

No. 771,702.

PATENTED OCT. 4, 1904.

J. A. BOUGHTON.
RAIL FASTENER.

APPLICATION FILED MAR. 14, 1904.

NO MODEL.

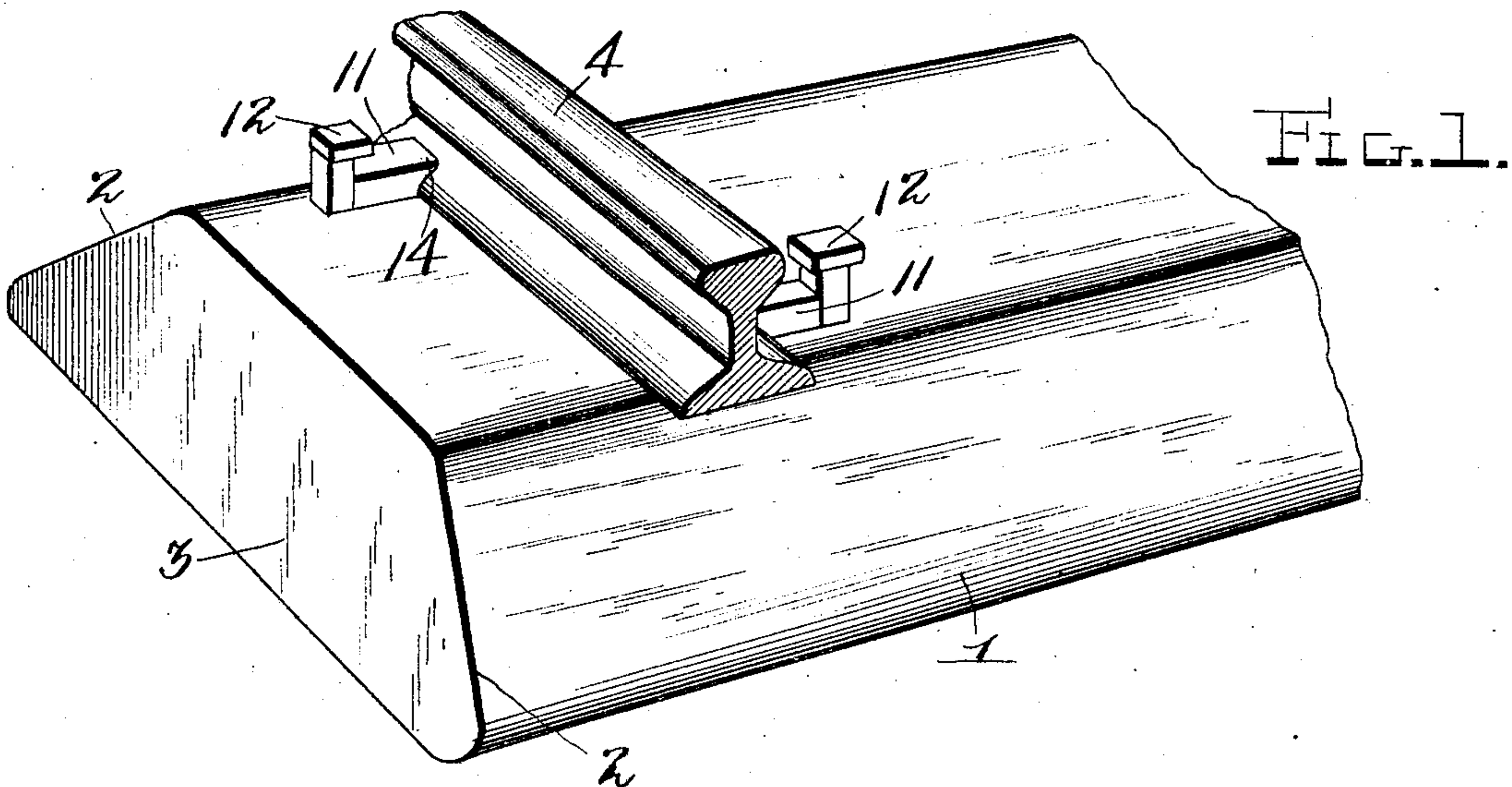


FIG. 2.

