

No. 804,127.

PATENTED NOV. 7, 1905.

W. J. HUCKABAY.
RAIL OR OTHER JOINT.
APPLICATION FILED MAY 31, 1905.

2 SHEETS—SHEET 1.

FIG. 1.

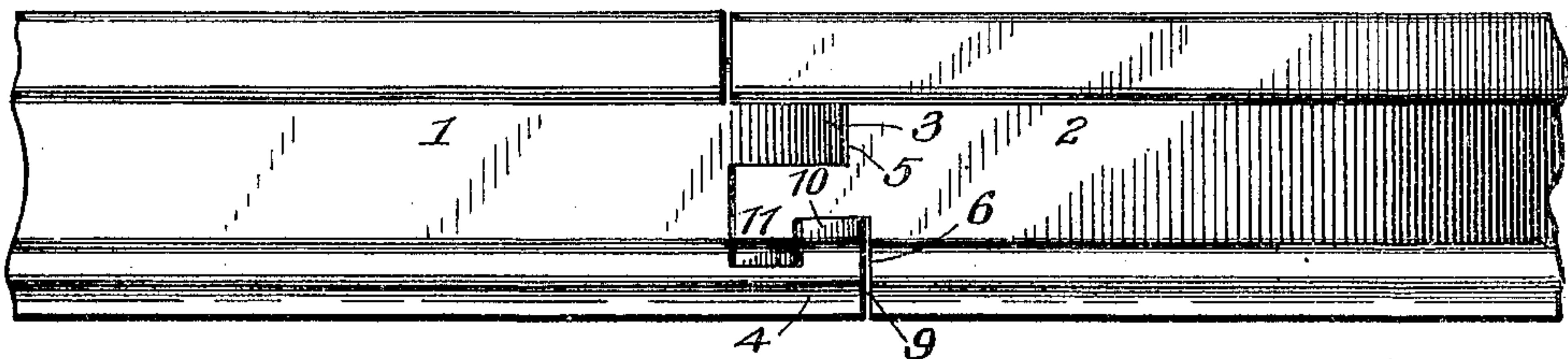


FIG. 2.

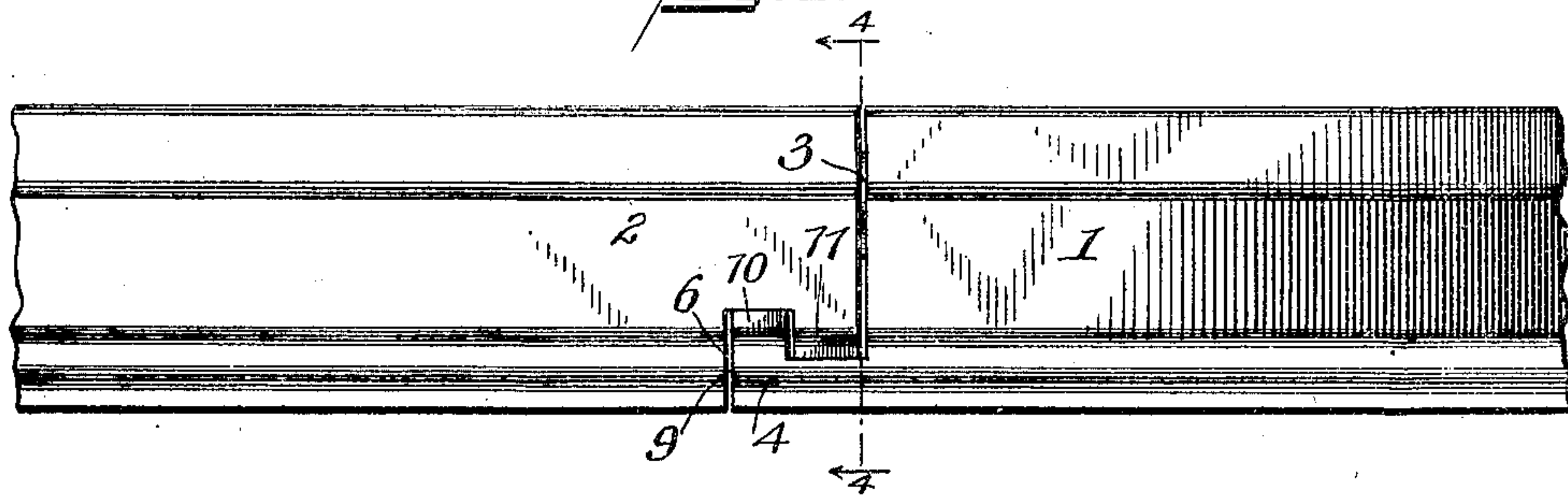


FIG. 3.

