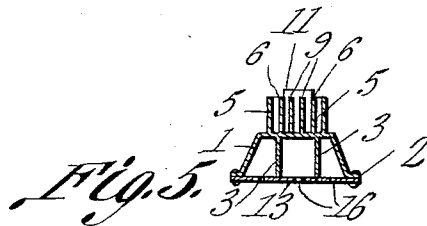
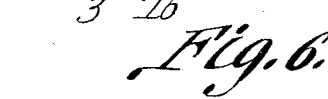
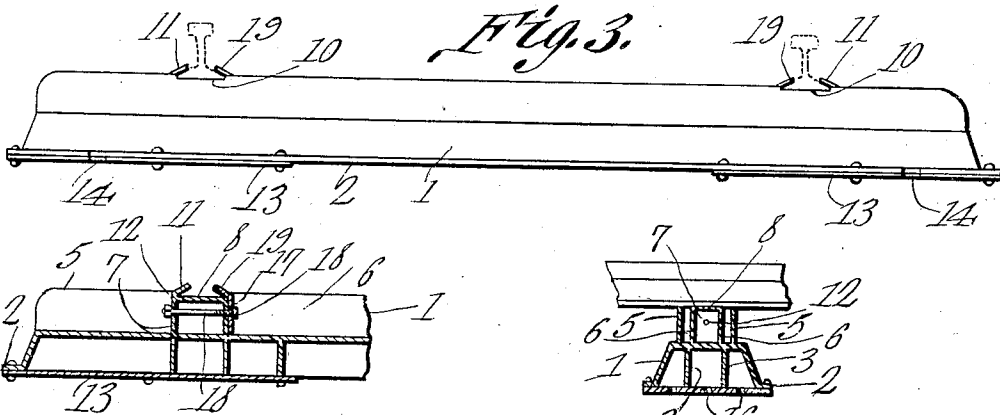
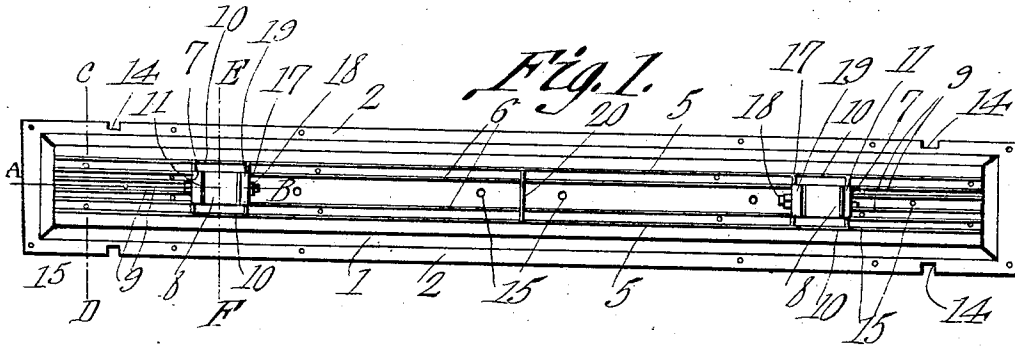


F. F. GREEN.
METALLIC RAILWAY TIE.
APPLICATION FILED AUG. 10, 1912.

1,050,271.

Patented Jan. 14, 1913.



F. F. Green

Witnesses

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UNITED STATES PATENT OFFICE.

FURNEY F. GREEN, OF COALGATE, OKLAHOMA.

METALLIC RAILWAY-TIE.

1,050,271.

Specification of Letters Patent.

Patented Jan. 14, 1913.

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To all whom it may concern:

Be it known that I, FURNEY F. GREEN, a citizen of the United States, residing at Coalgate, in the county of Coal and State of Oklahoma, have invented a new and useful Metallic Railway-Tie, of which the following is a specification.

This invention relates to metallic railway ties, one of its objects being to provide an all metal tie having a novel arrangement of reinforcing ribs whereby the tie is strengthened both longitudinally and transversely and can, therefore, be made of comparatively thin metal.

Another object is to provide novel means for fastening rails to the tie, said rail fastening means constituting efficient holding devices for preventing the rails from spreading after they have once been fastened in position.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a plan view of the tie. Fig. 2 is a bottom view thereof, the bottom plates being removed. Fig. 3 is a side elevation, the rails being shown by dotted lines in position on the tie. Fig. 4 is a section on line A—B Fig. 1. Fig. 5 is a section on line C—D Fig. 1. Fig. 6 is a section on line E—F Fig. 1.

Referring to the figures by characters of reference 1 designates an inverted trough-like tie body the walls of which converge upwardly. Outstanding flanges 2 are formed along the lower edges of the body and extending longitudinally within the body are parallel reinforcing webs 3 braced transversely at desired points by transversely extending webs 4.