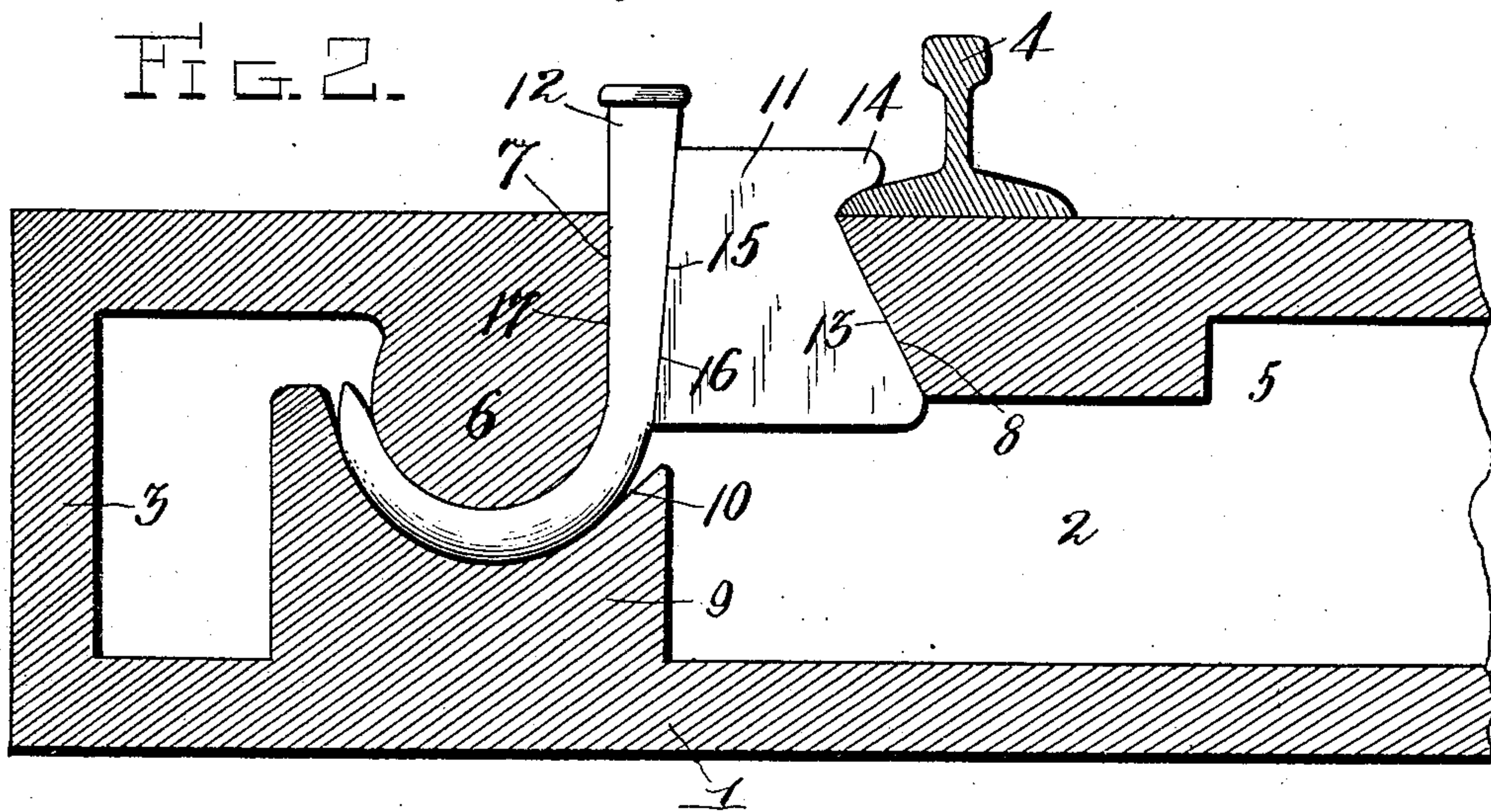