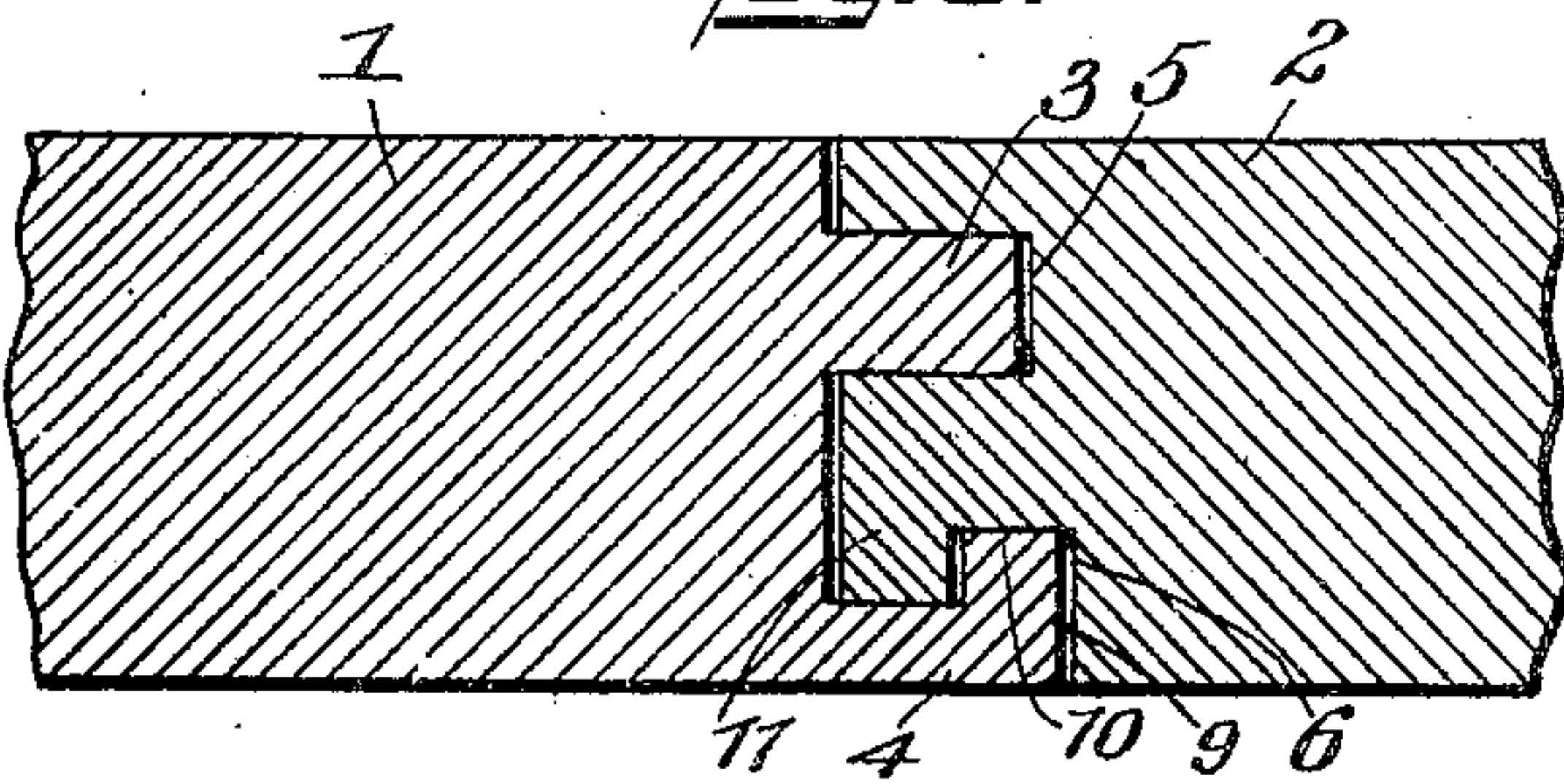


FIG. 4.

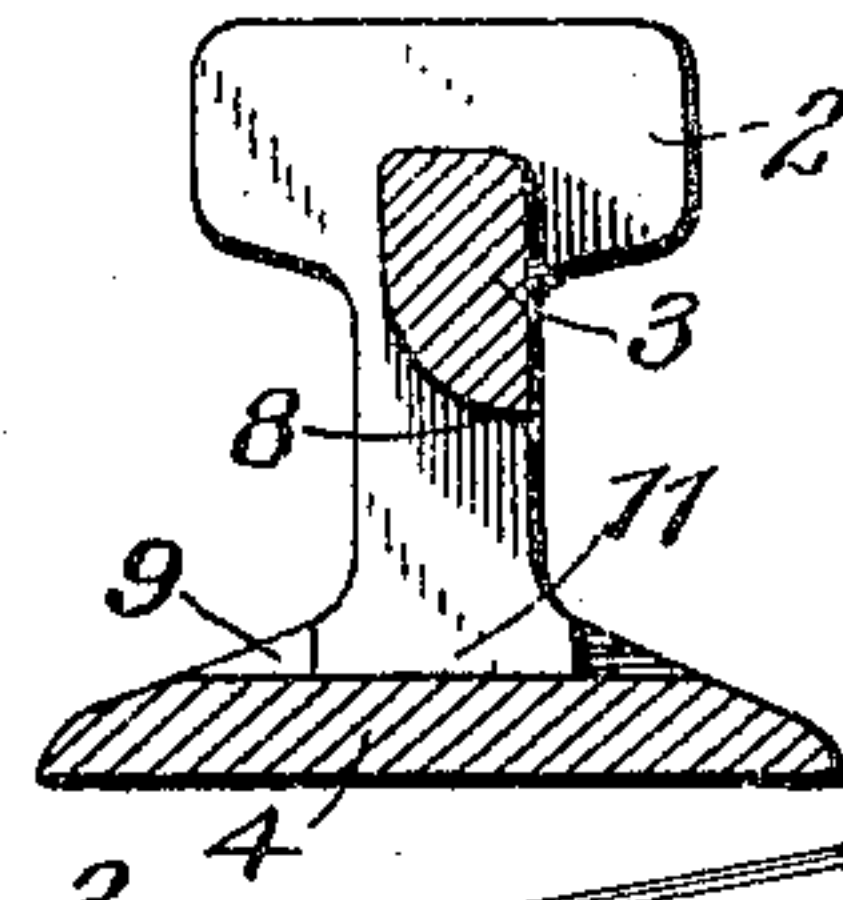


FIG. 5.

