

No. 768,998.

PATENTED AUG. 30, 1904.

A. R. KEENE.
METALLIC RAILROAD TIE.
APPLICATION FILED MAY 16, 1904.

NO MODEL.

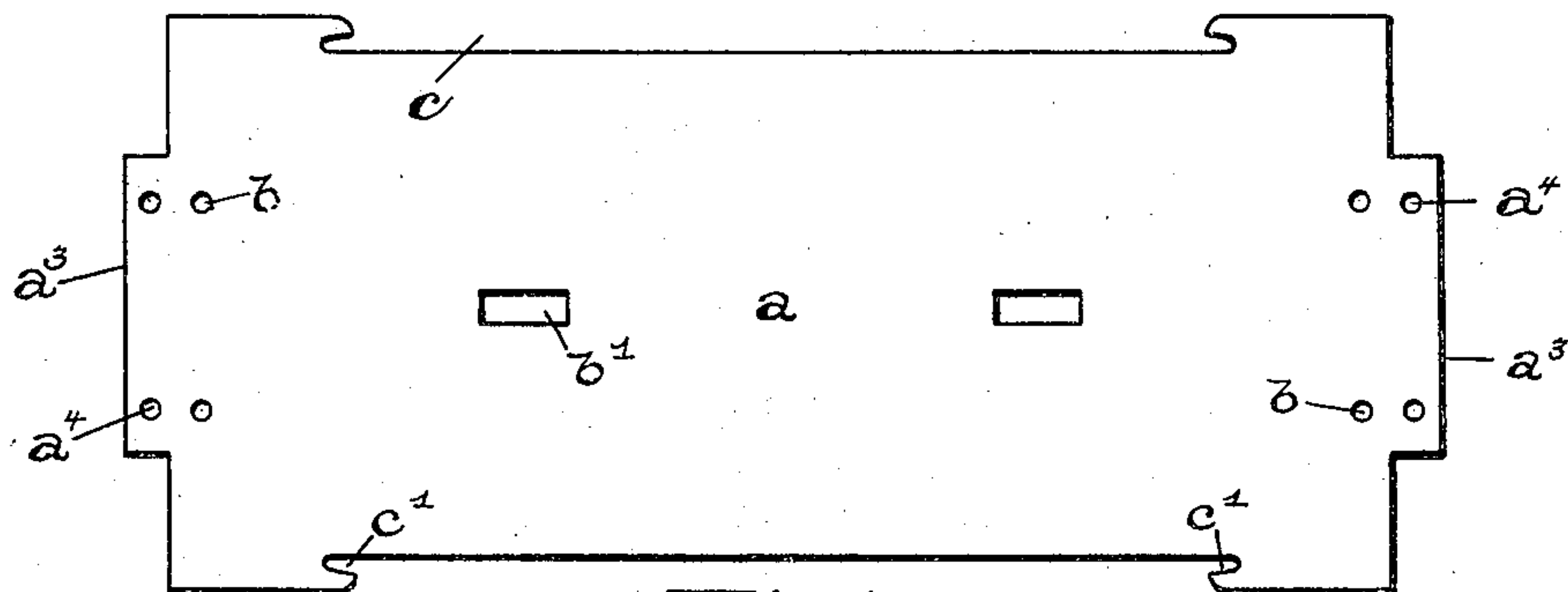


Fig. 1.