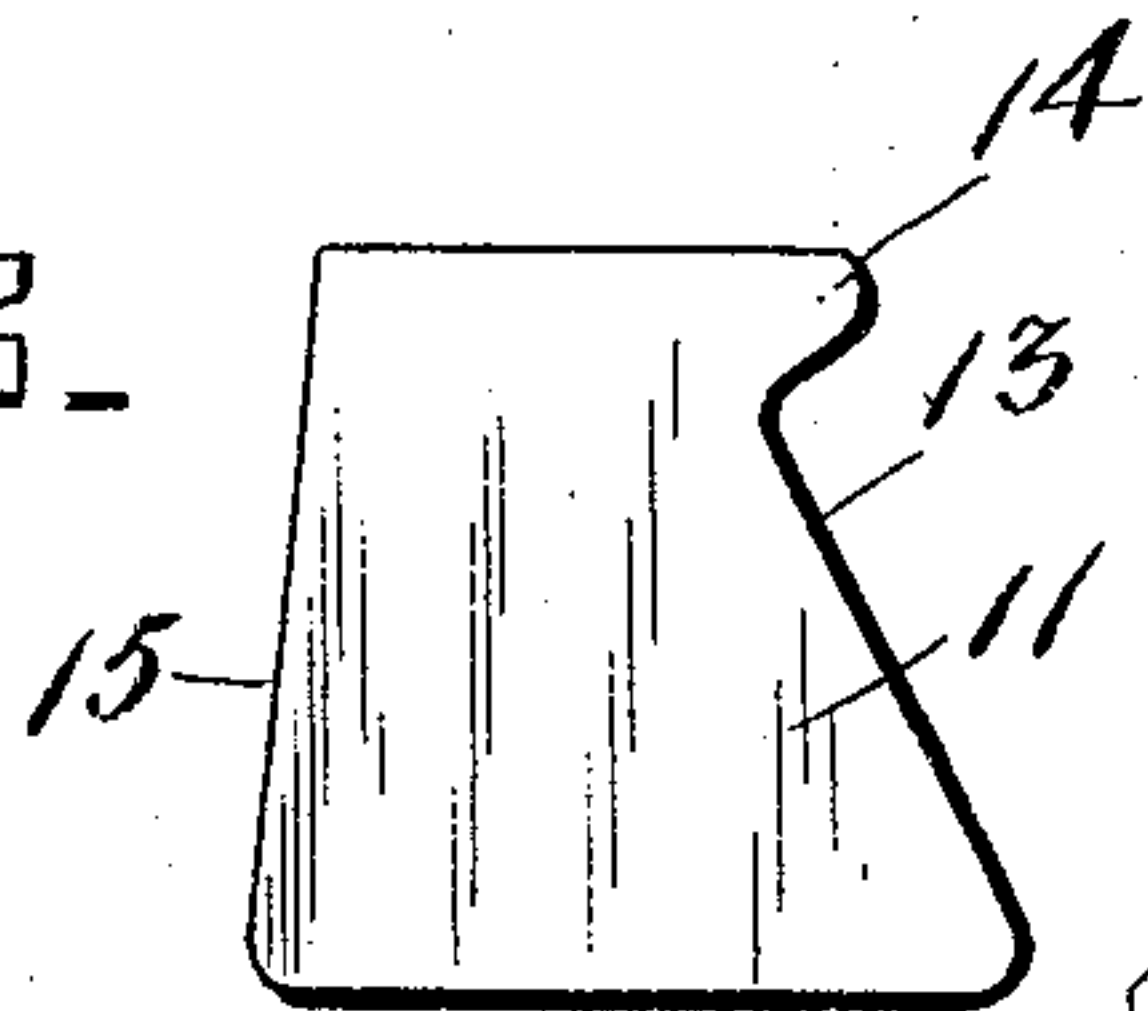