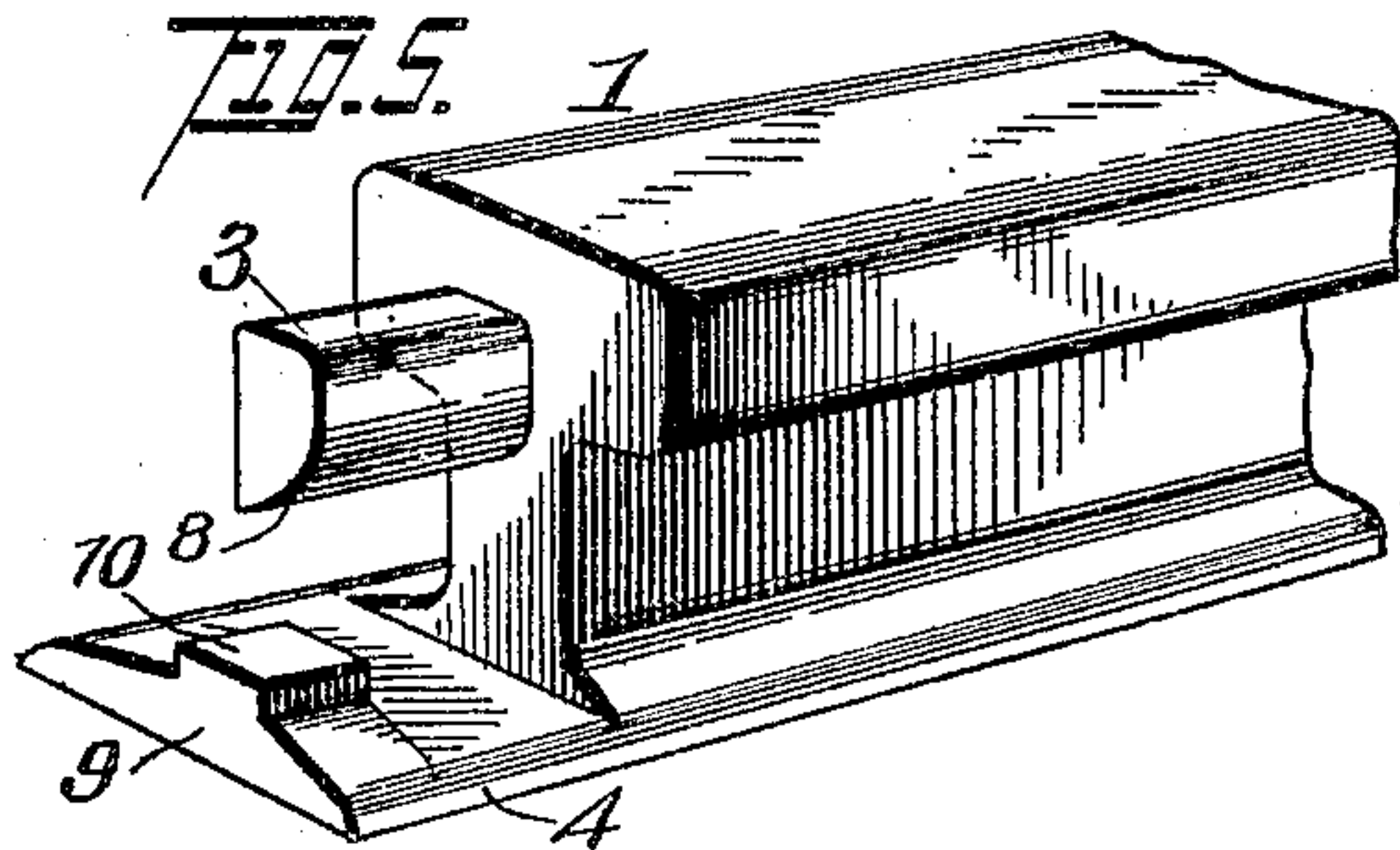
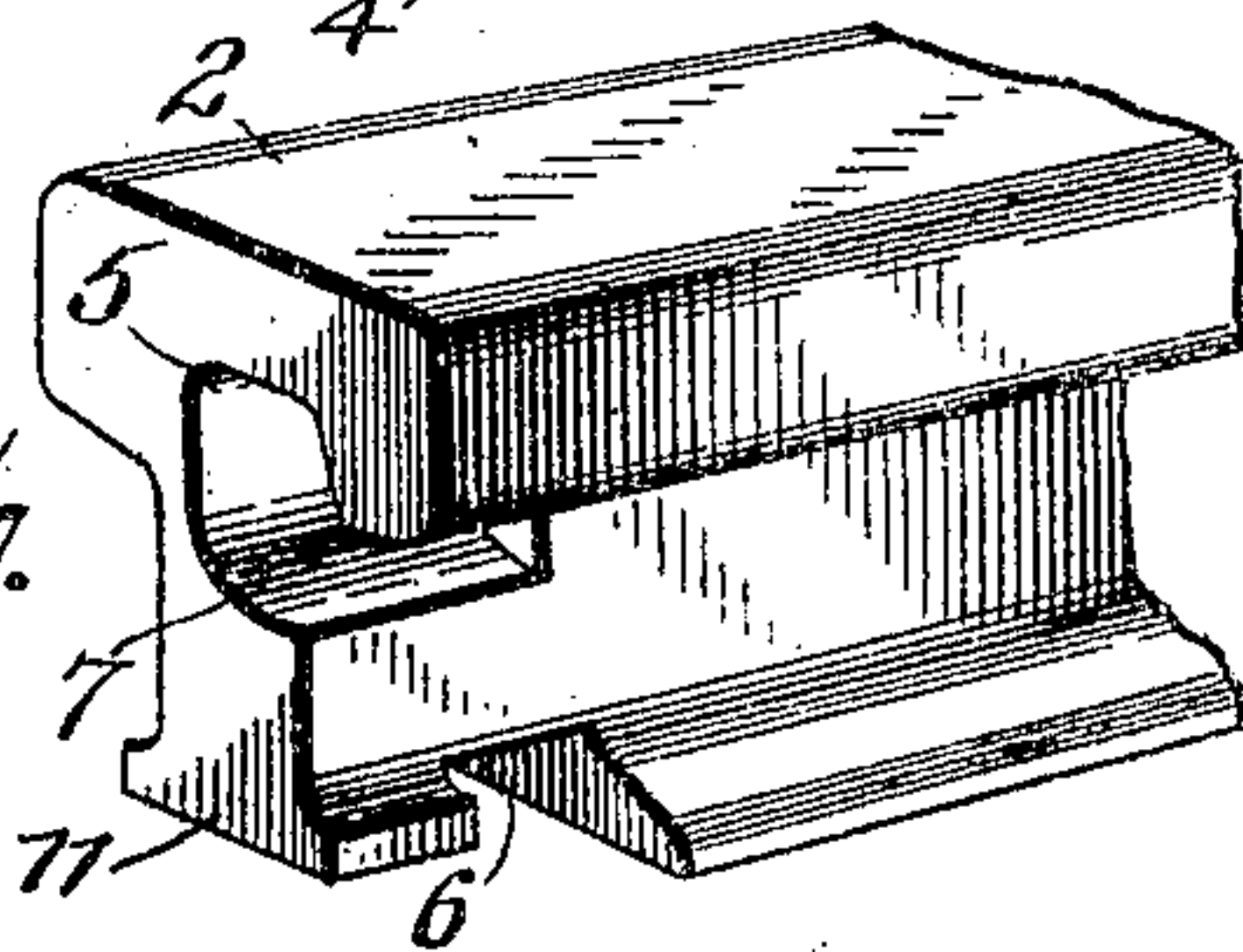


