No. 871,501. PATENTED NOV. 19, 1907.

C. Y. HAILE & G. M. HUGUS.

BOND FOR RAILS.

APPLICATION FILED MAY 17, 1907.

FIG. 1

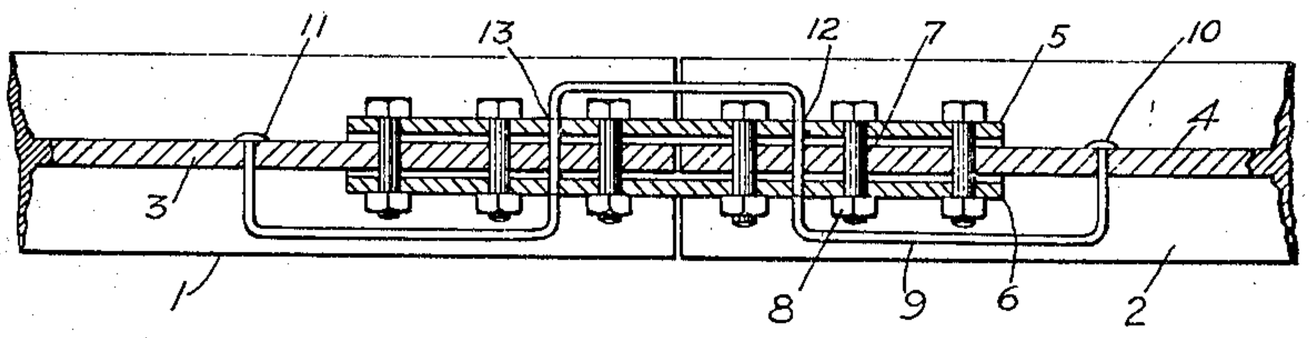
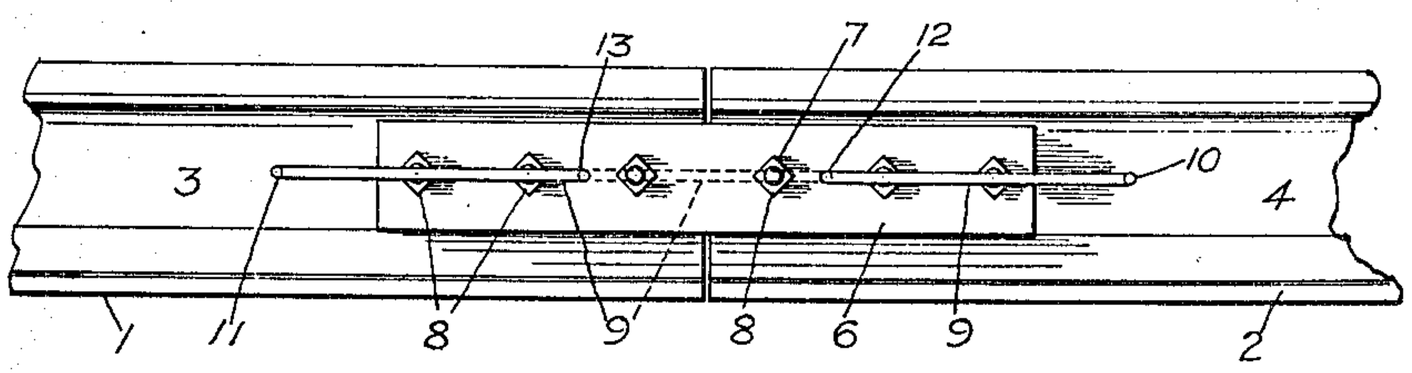


FIG. 2



WITNESSES:

J. R. Mahaney.

K. S. Butler

INVENTORS

C. Y. HAILE & G. M. HUGUS.

BY H. C. Evert & Co

Attorneys

UNITED STATES PATENT OFFICE.

CHARLES Y. HAILE AND GEORGE M. HUGUS, OF UNIONTOWN, PENNSYLVANIA.

BOND FOR RAILS.