FIG. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. BOUGHTON, OF CLEVELAND, OHIO.

RAIL-FASTENER.

SPECIFICATION forming part of Letters Patent No. 771,702, dated October 4, 1904.

Application filed March 14, 1904. Serial No. 198,161. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BOUGHTON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Rail-Fasteners; 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 rail-fasteners, and more particularly to improvements in the rail-fastener set forth in Patent No. 725,665, granted to me April 21, 1903.

The object of my invention is to improve and simplify the construction of devices of this character, and thereby render them more effective and durable in use and less expensive to manufacture.

With this 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 particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of one end of a railway-tie with a portion of a railway-rail secured thereon by my improved fastening means. Fig. 2 is a vertical longitudinal sectional view through the same. Fig. 3 is a detail view of the wedge-shaped key.

Referring to the drawings by numerals, 1 denotes a hollow railway-tie which may be constructed of any suitable material and in any desired shape; but I preferably make it of metal or concrete or some other suitable plastic material and form it with inwardly and upwardly inclined sides 2 and closed ends 3. The portions of the top wall of the tie upon which the railway-rails 4 rest are braced and strengthened by longitudinal ribs 5, formed upon the under side of the said top wall, as shown, and adjacent to one end of said rib is formed a curved or semicylindrical-shaped head 6, which depends from the under side of the top wall. In the said top wall adjacent to the head 6 is formed an opening or slot having at one end a straight wall 7 and at its op-

posite end an undercut or inwardly-beveled wall 8. Formed upon the upper side of the bottom of the tie directly beneath the head 6 and projecting slightly under one end of the opening or slot 7 is a clench-block or anvil 9, the upper face of which is formed with a curved or semicylindrical-shaped recess corresponding in shape to the curved lower face of the forming-head 6, from which it is spaced to leave a curved or semicylindrical passage or channel 10, as shown in Fig. 2.

The rail 4 is fastened to the tie by a wedge-shaped key 11 and a beveled key or spike 12, which keys are inserted in said opening or slot in the tie, as shown. The wedge 11 has both of its ends beveled, one end, 13, being engaged with the beveled or undercut end wall 8 of the said opening and having a head or projecting portion 14 to project over and engage the base flange of the rail 4, and the other end, 15, of said wedge or key 11 engages the beveled edge 16 of the key 12, the opposite edge 17 of which engages the straight end wall 7 of the said opening in the tie.

In securing a rail upon the tie the wedge-shaped key 11 is first placed in the tie-opening with its head or lip 14 engaging the base of the rail, and the key or spike 12 is then inserted between the straight wall 7 of the opening and the end 15 of the key 11. As said key 12 is driven down into the tie its lower end or point will strike the projecting portion of the anvil 9 and be deflected into the curved passage 10 between the said anvil and the forming or shaping head 6, as will be readily understood. The said end of the key will be thus bent or curved by the anvil and the shaping-head and will be securely clenched and held in position, the head 6 serving both to guide and shape the key 12 and to coact with the same to lock it in position and prevent its withdrawal from the channel 10. It will be seen that by thus curving the key 12 outwardly or away from the key 11 said keys lock each other in the opening or slot and form an extremely strong and durable fastener.

From the foregoing description, taken in connection with the accompanying drawings,

the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, 5 and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what 10 I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a hollow tie having an opening in its top, a shaping-head upon the under side of said top adjacent to said 15 opening and an anvil or clench-block beneath said shaping-head, a wedge in said opening having a portion adapted to engage the base of a rail, and a key driven into said opening and having its lower end bent or clenched between said anvil and shaping-head, substan- 20 tially as described.

2. The combination of a hollow tie having an opening in its top, a curved shaping-head upon the under side of said top adjacent to said opening and an anvil beneath said shap- 25 ing-head formed with a curved recessed upper face to conform to the shape of said curved shaping-head, a wedge inserted in said opening and having a head or lip to engage the base of a rail, and a key driven into said 30 opening and having its lower end bent or clenched into the curved space between said anvil and said shaping-head, substantially as described.

In testimony whereof I have hereunto set 35 my hand in presence of two subscribing witnesses.

JOHN A. BOUGHTON.

Witnesses:

J. C. WOODARD,
WM. H. K. ROSE.