FIG. 6.



W. J. Huckabay, Inventor

Witnesses
M. C. Lyddane
J. F. Riley.

By *E. G. Siggers*
Attorney

No. 804,127.

PATENTED NOV. 7, 1905.

W. J. HUCKABAY.
RAIL OR OTHER JOINT.
APPLICATION FILED MAY 31, 1905.

2 SHEETS—SHEET 2.

FIG. 7.

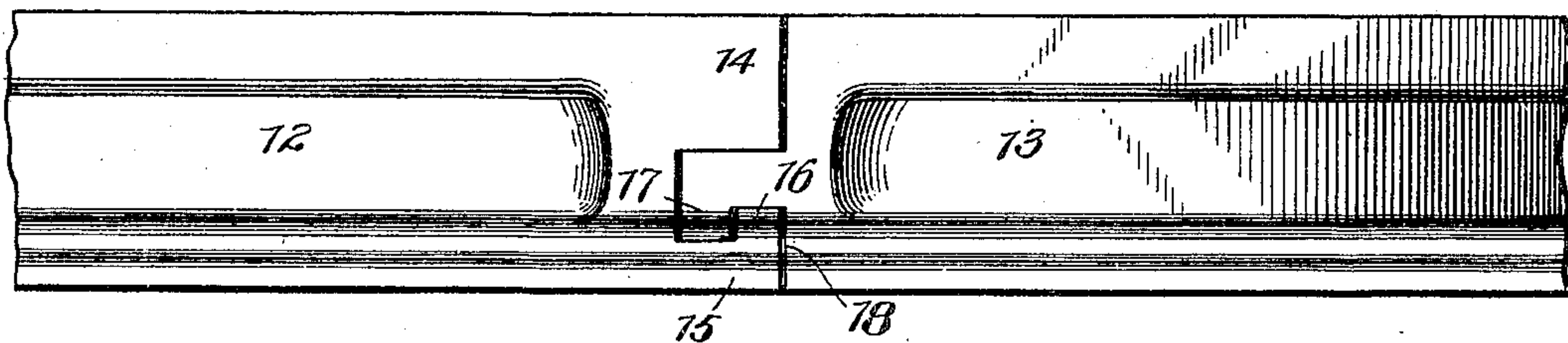


FIG. 8.