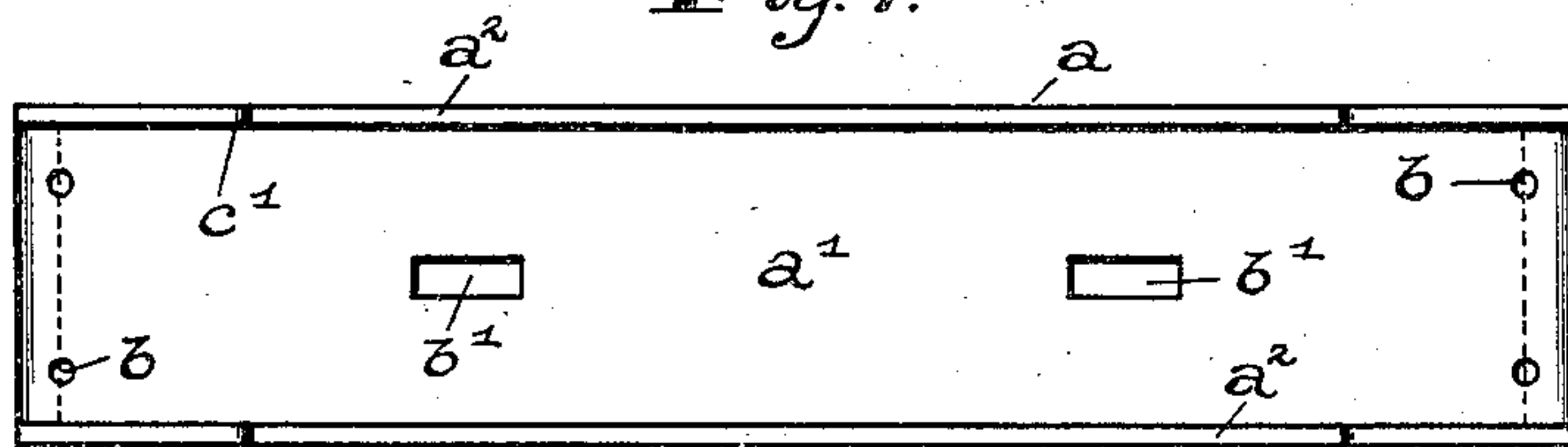


Fig. 2.

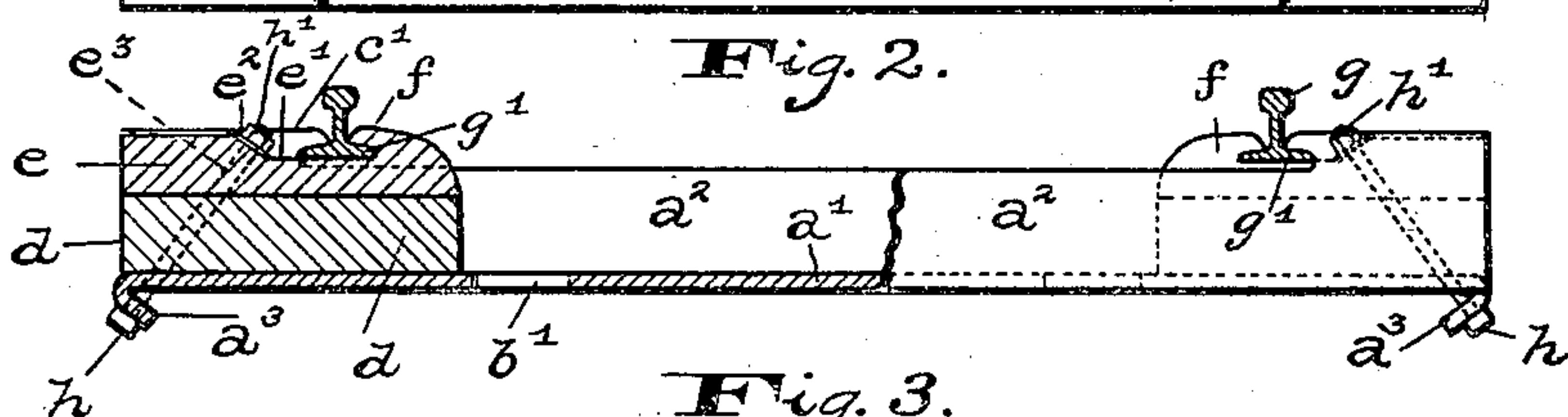


Fig. 3.

