought to be obvious that a multiple bond constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated.

I claim:

1. As a new article of manufacture an electric bond comprising a one-piece solid, rigid metal bar of substantial thickness and of constant width throughout its length and made up of a plurality of flat welding sections connected by intervening portions of modified form for facilitating the successive separation of the sections from one end of the bar, the said intervening portions between the bar welding sections being defined by protuberances extending beyond one face thereof and providing recesses at the one face of the bar of a depth to extend beyond the face of the bar beyond which the protuberances extend so that the removal of a protuberance results in a severance of the welding section outwardly thereof from the remainder of the bar.

2. As a new article of manufacture an electric bond comprising a one-piece solid, rigid metal bar of substantial thickness and of constant width throughout its length and made up of a plurality of flat welding sections connected by intervening portions of modified form for facilitating the successive separation of the sections from one end of the bar, the said intervening portions between the welding sections of the bar member being defined by protuberances extending beyond one face of the bar to provide at the opposite face notches extending beyond the said one face of the bar, said protuberances having similar faces disposed transversely across the bar and substantially V-shaped in edge plan.

3. As a new article of manufacture an electric bond comprising a one-piece solid, rigid metal bar of substantial thickness and of constant width throughout its length and made up of a plurality of flat welding sections connected by intervening portions of modified form for facilitating the successive separation of the sections from one end of the bar, said intervening portions between the welding sections of the bar being defined by protuberances extending beyond one face of the bar to provide notches at the opposite face extending beyond the said one face of the bar, said protuberances having similar faces disposed transversely across the bar on an inbow.

4. As a new article of manufacture an electric bond comprising a one-piece solid, rigid metal bar of substantial thickness and of constant width throughout its length and made up of a plurality of flat welding sections connected by

intervening portions of modified form for facilitating the successive separation of the sections from one end of the bar, the said intervening portions between the welding sections of the bar being defined by protuberances extending beyond one face of the bar to provide at the opposite face notches extending beyond the said one face of the bar, said protuberances having similar faces disposed transversely across the bar and substantially V-shaped in edge plan, said faces of the protuberances having their apices inwardly disposed.

5. As a new article of manufacture an electric bond comprising a one-piece solid, rigid metal bar of substantial thickness and of constant width throughout its length and made up of a plurality of flat welding sections connected by intervening portions of modified form for facilitating the successive separation of the sections from one end of the bar, the said intervening portions between the welding sections of the bar being defined by protuberances extending beyond one face of the bar to provide at the opposite face notches extending beyond the said one face of the bar, said protuberances having similar faces disposed transversely across the bar and substantially V-shaped in edge plan, said faces of the protuberances having their apices outwardly disposed.

6. An electric bond of the character described comprising a bar of electric current conducting material formed to provide a plurality of flat sections, each section having an obliquely extending portion extending across an edge of and joined to an adjacent section, the joining part between an oblique portion and an adjacent section being in the form of a wall perpendicular to the section.

7. An electric bond of the character described comprising a solid one piece bar of electric current conducting material formed to provide a plurality of flat sections disposed in spaced end to end relation, each section having an obliquely directed portion extending across an edge of an adjacent section and a short wall portion forming a right angular continuation of each section and connecting between such section and the adjacent obliquely extending portion.

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