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RAIL BOND TERMINAL

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Fig. 1.

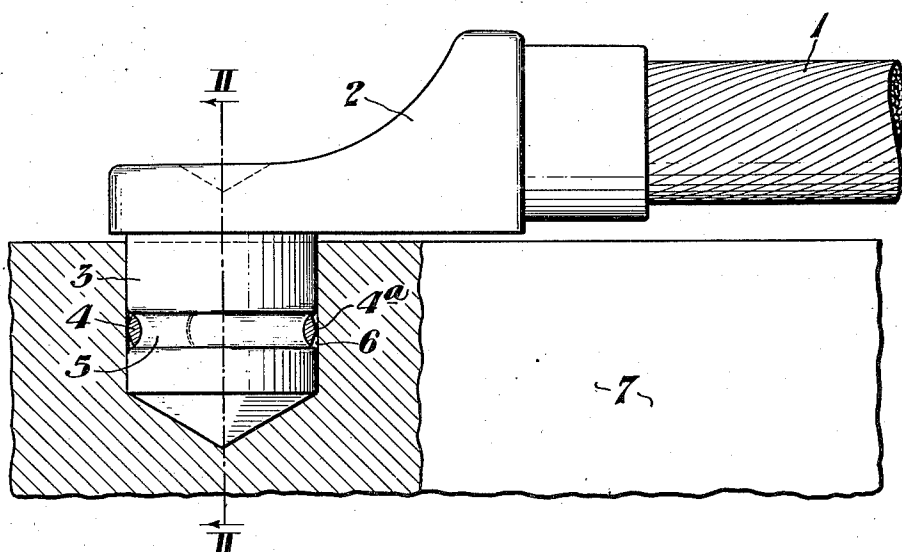
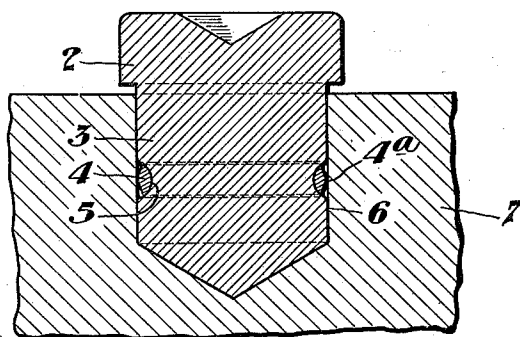


Fig. 2.



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UNITED STATES PATENT OFFICE

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RAIL BOND TERMINAL

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Application January 21, 1935, Serial No. 2,812

5 Claims. (Cl. 173—283)

This invention relates to terminals in general and particularly to rail bonds having terminals adapted for connection to railroad rails in which depressions are formed for this purpose. Other objects may be inferred.

A specific example of a rail bond embodying the features of the invention is illustrated by the accompanying drawing, Figure 1 showing one end of the bond with its terminal stud in a depression in the head of a railroad rail, and Figure 2 being a section taken from the line II—II in Figure 1.

More specifically, this rail bond includes a conductor 1, a steel terminal 2 butt-welded to this conductor, a steel stud 3 integrally projecting from this terminal, and a harder steel ring 4 encircling the stud 3 remotely from its ends. The stud 3 has an annular recess 5 which receives the ring 4, and the outer periphery of the latter is practically flush with the circumferential surface of this stud. This stud 3 is at least slightly longer than the depression 6 in the rail head 7 is deep. This recess 5 is transversely concave and the inner periphery of the ring 4 is transversely convex, the two surfaces interfitting. The outer periphery of the ring 4 is sharpened as at 4^a.

In use, the terminal is positioned against the head of the railroad rail 7 with its stud 3 in the depression 6 formed in this rail. Hammering or pressing forces are then applied to the terminal opposite the stud 3 so as to force the latter into the depression 7 and against the latter's end. This causes the stud to expand slightly and forces the harder steel ring 4 into the rail 6.

One of the chief advantages of this bond is its structural soundness, the conductor 1 being butt-welded to the terminal 2. The use of the harder steel ring 4 enables a connection to be made by conventional apparatus in spite of the fact that the stud 3 is made of solid steel. The steel from which the ring 4 is made is harder than either the steel from which the railroad rail is made or that from which the terminal 2 is made. Therefore, it is able to dig into the rail head 7 in the manner described. This action is further aided by the concave shape of the recess 5 and the convex inner periphery of the ring 4. Furthermore, this ring 4 is split so as to enable it to expand easily.

We claim:

1. A terminal adapted for connection with an article in which a depression is formed, said ter-

minal including a stud insertable into said depression and a ring encircling said stud remotely from its ends and having a sharpened outer periphery, said ring being made of harder material than either said stud or said article and said stud being annularly recessed to receive said ring.

2. A terminal adapted for connection with an article in which a depression is formed, said terminal including a stud insertable into said depression and a ring encircling said stud remotely from its ends and having a sharpened outer periphery, said ring being made of harder material than either said stud or said article and said stud being annularly recessed to receive said ring and being longer than said depression so that it expands when forced longitudinally therein.

3. A rail bond including a conductor, a steel terminal butt-welded to said conductor, a steel stud integrally projecting from said terminal, and a harder steel ring encircling said stud remotely from its ends, said stud having an annular recess for receiving said ring and the outer periphery of the latter being practically flush with the circumferential surface of said stud.

4. A rail bond including a conductor, a steel terminal butt-welded to said conductor, a steel stud integrally projecting from said terminal, a harder steel ring encircling said stud remotely from its ends, said stud having an annular recess for receiving said ring and the outer periphery of the latter being practically flush with the circumferential surface of said stud, and said recess being transversely concave and the inner periphery of said ring being transversely convex.

5. A rail bond including a conductor, a steel terminal butt-welded to said conductor, a steel stud integrally projecting from said terminal and adapted to be expanded in a depression formed in a rail, a harder steel ring encircling said stud remotely from its ends, said stud having an annular recess for receiving said ring and the outer periphery of the latter being practically flush with the circumferential surface of said stud, and said recess being transversely concave and the inner periphery of said ring being transversely convex, the outer periphery of the latter being sharpened to dig into the material of the rail when the said stud is expanded in the depression.

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