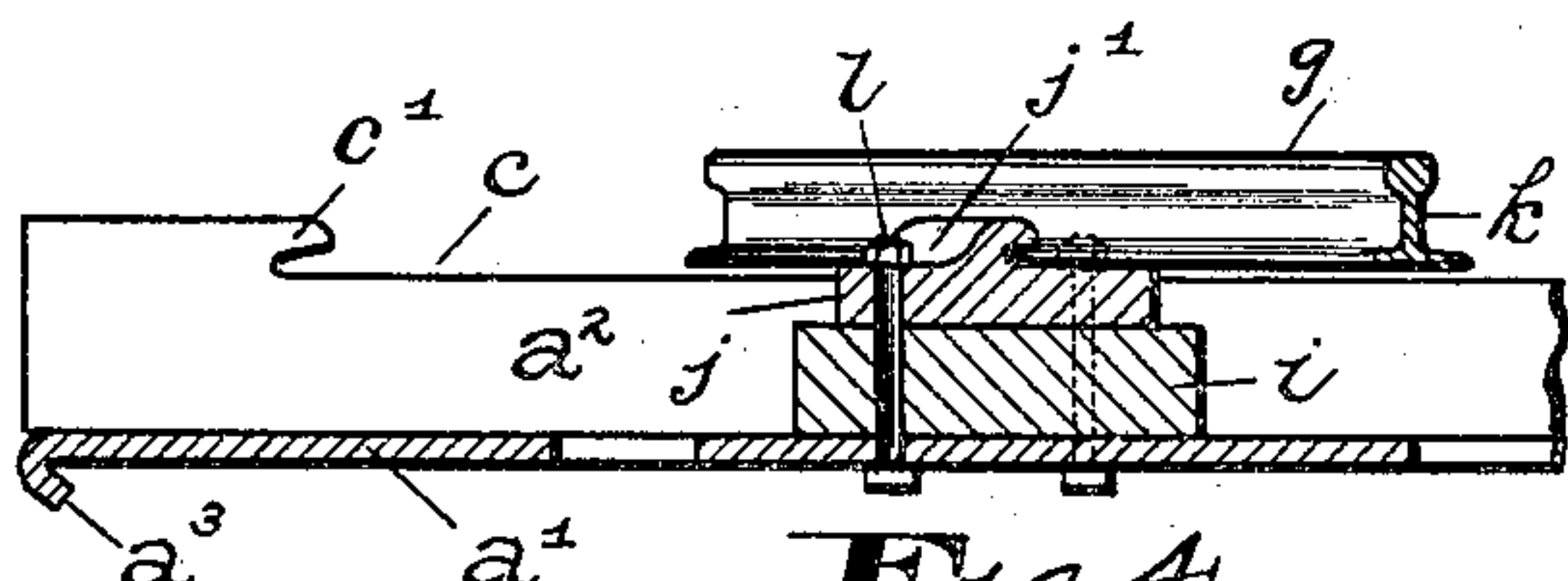


Fig. 4.

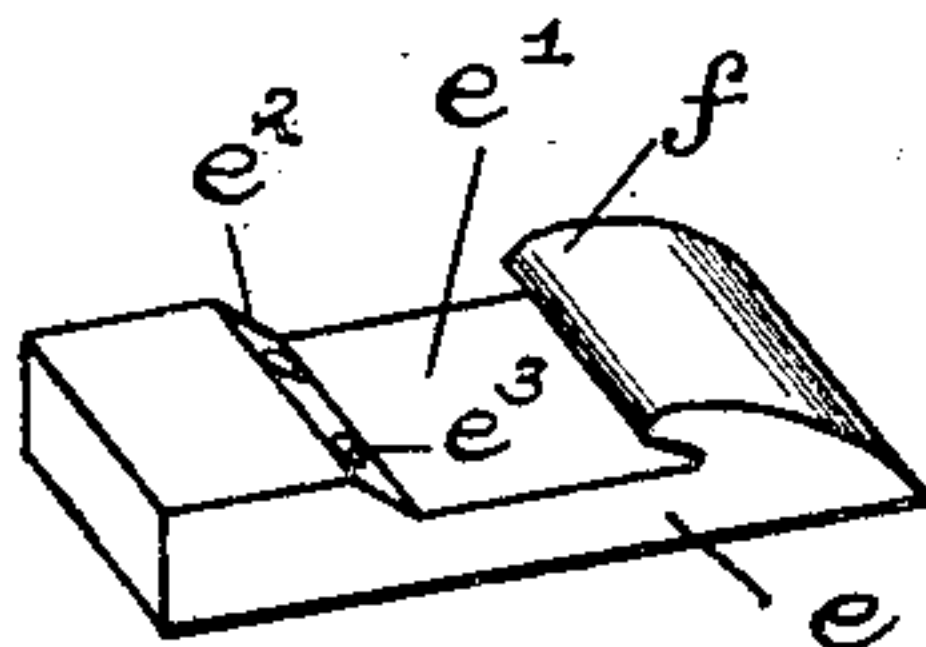


Fig. 5.