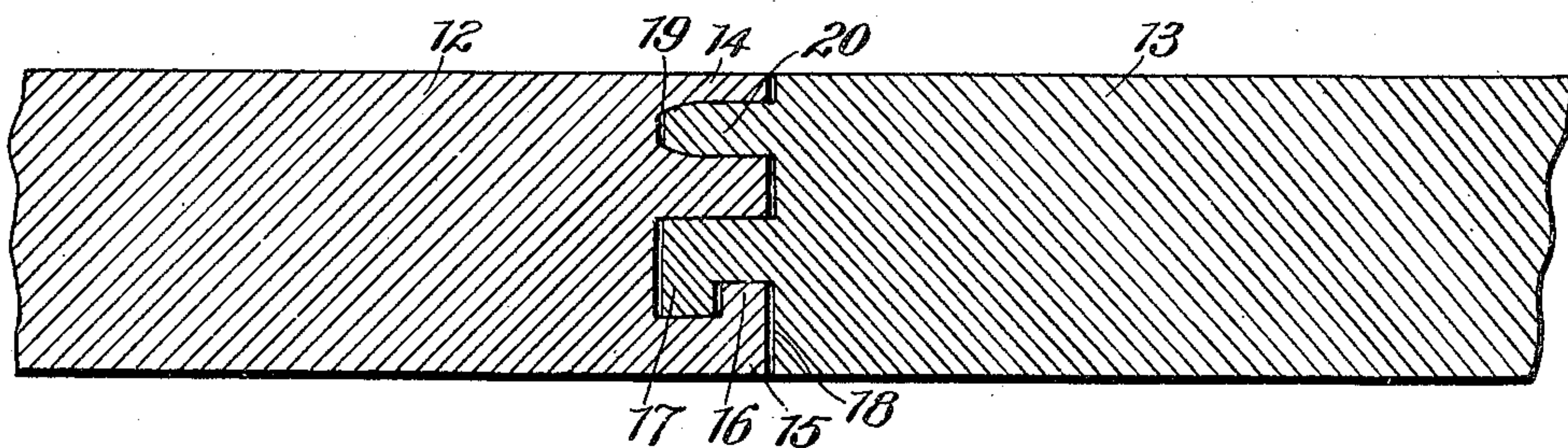


FIG. 10.

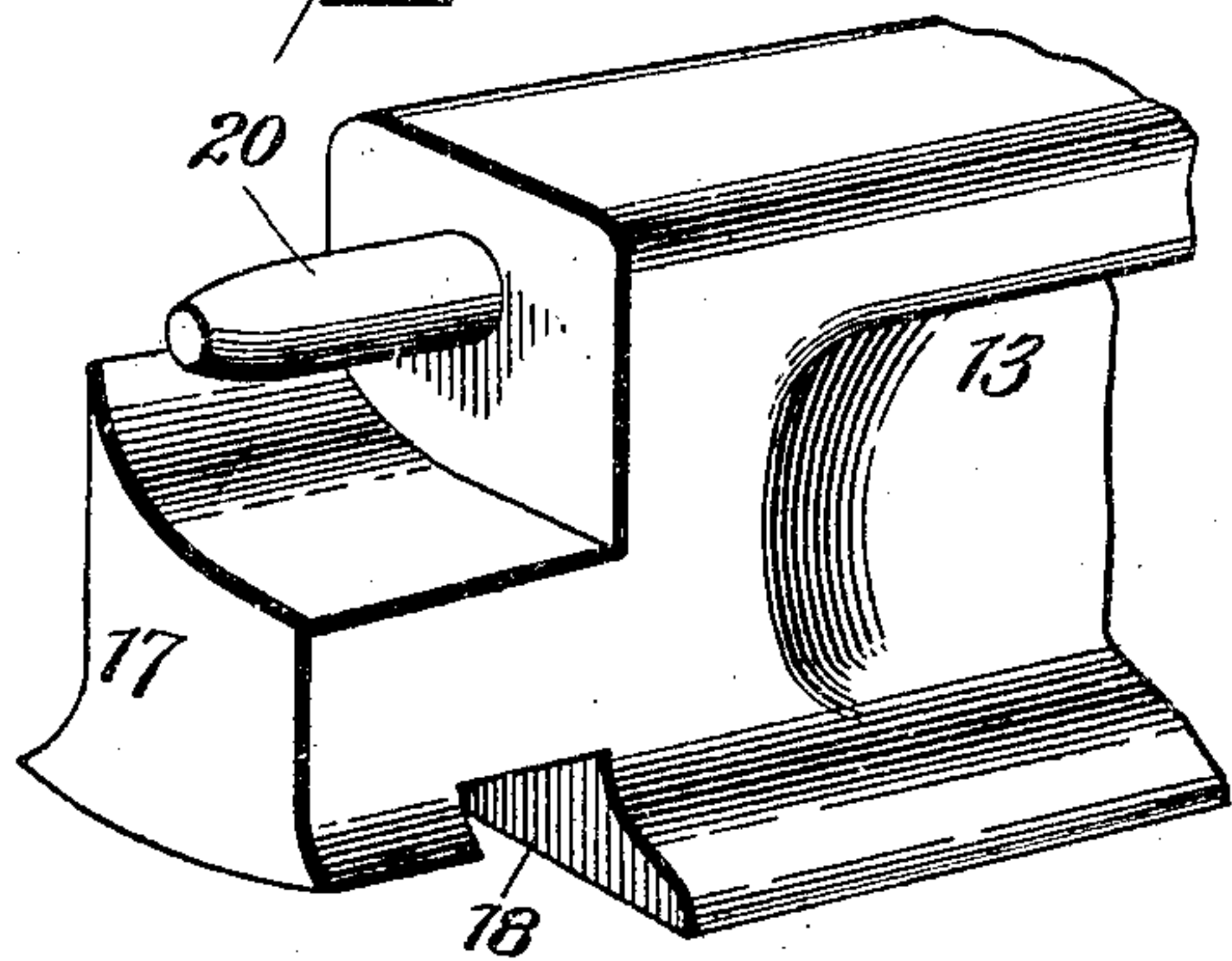


FIG. 9.