No. 871,501. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed May 17, 1907. Serial No. 374,251.

To all whom it may concern:

Be it known that we, CHARLES Y. HAILE and GEORGE M. HUGUS, citizens of the United States of America, residing at Uniontown, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Bonds for Rails, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to bonds for rails, and the invention has for its object to provide a novel bond, which will be destroyed or broken when connection between two rails is removed.

Our invention aims to eliminate the expense heretofore incurred upon railroads by the splice bars or plates of a rail joint being surreptitiously removed or broken. To this end, we have devised a novel bond for establishing a positive electrical connection between the confronting ends of two rails, and we arrange the bond, whereby the same will be broken or injured when the splice bars or plates are removed. Should the bond be injured or broken, the break in the electrical connection between the rails will immediately set the semaphore arm of an ordinary signal at a "danger" position, and notify an engineer that there is a break or accident in the block having the broken or injured bond.

The detail construction entering into our invention will be hereinafter more fully described and then specifically pointed out in the appended claims.

Referring to the drawing forming part of this specification, like numerals of reference designate corresponding parts throughout the several views, in which:

Figure 1 is a horizontal sectional view of a rail joint equipped with our bond, Fig. 2 is an elevation of the same.

In the accompanying drawing, we have illustrated the confronting ends of two rails 1 and 2, as having their webs 3 and 4 respectively connected by splice bars 5 and 6, bolts 7, and nuts 8.

The bond 9 is formed of a single piece of wire having a central portion which extends in a longitudinal direction with respect to the web of the rail sections, and said bond further comprises two pairs of transversely-extending portions, that is to say, the said two pairs of portions extend transversely with respect to the rail sections. The inner transversely-extending portion of one pair extends through alining openings 12 formed in the web 4 and the splice bars 5 and 6 and the inner transversely-extending portion of the other pair extends through alining openings 13 formed in the web 3 and the splice bars 5 and 6. The outer transversely-extending portion of one pair extends through an opening formed in the web 3 while the outer transversely-extending portion of the other pair extends through an opening in the web 4. The outer transversely-extending portions of each pair is of less length than the inner transversely-extending portion of each pair and the terminus of each outer transversely-extending portion is headed or upset as at 10, 11 respectively, thereby preventing the said outer transversely-extending portions from being pulled in one direction through the openings when the bond is set up, or in other words, the headed or upset terminus of the outer transversely extending portions prevent the separation of the bond from the rail sections when the former is set up in position. Such construction of bond 9 allows a portion of the same to extend upon each side of the rail sections 1 and 2, and if it be desired to remove the splice bars 5 and 6 it would be necessary to sever or break the bond. Besides preventing accidents by the removal of the splice bars 5 and 6, the bond 9 insures a more positive electrical connection between the rails 1 and 2 owing to the fact that the bond passes through the confronting ends of the rails, besides being connected to the webs thereof.

We do not care to confine ourselves to the manner of forming the terminals of the bond, or to the exact arrangement of the bond as shown, our invention principally residing in passing the bond through the splice bars and webs of the adjoining rails.

What we claim and desire to secure by Letters Patent, is:—

1. In a bond for rails, the combination with the confronting ends of two rails connected by splice bars, bolts and nuts, of a bond passing through said splice bars and the webs of said rails and having its terminals at the webs of said rails, a portion of said bond extending upon both sides of said rails.

2. The combination with a rail joint comprising rails, splice bars, bolts and nuts, of a bond passing through the webs of said rails and said splice bars, and having its terminals at the webs of said rails.

3. The combination with rails having their ends secured together by splice bars, of a bond passing through said bars, and the webs of said rails having their ends connected to said rails.

4. The combination with rails connected by splice bars, of a bond passing through said splice bars and connecting with said rails.

5. The combination with rails, and means for fastening said rails together, of a bond connecting with said rails and extending through said fastening means.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES Y. HAILE.
GEORGE M. HUGUS.

Witnesses:
N. H. HANKINS,
J. W. HARTMEYER.