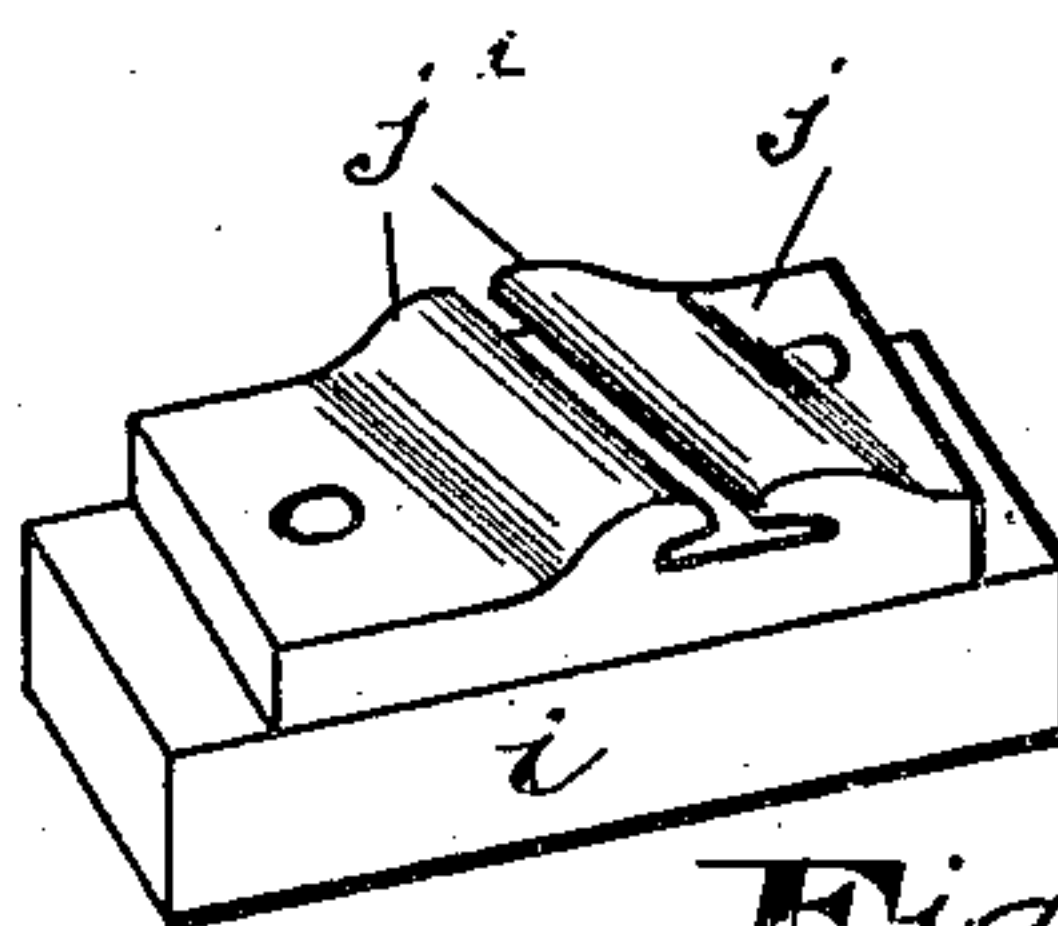


Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

ARTHUR R. KEENE, OF HAVRE DE GRACE, MARYLAND, ASSIGNOR OF TWO-THIRDS TO GEORGE A. BAKER AND HENRY GREENBAUM, OF HAVRE DE GRACE, MARYLAND.

METALLIC RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 768,998, dated August 30, 1904.

Application filed May 16, 1904. Serial No. 208,065. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR R. KEENE, a citizen of the United States, residing at Havre de Grace, in the county of Harford and State of Maryland, have invented certain new and useful Improvements in Metallic Railroad-Ties, of which the following is a specification.

This invention relates to improvements in metallic railroad-ties.

One object of the invention is to provide a construction of tie which may be stamped up from a single sheet of metal.

Another object of the invention is to provide a construction of metal tie and rail supporting device by means of which the advantages of the cushion effect of the wood tie may be retained while the objectionable features of rapid decay will be eliminated.

Other objects and advantages will be pointed out in the appended specification.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 illustrates a plan view of a tie-plate as it appears in the flat stamped-out condition. Fig. 2 illustrates a plan view of the tie. Fig. 3 illustrates the tie, one end of which is sectioned to show the rail supporting and clamping devices. Fig. 4 illustrates a vertical sectional view through a portion of the tie and shows an improved switch-rail block and clamp. Fig. 5 illustrates a perspective view of a rail-clamp, and Fig. 6 illustrates a perspective view of the switch-rail clamp and block.