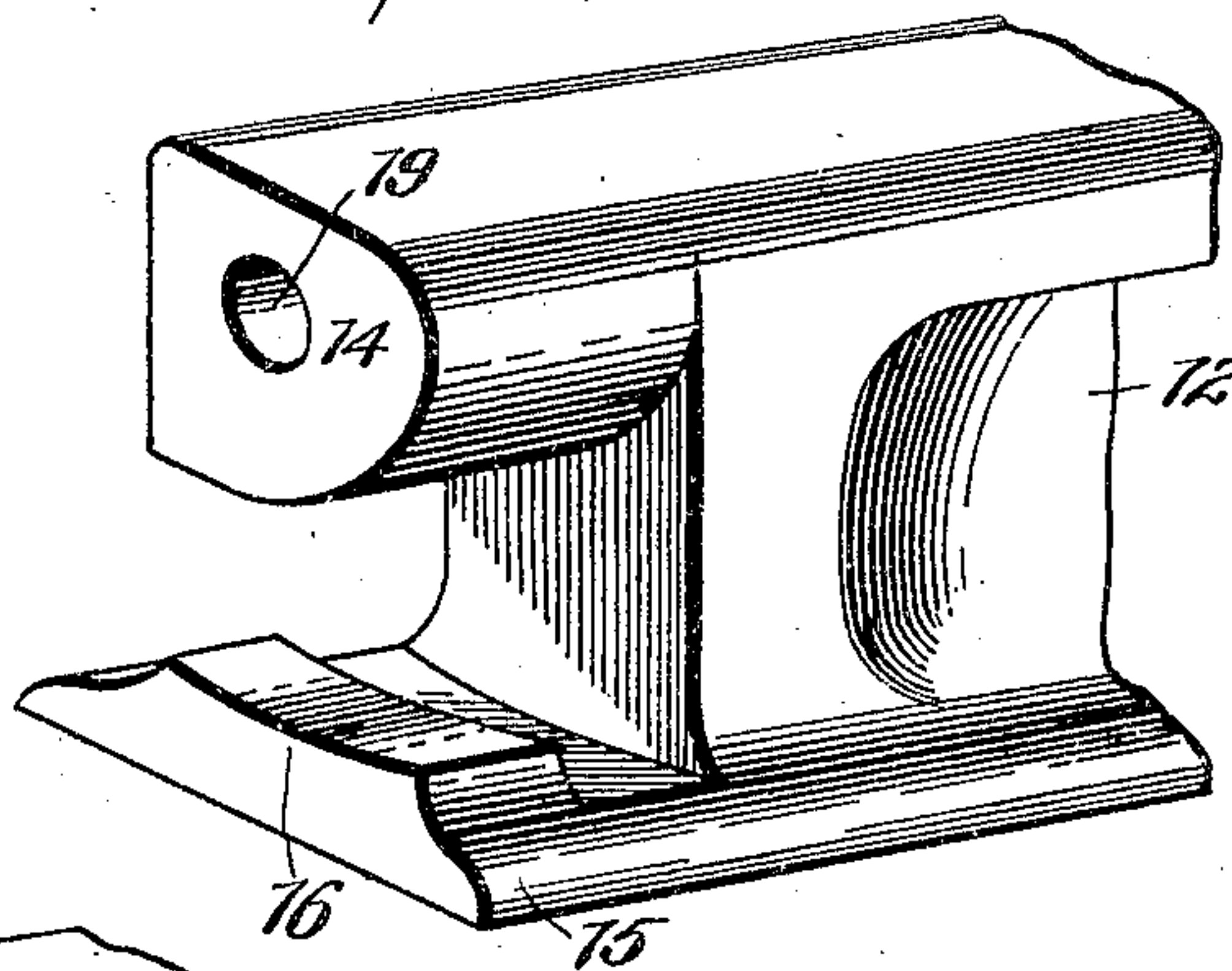
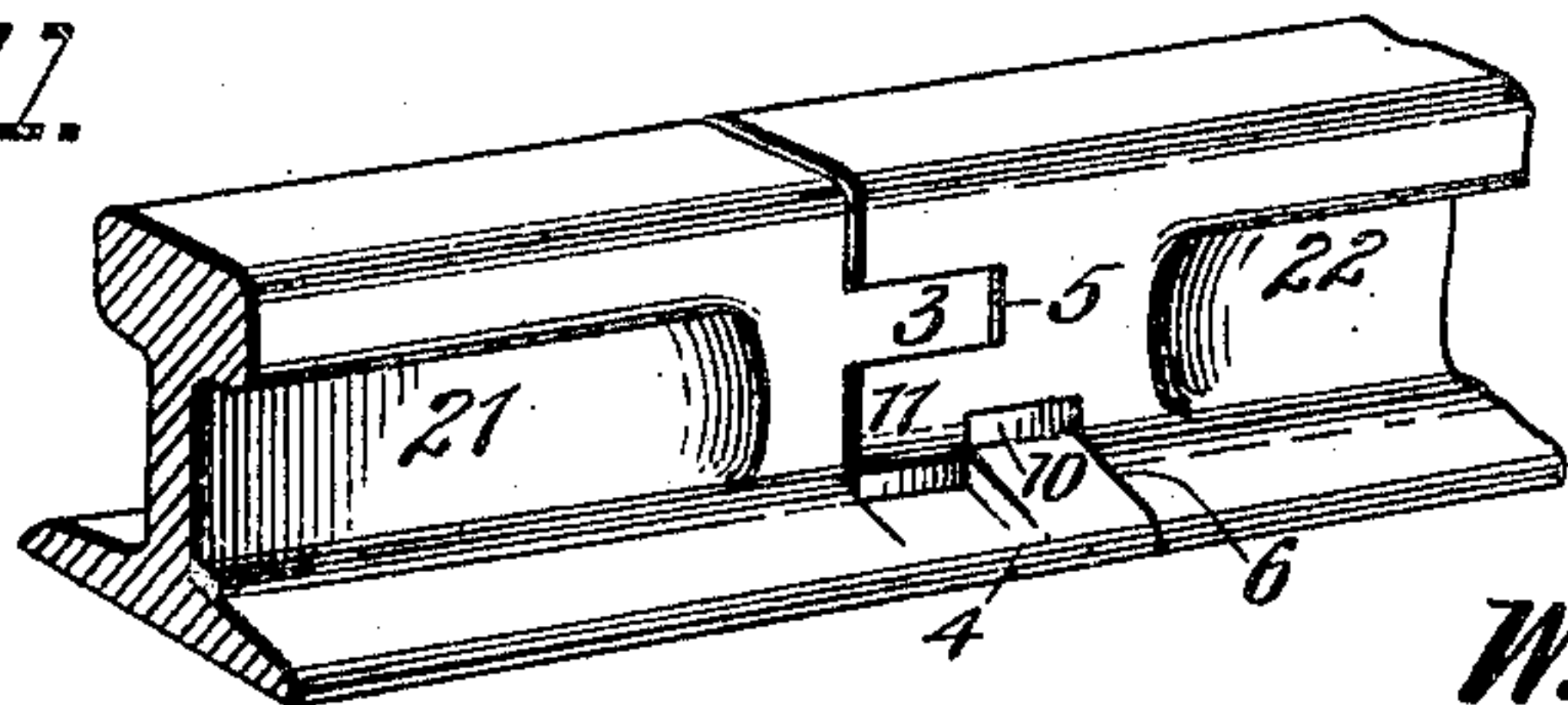