Extending longitudinally along the upper face of the body 1 is an outer pair of longitudinally upstanding ribs 5 and interposed between these ribs is an inner pair of upstanding ribs 6 which also extend longitudinally of the tie body throughout the length

thereof. A pair of transversely extending webs 7 connect the ribs 6 adjacent the ends of the tie body and are, in turn, connected by a top portion or bridge 8 constituting a seat for a rail. Supplemental longitudinal ribs 9 extend from the outer end of the body and up to the outermost webs 7. It will be noted that the outer ribs 5 are as high as the inner ribs 6 and those portions of the said ribs directly opposite the ends of the bridge 8 are cut away, as at 10 so as to receive the base portions of the rails mounted on the bridges. Formed integral with each bridge 8 and overhanging the outer side thereof is a rail engaging cleat 11 adapted to overhang and fit snugly upon the outer base flange of a rail. Transverse openings 12 are formed in the webs 7.

All of the parts hereinbefore described are formed in a single piece and in order to complete the tie structure, bottom plates 13 are riveted or otherwise secured to the end portions of the body, the edge portions of the plates being attached to the adjacent portions of the outstanding flanges 2. These flanges as well as the base plates are also provided with notches 14 to receive spikes, not shown, which may be used to attach the ties to bridges and the like. Openings 15 may formed in the top of the tie body so as to permit water to drain from the spaces formed between the longitudinal ribs and the transverse webs, and additional openings 16 may be formed in the bottom plates 13.

For the purpose of fastening rails to the ties, rail engaging plates 17 are extended into the spaces between the two pairs of webs 7 and are adapted to bear against the innermost webs of each pair and to be clamped thereagainst by bolts 18 extending through the openings 12. The upper ends of the plate 17 are inclined so as to form jaws 19 which overhang the bridges 8 and are adapted to bear upon the inner base flanges of the rails and thus hold the rails in engagement with the cleats 11.

As shown in Fig. 1, one or more reinforcing webs 20 may be arranged transversely between the inner ribs 6 at points between the pairs of webs 7.

It is to be understood that provision may be made for attaching frogs and switches to the tie, the changes necessary being so obvious that it is not deemed necessary to illustrate them in the present case.

What is claimed is:—

1. A metallic railway tie including an inverted trough-like body having longitudinal reinforcing webs therein, transverse webs within the body and connecting the longitudinal webs, said body and webs being integral, outer and inner pairs of longitudinal ribs integral with and upon the upper face of the body, means integral with the inner ribs for bridging the space therebetween and constituting rail seats, rail engaging portions integral with said bridging means, detachable rail engaging jaws cooperating with said means to secure rails upon the ribs, there being rail receiving recesses in the upper edges of the ribs of inner and outer pairs and at opposite ends of the bridging means.

2. A metallic railway tie including an inverted trough-like body having longitudinal and transverse reinforcing webs integral therewith and arranged therein, longitudinal ribs upon the upper face of the body, a bridging portion connecting the ribs adjacent each end thereof and constituting a rail seat, a rail engaging cleat overhanging each bridging portion, longitudinal reinforcing ribs interposed between the end portions of the first named ribs and extending up to the bridging portions, jaws detachably mounted between the bridging portions and overhanging the same for engaging the inner base flanges of the rails, and means extending under the bridging portions for securing the jaws in position.

3. A metallic railway tie including an inverted trough-like body, longitudinal and transverse reinforcing webs within the body, said body having outstanding flanges along its lower edges, a pair of longitudinal ribs upon the body and integral therewith, bridging members connecting the ribs and constituting rail seats, rail engaging devices integral with said bridging members and overhanging the same, rail engaging jaws interposed between the ribs and bearing against the bridging members, said jaws

overhanging said members and adapted to engage the inner base flanges of rails, means extending longitudinally of the tie and under the bridging members for securing the jaws in position, longitudinal ribs upon the tie and integral therewith, said ribs being disposed between the first named ribs and the longitudinal side edges of the tie body, there being recesses in the upper edges of the longitudinal ribs for the reception of the base portions of rails upon the bridge members.

4. A metallic railway tie including an inverted trough-like body, longitudinal and transverse reinforcing webs within the body, said body having outstanding flanges along its lower edges, a pair of longitudinal ribs upon the body and integral therewith, bridging members connecting the ribs and constituting rail seats, rail engaging devices integral with said bridging members and overhanging the same, rail engaging jaws interposed between the ribs and bearing against the bridging members, said jaws overhanging said members and adapted to engage the inner base flanges of rails, means extending longitudinally of the tie and under the bridging members for securing the jaws in position, longitudinal ribs upon the tie and integral therewith, said ribs being disposed between the first named ribs and the longitudinal side edges of the tie body, there being recesses in the upper edges of the longitudinal ribs for the reception of the base portions of rails upon the bridging members, and bottom plates secured to the end portions of the body, there being drain openings in the top of said body and in the bottom plates.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

F. F. GREEN.

Witnesses:

PATSY GREENAN,
J. E. T. CLARK.