In the drawings, a designates the tie, comprising a metal bottom plate a' and vertical side plates a'' , forming a channel between said sides. At each end the bottom plate a' is provided with a downwardly and inwardly inclined flange a^3 , which projects below the bottom surface of said bottom plate, and said flanges are each provided with a plurality of perforations a^4 , while the bottom plate is also provided with perforations b and slots b' . The upper edge of each side plate a'' is provided with a longitudinal notch c , at each end of which is a V-shaped undercut or shoulder c' for a purpose to be presently described.

Blocks d , preferably of wood, have position on the bottom plate a' , one at each end of the tie and between the side plates a'' , and these blocks are each provided with inclined holes the lower ends of which register with the perforations b in the bottom plate and are also in line with the perforations a^4 in the inclined flanges a^3 .

A clamp-block e is seated on each of the blocks d , and said clamp-blocks are each provided with a depressed portion e' , which has position in a horizontal plane above the side plates a'' . These clamp-blocks are each also provided with an inclined surface e^2 at one side of the depressed portion e' , and the inclination of said surface e^2 is in a direction parallel with the inclination of the inclined flanges a^3 on the bottom. Holes e^3 extend in an inclined direction from the surface e^2 through said clamp-blocks e and register with the holes in the blocks d . The inner end of each of these clamp-blocks is provided with an outwardly-projecting hook f . The rail g is seated on the depressed portion e' of the clamp-block e , so that the bottom surface of the rail will be elevated above the vertical metal side walls a'' . The inner side of the foot g' of said rail projects beneath the hook f , while the outer side of said foot projects beneath the undercut c' in the side plate a'' . A bolt h extends upwardly through the perforations a^4 in the inclined flanges a^3 , and also through the perforations b in the bottom plate and through the block d and clamp-block e and out through the inclined surface e^2 of said clamp-block. A nut h' on the upper end of the bolt serves to draw the clamp-block e , the hook f , and rail g toward the undercut or shoulder c' and firmly clamp said rail in position between said shoulder and hook. The blocks d being of wood form a cushion for the rails.

At points where switches are to be provided I employ a base-block i , which fits snugly between the side plates a'' , and the upper surface of said base-block carries a clamp-block j , which is provided with two inwardly-turned hooks j' which confront each other, but are spaced far enough apart to permit the web k of the rail to extend vertically be-

tween them. These hooks *j'* extend in a more or less diagonal direction with respect to the base-block *i*, according to the curve of the switch. The base-blocks *i* are secured to the bottom plate of the tie by bolts *l*.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A metallic railway-tie having a bottom and parallel longitudinal sides provided at each end with a shoulder in combination with a clamp-block having position between said parallel sides and also having a hook which projects toward the shoulder on said sides, and means for drawing said clamp-block toward said shoulder.

2. A metallic railway-tie having a bottom and parallel longitudinal sides which are provided at each end with a shoulder, in combination with a clamp-block having a recess in its upper surface and a hook projecting over said recess, and a bolt extending downwardly in an inclined direction through said clamp-block and beneath the bottom of said tie.

3. A metallic railway-tie having a bottom and a flange at each end projecting beneath the bottom, said tie also having parallel longitudinal sides which are provided at each end with an inwardly-extending hook in combination with a clamp-block also having a hook which extends in a direction toward the hook on said sides, and a bolt extending in an in-

clined direction through the clamp-block and also through the bottom and end flange of said tie.

4. A metallic railway-tie having a bottom provided at its ends with one or more perforations and a downwardly-inturned flange projecting from said bottom, said tie also having parallel longitudinal sides the top surfaces of which are provided at opposite ends with inwardly-turned hooks, in combination with a clamp-block at each end of said tie and each of said blocks having a top recess and an inclined surface confronting said recess, and a bolt extending through the inclined flange and also through perforations in the bottom and up through the clamp-block and projecting at the inclined surface of said block.

5. A metallic railway-tie having a bottom and upwardly-extending parallel sides the upper edges of which latter are provided with a cut-away portion to form a shoulder near each end in combination with a clamp-block at each end of said tie and having a hook which extends across the tie between said sides and coacts with the shoulders on said sides to clamp a rail.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR R. KEENE.

Witnesses:

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