(No Model.)

H. V. & T. SLUTZ.

RAILWAY TIE.

No. 492,895. Patented Mar. 7, 1893.

Fig. 1.

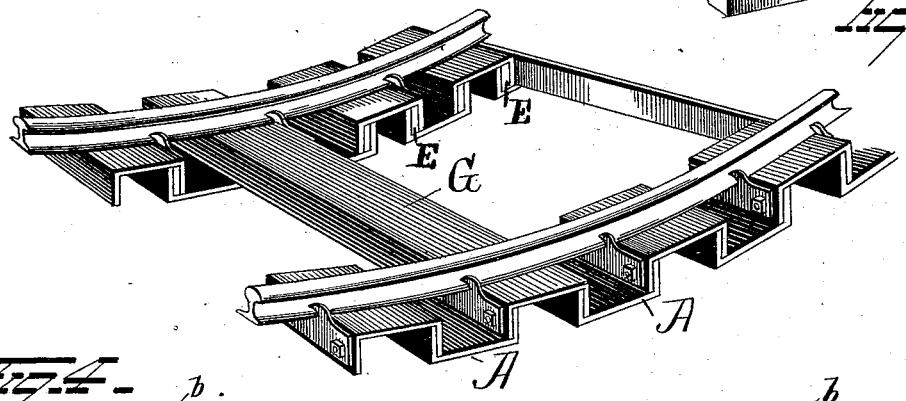

Fig. 6.

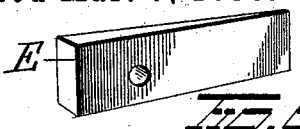

Fig. 4.

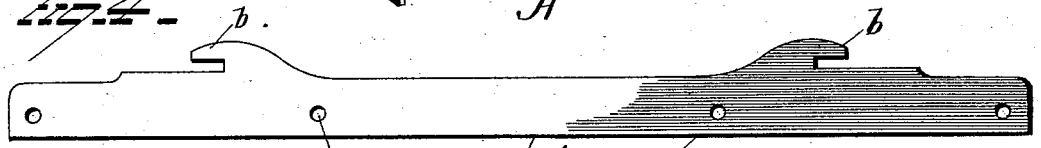

Fig. 3.

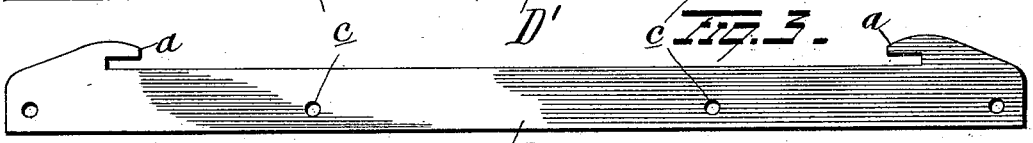

Fig. 5.

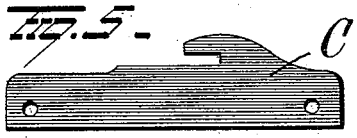

Fig. 2.

Witnesses
G. F. Downing
V. E. Hodges.

Fig. 7.

Inventors
H. V. and T. Slutz
By H. A. Seymour
Attorney

UNITED STATES PATENT OFFICE.

HERMAN V. SLUTZ, OF ALTA, AND THEOPHILUS SLUTZ, OF STORM LAKE, IOWA.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 492,895, dated March 7, 1893.

Application filed February 15, 1892. Serial No. 421,597. (No model.)

To all whom it may concern:

Be it known that we, HERMAN V. SLUTZ, of Alta, and THEOPHILUS SLUTZ, of Storm Lake, in the county of Buena Vista, State of Iowa, have invented certain new and useful Improvements in Railway-Ties; and we 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.

Our invention relates to an improvement in railway ties, and more particularly to improvements on the construction disclosed in our United States Patent No. 451,781, granted to us May 5, 1891. In the said patent we show and describe ties composed of metallic plates having side flanges, the said plates being so arranged that each alternate plate rests solidly on the ground or bed with its flanges projecting upwardly and the intermediate or upper plates resting on the upturned flanges of the lower plates, the flanges of the upper plates projecting downwardly and on the outside of the flanges of the lower plate. The upper plates support the rail and the latter is secured thereto by hooked bars overlapping the flanges and secured by bolts to the adjacent flanges of the upper and lower plates. The plates supporting the two lines of rails constituting the track, are secured together by the rods which latter do not restrict the free yielding movement of either set of plates but are designed more particularly to prevent the rails from spreading.

Our present invention relates more particularly to devices for assembling the tie at a curve and to gage rods for connecting the rails at intervals throughout its length, and it consists in the parts and combinations of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings Figure 1 is a view in perspective of, a section of one track arranged on a curve. Fig. 2 is a view of a section of straight track. Fig. 3 is a view of an outside gage bar. Fig. 4 is a view of an inside gage bar. Fig. 5 is a view of one of the hooked bars for securing the rails to the upper plates. Fig. 6 is a view of the wedge and Fig. 7 is a view of the bolt for securing the ties together.

The ties A are each composed of a plate having flanged sides and arranged as shown so that each alternate or lower plate rests solidly on the road bed, while the upper ties or plates support the rails, the latter being secured to the ties or plates by the hook bars C and stirrup bolts B which latter passes through the flanges of the upper and lower plates and through the hook bar C, and secures the parts in place. The hooked bars are necessarily arranged to engage both flanges of the rails. At suitable intervals apart the hook bars are displaced by the gage bars D, D′ the former having hooks or lips *a* for engaging the outer flanges of the two rails, while the latter have lips *b* for engaging the inner flanges. These bars each have holes *c* near their opposite ends for the passage of the screw threaded ends of the stirrup bolts B which latter secure them in place. These bars D D′ are preferably arranged alternately and in addition to keeping the rails at the desired gage, also absolutely prevent spreading.

The wedges E are simply employed for assembling or arranging the ties at curves, and are driven or placed in between the flanges of the upper and lower plates on the inside of the curve and are secured by the stirrup bolts B. The insertion of the wedges between the flanges necessarily shortens the space between the upper plates at one end without affecting the width of the space at the opposite end. By this arrangement curves of any radius may be secured. For a sharp curve large wedges may be driven in between each pair of flanges, and for a longer one they can be placed at intervals or smaller wedges may be used. Again in order to strengthen the track at a curve we prefer to employ at intervals, continuous ties such as shown at G. These ties are simply plates bent similar to plate A, but of a length sufficient to extend from one rail to the other. These continuous ties are preferably placed under the joints of the rails and not only very materially assist

the gage bars in preventing the rails from spreading but they materially stiffen the surface bearing at the meeting points of the rails.

The gage or tie rods are desirable in some instances, but they are not absolutely essential as the continuous ties G, are generally sufficient to prevent spreading and hence the tie or gage rods can be dispensed with. Again if desired we can employ a cement or other suitable filling under the ties to support same if found necessary.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is--

1. A railway tie composed of a series of short metal ties, each tie consisting of a plate having flanged sides, the plates being arranged as shown so that the flanges of one overlap the adjacent flanges of the two adjacent ties, and continuous ties the latter having flanged sides and extending from one rail to the other and supporting both rails, the said longer ties being arranged at intervals throughout the trackway, substantially as set forth.

2. The combination with the two series of short metal ties each consisting of a plate having flanged sides, the flanges of each alternate tie overlapping the adjacent flanges of the two adjacent ties, of the wedges secured between the flanges for forming a curve, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

HERMAN V. SLUTZ.
THEOPHILUS SLUTZ.

Witnesses:
JOHN R. LEMON,
J. ROYAL LEMON.