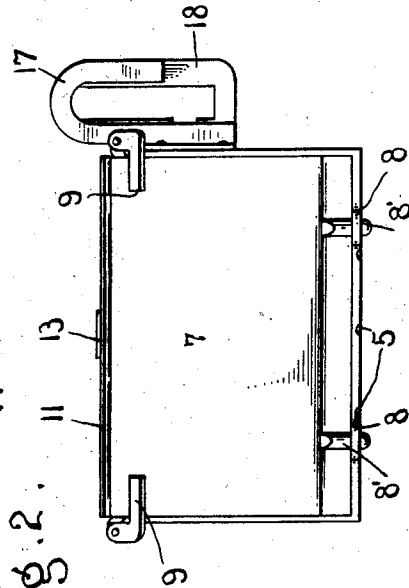
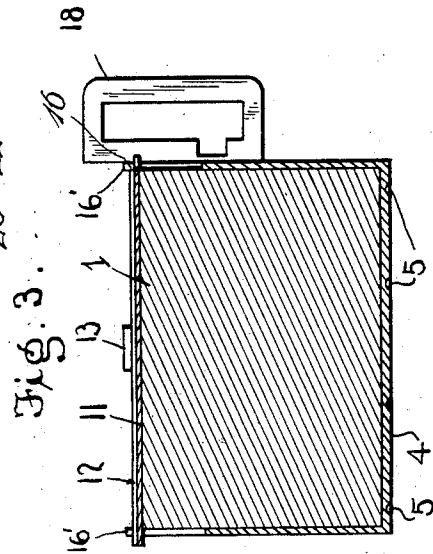


1,055,078.

2 SHEETS--SHEET 1..



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RAILROAD TIE.
APPLICATION FILED NOV. 18, 1912.

1,055,078.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 2.

Fig. 4.

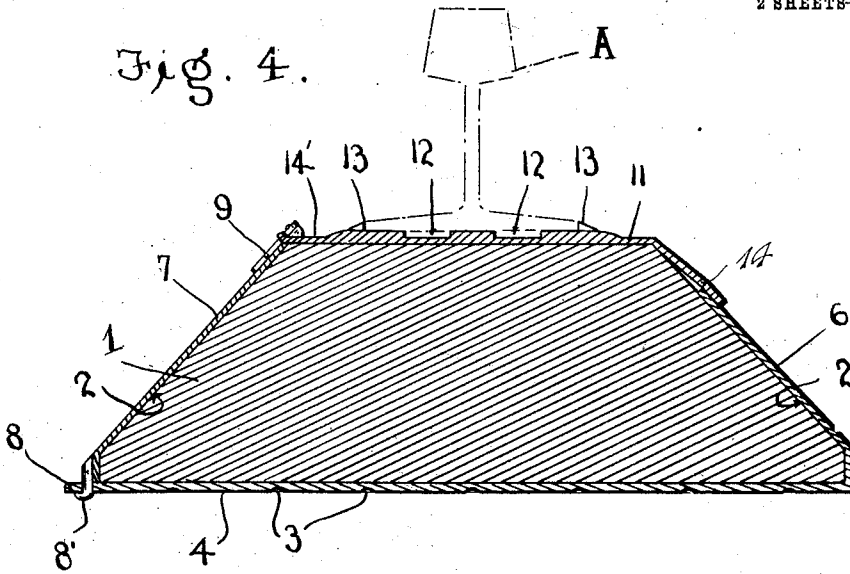


Fig. 5.