FIG. 11.



Witnesses

W. C. Lyddane
J. F. Riley

W. J. Huckabay, Inventor

By

E. G. Siggers

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM J. HUCKABAY, OF SPARTA, LOUISIANA.

RAIL OR OTHER JOINT.

No. 804,127.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed May 31, 1905. Serial No. 263,122.

To all whom it may concern:

Be it known that I, WILLIAM J. HUCKABAY, a citizen of the United States, residing at Sparta, in the parish of Bienville and State of Louisiana, have invented a new and useful Rail or Other Joint, of which the following is a specification.

The invention relates to improvements in rail or other joints.

The object of the present invention is to improve the construction of rail or other joints and to provide a simple and comparatively inexpensive construction adapted to connect the ends of rails without the use of fish-plates, bolts, nuts, springs, and the like and capable of enabling railroads to be rapidly constructed.

A further object of the invention is to provide a device of this character adapted to interlock the adjacent ends of the rails and capable of holding them against vertical, longitudinal, and transverse movement on each other and of enabling roads to be constructed without placing cross-ties beneath the ends of the rails.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a portion of two rails provided with a rail-joint constructed in accordance with this invention. Fig. 2 is a similar view showing the opposite side of the rail-joint. Fig. 3 is a longitudinal sectional view. Fig. 4 is a transverse sectional view on the line 4 4 of Fig. 2. Figs. 5 and 6 are enlarged detail perspective views illustrating the construction of the interlocking ends of the rails. Fig. 7 is an elevation of a rail-joint, illustrating a modification of the invention. Fig. 8 is a longitudinal sectional view of the same. Figs. 9 and 10 are enlarged detail perspective views illustrating the construction of the interlocking ends of the rails shown in Figs. 7 and 8. Fig. 11 is a perspective view of a rail-joint provided with interlocking ends constructed as

shown in Fig. 1, but laterally enlarged or bulged to reinforce the rail-joint.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 and 2 designate rails having interlocking male and female ends, the rail 1 being provided with an upper projecting tongue 3 and a lower projecting bottom flange 4 and the other rail having a socket 5 to receive the tongue 3 and being also provided with a bottom recess 6 to interlock with the projecting bottom flange 4. The socket 5, which extends inward from the end of the rail 2, is open at one side of the same, being formed in the upper portion of the web and the adjacent portion of the head of the rail, and its bottom 7 is rounded. The tongue 3, which is formed integral with the rail 1, extends horizontally from the upper portion of the web and the adjacent portion of the head of the rail and is arranged in the same horizontal plane as the socket 5. The lower edge 8 of the tongue 3 is rounded at one side to fit the rounded bottom of the socket into which the tongue is introduced at the open side of the said socket by giving the rail 1 a quarter-turn on its longitudinal axis, the tongue constituting a pivot for such partial rotary movement of the rails on each other.

The horizontal tongue 3 is spaced from and overhangs the bottom portion or flange 4, which is provided at its end with a transversely-disposed upwardly-extending wall 9, having a lug 10 arranged in the same plane as and corresponding to the web of the rail. The recess or cut-away portion of the bottom of the rail 2 fits over the projecting portion or bottom flange 4 and interlocks with the same, being provided at the outer end of the recess 6 with a depending wall or lug 11, forming a foot, and fitting in the recess or space between the wall 9 and the adjacent end of the body of the rail. The interlocking lugs or walls of the bottom portions of the rails hold the same against longitudinal movement on each other, and the tongue-and-socket connection of the upper portions of the rails prevents the same from moving vertically or transversely on each other, and the rails cannot become disconnected from each other when they are in proper position on the cross-ties. One of the rails must be given a quarter-turn on its longitudinal axis to roll the tongue out of the socket and to carry the in-

terlocking bottom portions of the rails out of engagement with each other. As shown in the accompanying drawings, a slight space may be provided between the abutting vertical walls of the rails to permit the contraction and expansion due to changes of temperature.

The rails are designed to be spiked to the cross-ties in the usual manner, and in practice one of the rails is placed in position and secured to the cross-ties. The other rail is interlocked with the fixed rail by partially rotating it on its longitudinal axis, as before explained, and when interlocked it is spiked to the cross-ties. Means for securing the rails to the cross-ties will effectually prevent them from becoming separated. It is not necessary to place the interlocked ends of the rails directly upon a cross-tie, and owing to this fact roads may be constructed more rapidly and at a less cost than where it is necessary to place cross-ties directly beneath the rail-joint. Each of the rails 1 and 2 in practice is designed to be provided with male and female ends, so that the ends of each rail will interlock with the ends of the adjacent rails.

