

(No Model.)

G. E. SOMERS.
ELECTRIC RAIL BOND.

No. 531,980.

Patented Jan. 1, 1895.

Fig. 1.

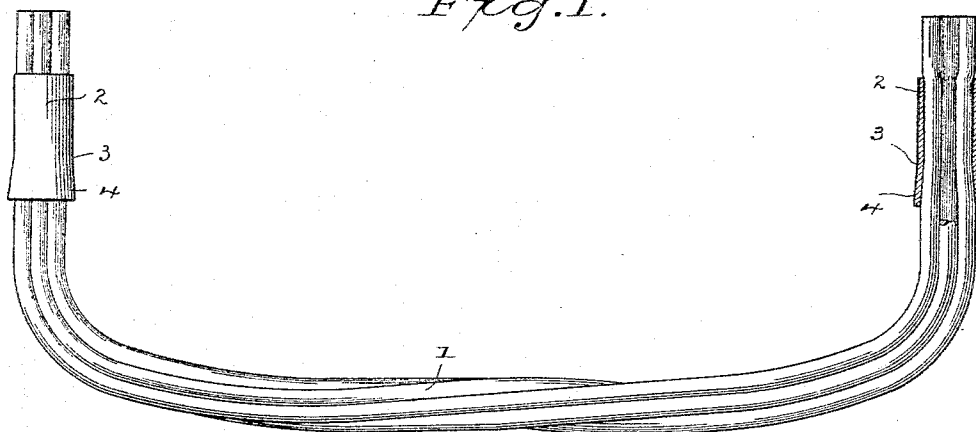
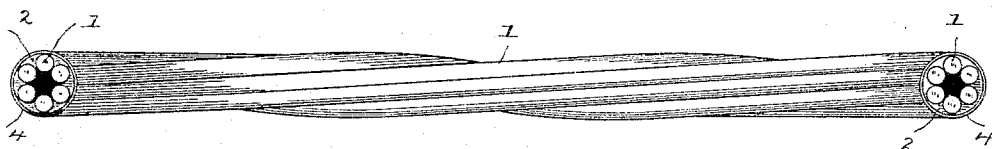


Fig. 2.



WITNESSES

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ELECTRIC RAIL-BOND.

SPECIFICATION forming part of Letters Patent No. 531,980, dated January 1, 1895.

Application filed May 7, 1894. Serial No. 510,249. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. SOMERS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Electric Rail-Bonds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the class of bonds used in building electric railways to form complete connections between the rails, and my invention has for its object to provide a bond of this class which while having ample current carrying capacity shall have also ample resiliency to permit it to yield sufficiently to overcome any danger of the bond becoming crystallized in use or becoming loosened by the expansion and contraction of the rails or by the springing of the ends of the rails should they be unevenly laid or become loose. In order to accomplish these results I have devised the novel rail bond of which the following description in connection with the accompanying drawings, is a specification, numbers being used to designate the several parts.

Figure 1 is an elevation of my novel bond, and Fig. 2 is a plan view thereof.

The novel features of my improved bond consist, first, in making the bond from a series of independent strands of wire; secondly, in giving to the strands of which it is composed a half turn so that all the strands may be of equal length, and, thirdly, in securing the bonds together by tapering ferrules which are pressed into place with sufficient power to embed the ferrules into the strands of wire of which the bond is composed and furthermore to leave a tapering shoulder on the lower portion of each ferrule which serves as a stop or rest in setting the bond to place and also locks the bond in position with a drive fit.

1 denotes strands of wire of which the bond is composed and 2 the ferrules by which they are held together. It will of course be understood that the number of strands of wire used is not of the essence of my invention. I have shown six on account of the convenient manner in which they may be bound together. A central wire might be used if preferred

making seven or in fact any number might be bound together without affecting the principle of my invention, it being simply required to provide sufficient metal to give ample current carrying capacity but to provide the metal in the form of independent strands instead of in a single strand of larger size. It will furthermore be apparent that strands of equal length may be used and the ends will be sufficiently even for all practical purposes without trimming. The half turn which is imparted to each strand in the completed bond will be clearly understood from the drawings. The strands are held in place by pressing the ends thereof into the ferrules. After placing the ferrules in position the upper ends of the ferrules are drawn outward and are compressed into the strands forming the bond with sufficient power to taper the upper ends of the ferrules and to actually embed them into the strands of wire. It will be noticed that the upper portion of each ferrule is straight sided the taper being at the lower end thereof, the intersection of the straight portion with the tapering portion being indicated by 3. It is contemplated that the straight portion of the ferrule shall be of just the required diameter to pass easily through the holes in the rails so that the inclines at the lower ends of the ferrules which are designated by 4 will form shoulders which will rest against the under sides of the rails and will also retain the bonds in the rails with a drive fit. The upper ends of the strands will pass through the portions of the rails to which they are attached and the bonds may be securely locked in place by turning the ends of the strands outward. It is apparent that this will make a very much stronger fastening for the bonds than can be made by ordinary riveting and one which will stand the severe strain of use without danger of the bonds becoming detached from the rails.

Having thus described my invention, I claim—

1. A rail bond consisting of a series of strands of wire laid together and retained in place by ferrules through which the ends of the strands are passed, the upper ends of the ferrules being pressed into the strands so as to lock the ferrules thereto and secure the strands together and also to provide tapers

at the lower ends which are adapted to engage the rails in setting the bond up to place.

2. A rail bond consisting of a series of strands of wire laid together and given a half turn so that strands of equal length may be used, said strands being retained in place by tapering ferrules, the upper ends of which are pressed into the strands and which are

adapted to engage the rails in setting the bond to place.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE E. SOMERS.

Witnesses:

A. M. WOOSTER,

S. V. RICHARDSON.