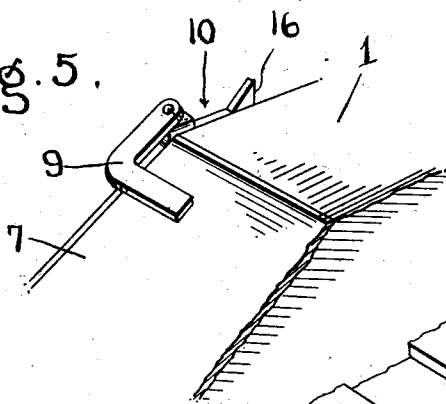
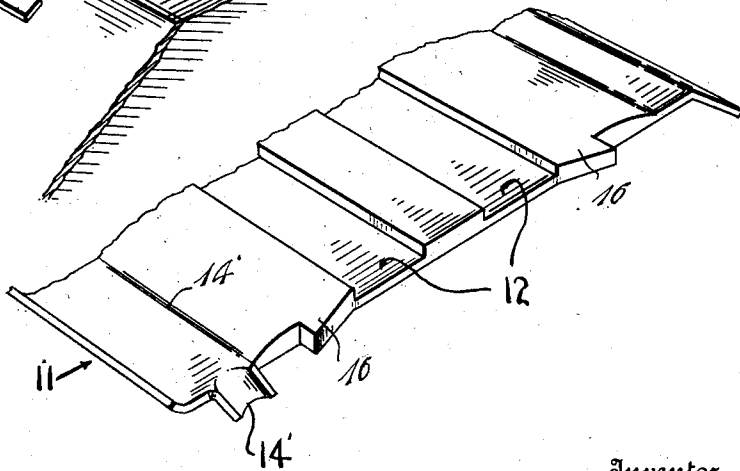


Fig. 6.



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UNITED STATES PATENT OFFICE.

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RAILROAD-TIE.

1,055,078.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed November 18, 1912. Serial No. 732,151.

To all whom it may concern:

Be it known that I, FRED QUIST, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Railroad-Ties; and I do 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.

This invention relates to improvements in railway ties and more especially to metal covered wooden ties.

The main object of the invention is to provide a spikeless metal covered wooden tie so constructed as to be thoroughly ventilated and yet protected against the weather thereby greatly prolonging the life of the tie.

Another object is to produce a tie of this character the configuration of which is such that a minimum amount of wood is used to produce a maximum bearing for the rail.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings; Figure 1 represents a top plan view of a tie constructed in accordance with this invention; Fig. 2 represents an end elevation thereof; Fig. 3 represents a transverse vertical section on a line 3—3 of Fig. 1; Fig. 4 is a longitudinal sectional view thereof; Fig. 5 is an enlarged detail of one of the locking clamps; Fig. 6 is a similar view of one end of the tie plate.

In the embodiment illustrated a wooden tie 1 is shown the opposite sides of which are beveled as shown at 2, whereby a maximum bearing surface or base 3 is provided while requiring a minimum amount of wood to construct the tie a great saving being effected by beveling the sides thereof. These ties may be of any suitable or desired length being preferably about three feet three inches long thus requiring about eight ties to a rail thirty-three feet long providing a total bearing of about twenty-six feet for the rail as the ties are adapted to be placed lengthwise. These wooden ties 1 which constitute fillers are covered with a suitable metal casing preferably constructed of galvanized sheet metal in the form shown in the drawings. The bottom 4 of this casing is preferably composed of one-fourth inch

iron and is corrugated as shown at 5. The bottom, one side and the ends of this casing are preferably constructed from a single sheet of metal bent to conform to the shape of the wooden filler 1 the integral side 6 being shown of less length than the beveled side of the filler to which it is applied and over which the tie plate laps as will be hereinafter described to prevent the entrance of water into the casing. The opposite side 7 of the casing is preferably made from a separate sheet of metal and is secured to the bottom 4 by detachable means here shown in the form of apertured lugs 8 which extend from the bottom 4 and with which are engaged clamping elements 8' which securely retain the side member 7 in position. Any desired number of these clamps may be employed. The upper end of the member 7 is secured to the end members of the casing by means of pivotally mounted clamps or catches 9 which swing over said side 7 near its upper edge and securely lock it to the casing.

The ends of the casing are provided at their upper edges adjacent the side member 7 with recesses 10 to receive the opposite ends of a spout formed on the tie plate now to be described. This tie plate 11 forms the covering for the upper face of the wooden filler and on which the rails as A are designed to rest. This plate 11 is formed of any suitable metal and is provided with longitudinally extending grooves 12. A plurality of shoulders 13 are formed on the upper face of this plate with which the edge of the base of the rail A is designed to engage, said shoulders serving to hold the rail in place on the plate and preventing lateral movement thereof. This plate 11 has a downwardly inclined flange or apron 14 which overlaps the upper edge of the side 6 of the casing thereby preventing water from entering the casing at this point. The shoulders 13 may be of any suitable or desired size being preferably about one inch wide and three inches long.

