(No Model.)

W. W. PITTS.

METAL TIE AND AUTOMATIC CLAMP FOR FASTENING SAME.

No. 488,904. Patented Dec. 27, 1892.

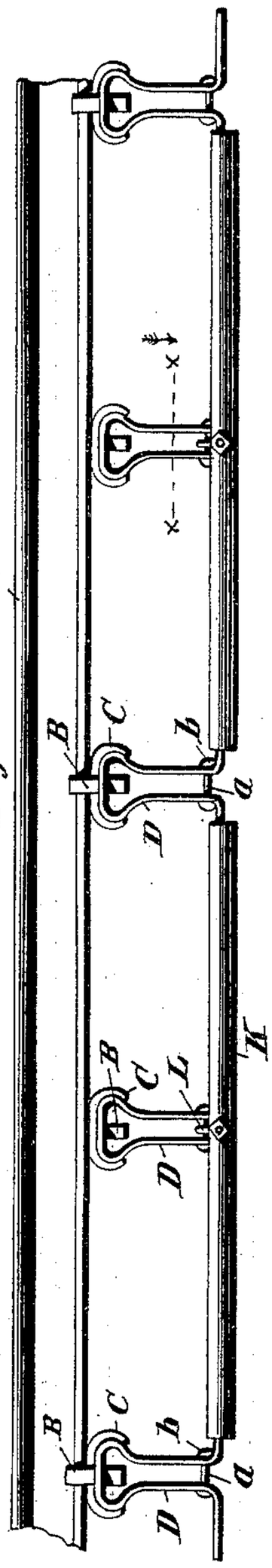

Fig. 1.

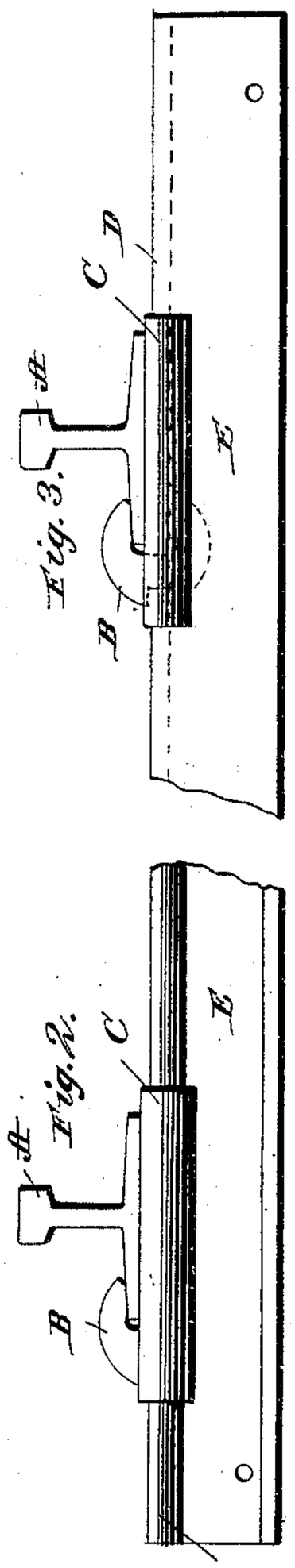

Fig. 3.

Fig. 2.

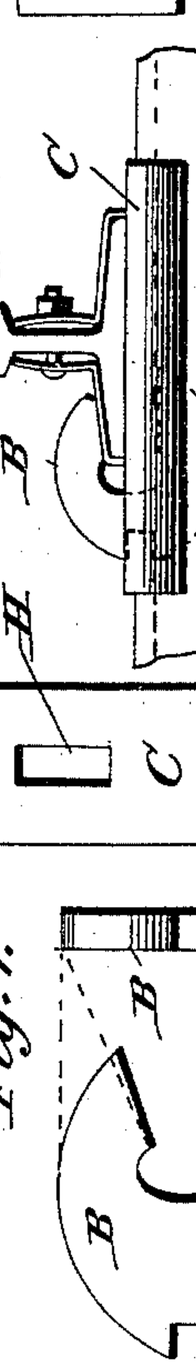

Fig. 7.

Fig. 6.

Fig. 5.

Fig. 4.

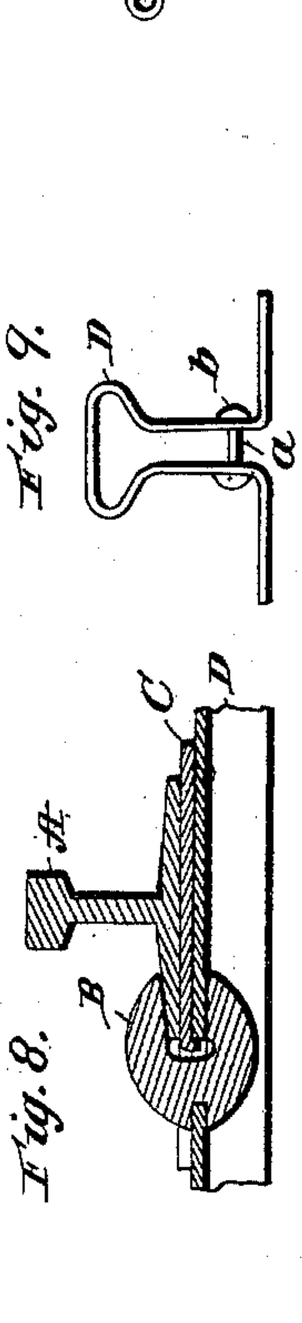

Fig. 11.

