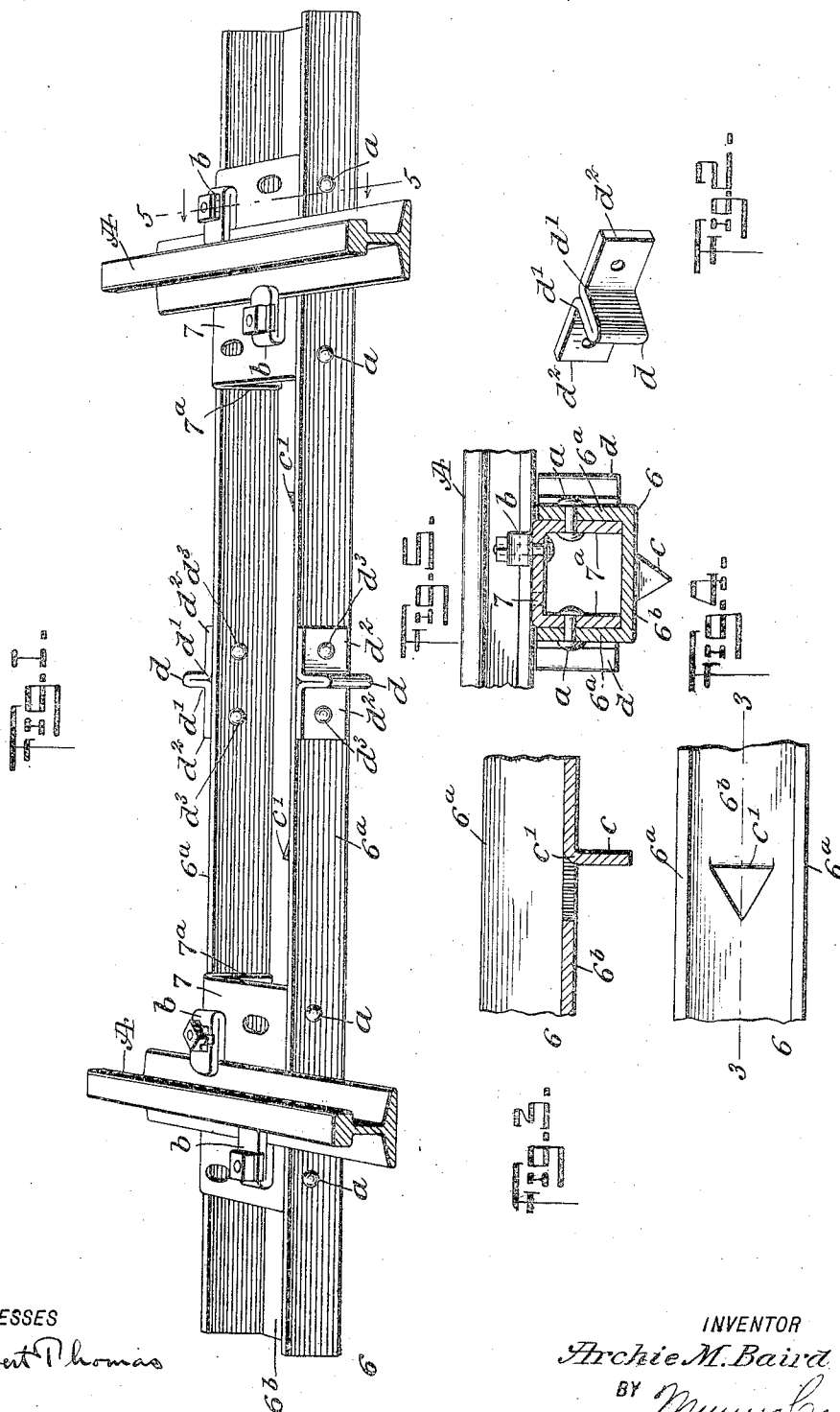


METALLIC RAILROAD TIE.

902,364.

Patented Oct. 27, 1908.



WITNESSES

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METALLIC RAILROAD-TIE.

No. 902,364.

Specification of Letters Patent.

Patented Oct. 27, 1908.

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To all whom it may concern:

Be it known that I, ARCHIE M. BAIRD, a citizen of the United States, and a resident of Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in Metallic Railroad-Ties, of which the following is a full, clear, and exact description.

The purpose of this invention is to improve the construction of the cross tie, for which a patent was granted to me, dated July 2, 1907, and numbered 858,942.