On the outer edge of the tie plate 11 is formed a depression extending longitudinally thereof and adapted to perform the function of a drain pipe or spout 14' the ends of which project and fit within the recesses 10 in the ends of the casing. The side edge of this tie plate adjacent the spouts or gutters 14' is preferably turned upward slightly to prevent the water pass-

ing over the side of the plate and under which upturned portion the upper edge of the side 7 of the casing is designed to extend. The opposite ends of the tie plate
5 are provided with longitudinally extending lugs or tongues 16 which are adapted to engage lateral projections 17 and 18 to be described on the ends of the casing whereby the plate 11 is firmly held against lateral
10 movement, the lugs or tongues 16 being arranged between the lateral projections on the casing ends when the parts are assembled.

The end walls of the casing are preferably
15 cut out at their upper edges for about one inch more or less below the top of the filler 1 between said lateral projections to provide for wearing of the top of the filler without interfering with the casing and
20 have upwardly extending lugs 16' to which the members 17 and 18 are connected and which project above the plate 11 when the parts are assembled.

The lateral projections 17 and 18 on the
25 ends of the casing above referred to are shown in the form of anti-creeper supporting members designed for use in connection with an anti-creeper which forms no part of this invention and hence a detail description thereof is not deemed necessary.
30

These ties which are arranged longitudinally under the rails A are secured to the ties of the opposite side of the track by suitable tie rods 19 which are here shown
35 projecting from the ends of the casing. Any suitable form of tie rod may be employed when no block signals are used and when such signals are used the tie rod shown in the accompanying drawings is applicable. These tie rods as shown constitute
40 overlapping bars 20 and 21 the inner or overlapping ends of which have interlocking teeth 20' and 21' and are held in adjusted position by means of wedge shaped
45 cotter keys 22 which pass through studs 23 on the ends of the overlapping bars, said studs being first extended through apertures in the adjacent bars. These keys when properly applied will not rattle loose as the
50 split ends thereof diverge and prevent rattling or accidental disengagement.

While I have described my invention with more or less minuteness as regards details and as being embodied in certain
55 precise forms I do not desire to be limited thereto unduly any more than is pointed out in the claims. On the contrary, I contemplate all proper changes in form, construction and arrangement, the omission of
60 immaterial elements and substitution of equivalents as circumstances may suggest or render expedient.

I claim as my invention:

1. A railway tie comprising a wooden filler, a metal covering enveloping said
65 filler and comprising a casing composed of sides, ends and a bottom conforming to the configuration of said filler, and a tie plate arranged over the upper face of said filler and having a depending apron at one side
70 thereof overlapping the upper edge of one side of said casing, a water spout formed at the other side of said plate, and cooperating means on said plate and casing for locking the parts in operative position. 75

2. A railway tie comprising a filler having its opposite sides beveled, a metal casing enveloping said filler and having one side detached, a detachable top for said
80 casing provided with a plurality of longitudinally extending grooves and with means for holding the rail against lateral displacement, and cooperating means on said top and the end walls of said casing for locking the parts in operative position. 85

3. A railway tie comprising a filler, a metal covering therefor comprising a single sheet bent to form a bottom, ends and one side wall, another side wall detachably connected with the bottom of said casing, catch
90 members on the end of said casing for engaging said detachable side and holding it in operative position, and a plate forming a covering for said casing and having a depending apron at one side thereof overlapping the integral side member of the casing,
95 and cooperating shoulders on the end walls of the casing for locking said plate against lateral movement, said end walls having recesses therein, and a water spout projecting beyond the ends of said plate and engaging the recesses in the end walls of the casing. 100

4. A railway tie comprising a wooden filler, a metal covering enveloping said filler
105 and comprising a casing composed of sides, ends and a bottom conforming to the configuration of said filler, and a tie plate arranged over the upper face of said filler and having a depending apron at one side thereof overlapping the upper edge of one side
110 of said casing, a water spout formed at the other side of said plate, cooperating means on said plate and casing for locking the parts in operative position, and tie rods
115 for connecting the ties at opposite sides to the bracket.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRED QUIST.

Witnesses:

NORMAN O. BYERS,
WILLIAM CHANEY.