Fig. 10.

Fig. 9.

Fig. 8.

Witnesses:
H. Raeder
James J. Sheehy

Inventor.
Wm. W. Pitts
By W. R. Stringfellow
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM WIRT. PITTS, OF SAN LUIS POTOSI, MEXICO, ASSIGNOR OF ONE-HALF TO WILLIAM T. PEGUES AND CHARLES E. JENKINS, OF MANSFIELD, LOUISIANA.

METAL TIE AND AUTOMATIC CLAMP FOR FASTENING SAME.

SPECIFICATION forming part of Letters Patent No. 488,904, dated December 27, 1892.

Application filed February 15, 1892. Serial No. 421,645. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WIRT. PITTS, a citizen of the United States, residing at San Luis Potosi and State of San Luis Potosi, Mexico, have invented certain new and useful Improvements in Metal Ties and Automatic Clamps for Fastening Same; 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.

My invention relates to an improvement in metal ties and automatic clamps for fastening same, and the novelty will be fully understood from the following description and claim, when taken in connection with the annexed drawings; and the objects of my invention are to provide a metal tie that is light and durable, and that can be readily and securely attached and detached from the metal rails of a railway track. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional side view of track. Fig. 2 is a sectional side view, showing tie, rail, and clamp. Fig. 3 is a sectional side view of tie, showing position of clamp in tie. Fig. 4 is a side and rear view of clamp. Fig. 5 is a top view of shoe. Fig. 6 is a sectional view, showing clamp on rail joint and fish-plate. Fig. 7 is a sectional top view of metal tie, showing slot in same for introducing clamp. Fig. 8 is a view showing tie, shoe, and rail in section, and side view of clamp. Fig. 9 is an end view of tie. Fig. 10 is a perspective view of braces and hooks for securing ties. Fig. 11, is a detail horizontal section taken in the plane indicated by the dotted line *x*, *x*, of Fig. 1, looking downwardly.

Similar letters refer to similar parts throughout the several views.

In the drawings, A is a rail, showing the beveled web or bottom of same.

D indicates a tie. E a vertical wall or side of tie.

C represents a shoe that is placed between rail and tie.

F indicates a tongued hook that is bent from the shoe C, and which enters a slot H in the tie, as shown in Fig. 8.

B is a clamp made of metal, and preferably of the shape shown in Fig. 4, and being slotted in such a manner as to engage the ends of the slot in the tie, and when in position bears upon the web of the rail, and the tongued hook F, within the slot H, acts as a key, and when pressure is placed upon the rail causes the jaws of the clamp to bear upon the web of the rail, and the under surface of the top of the tie, as shown in Fig. 8. The metal tie used with my clamp is T shaped, and hollow, as shown in Fig. 9, and provided with slots in each end, as shown in Figs. 5 and 7, thus enabling clamps B to be easily adjusted. The bolt "*a*" is provided with heads "*b*," which are securely riveted to bolt, thus enabling me, when ties are properly pressed into shape, to bolt the ties at each end, as shown in Fig. 9; these bolts are usually placed from four to six inches from end of tie.

When the ties are laid in position upon the bed of the track, and the rails placed thereon, the ties are held securely in position by means of braces K, as shown in Fig. 1, also in detail in Fig. 10; these braces K are slitted as better shown in Fig. 11, to engage the ends of the ties, and are provided with a hook L for engaging the bolts "*a*" in end of tie, said hooks L have a threaded end, upon which a nut M is placed. I have found it preferable to attach hook L to every alternate tie, as in this manner the ends of braces K engage the ends of ties D and prevent their moving out of position.

In practice, the ties are laid upon the road bed in the usual manner, the clamps are placed in the slots in the tie, then place the shoe on tie, as shown in Fig. 8, then slip the rail in place, then tighten braces K, which draws the tie against the clamp B, at D′, and forces the web of the rail to tighten every part to the tie D. The braces K not only hold the ties in a secure position, but have a tendency to prevent the rails from warping, and a rail is

kept in line when once placed in position, and a track walker is enabled to keep his work up properly.

A striking advantage of my invention is the durability and economy of construction, and ease by which a track can be kept in running order.

Having described my invention and the manner in which the same is or may be carried into effect, I would say in conclusion that I do not limit myself to the precise details shown in illustration, as the same may be varied to some extent, but

What I claim and desire to secure by Letters Patent, is—

The herein described metal tie having transverse bolts adjacent to its ends, the brace engaging the ends of ties, and the hooks engaging the transverse bolts of the tie and adapted to hold the brace in position, in combination with a railway rail and a clamp for connecting the rail to the tie, substantially as specified.

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

WILLIAM WIRT. PITTS.

Witnesses:
WILLIAM JEFFERSON ELAM,
CHARLES WILKINSON PAGE.