The invention consists in the novel construction and combination of parts, as is hereinafter described and defined in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a cross tie embodying the present improvements; Fig. 2 is a detached perspective view of an attachable wing that is a detail of the invention; Fig. 3 is a longitudinal sectional view of a portion of the cross tie body having a feature of improvement thereon, the section being taken on the line 3—3 in Fig. 4; Fig. 4 is a plan view of the portion of the cross tie body shown in Fig. 3; and Fig. 5 is a transverse sectional view of the improved cross tie, substantially on the line 5—5 in Fig. 1.

6 indicates the body of the cross tie, preferably constructed of steel plate cut and bent into shape, and as shown in the drawings, two side walls 6^a are spaced apart by a flat bottom wall 6^b, and thus held in vertical parallel planes, and it may here be explained that this form of the tie body is not claimed as broadly new, the same being shown in said Letters Patent No. 858,942.

Two rail-bearing stools are furnished, which are of similar form, each consisting of a top plate 7, and two side walls 7^a, which are bent at right angles from the top plate, and are thus disposed in parallel planes.

The space between the outer sides of the side walls 7^a of each stool is such that they may be inserted down into the open top of the tie body, and fit closely against the inner surface of its side walls 6^a, the true free lower edges of the side walls 7^a being seated upon the bottom wall 6^b of the tie body.

The stools are disposed at such a distance

apart as will conform to the gage or degree of separation between the track rails, and each stool is secured within the tie body by rivets *a*, which are secured in transverse perforations of the lapped side walls 6^a and 7^a. The top plates 7 of the stools have their upper surfaces substantially flush with the top edges of the side walls 6^a of the tie body 6, so that the track rails A, A, may be seated upon said top plates 7 and be thereon secured by clamps *b*, that may be of any approved construction.

The features of improvement that are most important in this invention, comprise novel means for holding the body 6 stationary, and preventing a longitudinal creeping movement, that is liable to occur in a road bed of clay or wet soil in which the tie body may slip.

One detail of the invention for effecting the purpose mentioned, consists in the formation of preferably V-shaped lugs *c* on the lower side of the bottom wall 6^b of the tie body 6. These lugs *c* in any preferred number, are formed integrally with said bottom wall by cutting the material forming each lug loose at the side edges, leaving a transverse connection *c'* remain intact, as shown best in Fig. 3, and the lug is completed by bending the same down at a right angle, thus projecting it from the lower side of the bottom wall 6^b.

Another important novel detail of construction is shown detached in Fig. 2, and connected with the tie body in Fig. 1, this consisting of a wing *d*, formed of plate metal, bent into shape by return folding a strip of metal together at its center of length, thus forming the body of the wing, and at opposite points *d'*, again bending the strip at right angles outwardly from the wing *d*, forming flanges *d''*, at opposite sides of the latter, and disposing said flanges in the same plane. The wings *d* are mounted upon the outer surfaces of the side walls 6^a, of the tie body, and thereto secured by rivets *d''* on bolts passed through transverse perforations in the flanges *d''* and said side walls 6^a. Preferably two of these projecting wings *d* are secured on the tie body oppositely and at its longitudinal center; but it is to be understood that an increased number of said wings, disposed at any distance apart, may be secured on the side walls of the tie body. It will be seen that the projecting wings *d* form abutments which will hold the tie

body stationary, and that the lugs *c* on the bottom wall of said tie body will cooperate with the wings, for effecting such a purpose.

The employment of the improved features in connection with an open channeled body for a metallic cross tie, is especially advantageous for holding such ties that are located on sharp curves of a railroad, or on any other portion of the road-bed that may incline more or less laterally. In fact, the use of the wings and lugs on the tie body is advantageous at any point, and in any soil on a railroad track where cross ties are liable to creep endwise.

15 Having described my invention, I claim as new and desire to secure by Letters Patent:—

20 1. A tie comprising a channel shaped body, channel shaped rail stools, having their side walls inserted between the side walls of the tie body, and seating on the

bottom wall of the tie body, said body having bent down projections on its bottom and lateral wings on its sides, each of said wings comprising a strip folded upon itself, and having its free ends bent laterally, and secured to the tie. 25

2. A tie comprising a channel shaped body, channel shaped rail stools, having their side walls inserted between the side walls of the tie body, and seating on the bottom wall of the tie body, said body having bent down projections on its bottom and lateral wings on its sides. 30

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses. 35

ARCHIE MARKLAND BAIRD.

Witnesses:

DON KINNEY,

HARRY A. INGOLD.