In Figs. 7 to 10, inclusive, is illustrated a modification of the invention provided at the bottom with interlocking parts and having a tongue-and-socket joint at the top, forming a pivotal connection on which the rails 12 and 13 are adapted to turn or partially rotate to carry the interlocking bottom portions into and out of engagement with each other. The rail 12 is provided with an upper projecting portion 14, and it has a lower projecting bottom flange 15. The bottom flange is provided with a transverse end wall or lug 16, which is spaced from the adjacent end of the body of the rail to provide a recess to receive a depending lug or foot portion 17 of the rail 13. The rail 13 is recessed at the bottom at 18 to overlap the bottom flange 15 of the rail 12 and to receive the end wall or lug 16, whereby the lower portions of the rails are interlocked, as clearly shown in Figs. 7 and 8 of the drawings. The lower edge of the depending lug or foot 17 is preferably rounded, as shown in Fig. 10, to enable the parts to readily swing into and out of engagement with each other, and the upper edge of the end wall or lug 16 is curved for a similar purpose and also to fit the top wall of the recessed portion 18, which is preferably rounded.

The projecting portion 14, which forms a continuation of the head of the rail 12, is provided with a socket 19, and the rail 13, which is recessed or cut away at the top at a point above the projecting foot portion 17, is provided with a tongue 20 to fit the socket 19. The tongue is rounded to form a pivot, and the socket is also circular in cross-section, the parts being preferably tapered, as clearly shown in Fig. 8 of the drawings. The rails are adapted to rotate on the pivotal connec-

tion formed by the tongue-and-socket joint to carry the interlocking lower portions into and out of engagement with each other, and there is sufficient play of the parts to permit the necessary contraction and expansion of the rails due to changes of temperature.

The rails 12 and 13 are laterally enlarged or bulged at the joint, as clearly shown in Figs. 7, 9, and 10; but the consequent reinforcing or strengthening of the rails may be omitted, as illustrated in Figs. 1 and 2. Also, if desired, rails 21 and 22, having interlocking ends constructed as shown in Figs. 1 to 6, inclusive, may be laterally enlarged or bulged, as illustrated in Fig. 11 of the drawings.

It will be clear that the joint, besides being adapted for connecting the ends of rails, is capable of use in other relations and may be employed for splicing various kinds of bars, stringers, and other members of various constructions, whether wood or metal, and that when such members are in proper position they will be held against longitudinal movement and also transverse movement in any direction.

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

1. In a rail or other joint, the combination of two rails or members provided with means for detachably interlocking their contiguous ends and for holding the rails or members against vertical, longitudinal and transverse movement on each other without the use of fastening devices, and for pivotally connecting the rails or members to permit the interlocking parts to be swung into and out of engagement with each other.

2. In a rail or other joint, the combination of two rails or members provided with means for interlocking their contiguous ends and for holding the same against vertical, longitudinal and transverse movement on each other, when the rails or members are in operative position, said rails or members being separable when moved from such operative position.

3. In a rail or other joint, the combination of two rails or members provided with means for detachably interlocking them and for holding them against longitudinal and transverse movement on each other, said means embodying a tongue projecting from one of the rails or members, and a socket formed in the other rail or member and open at one side, the tongue and socket forming a pivotal connection on which the rails are adapted to turn to connect and disconnect them.

4. In a rail or other joint, the combination of two rails or members provided with means for interlocking them and for holding them against longitudinal and transverse movement on each other, said means embodying a tongue projecting from one of the rails or members, and a socket formed in the other rail or mem-

ber and open at one side, the tongue and the socket being rounded at the bottom, and the rails or members being separable by partially rotating one on its longitudinal axis with relation to the other.

5. In a rail or other joint, the combination of two rails or members having a tongue-and-socket connection adapted to hold the rails or members against transverse movement on each other, said rails or members being also provided with interlocking parts arranged to hold the rails or members against longitudinal movement on each other, and the said tongue and socket forming a pivotal connection on which the rails are adapted to turn to connect and disconnect them.

6. In a rail or other joint, the combination of two rails or members provided at their upper portions with a tongue-and-socket connection, the socket being open at one side, and the tongue forming a pivot on which the rails or members are adapted to be partially rotated to connect and disconnect them, said rails or members being provided adjacent to the tongue-and-socket connection with correspondingly-recessed interlocking parts adapted to be carried into and out of engagement with each other by the said rotary movement of the rails or members.

7. In a rail or other joint, the combination of two rails or members provided at the upper portions of their ends with a tongue-and-socket connection and having their bottom portions overlapped and correspondingly recessed to interlock with the said tongue, forming a pivot on which the rails or members are adapted to be partially rotated to carry the overlapped interlocking front portions into and out of engagement with each other.

8. In a rail or other joint, the combination of two rails or members having an upper tongue-and-socket connection, one of the rails or members being provided with an extended bottom flange having an upwardly-projecting lug, and the other rail or member being recessed or cut away at the bottom and provided with a depending lug to interlock with the said lug.

9. In a rail or other joint, the combination

of a rail or member provided at the upper portion with a projecting horizontal tongue and having a projecting bottom flange spaced from the tongue and provided with an upwardly-extending lug, and a rail or member having a socket for the said tongue and recessed or cut away at the bottom for the reception of the said bottom flange and provided with a depending lug or foot to interlock with the said lug.

10. In a rail or other joint, the combination of two rails or members having a tongue-and-socket joint and provided adjacent to the same with interlocking parts, said tongue-and-socket joint forming a pivotal connection on which the rails or members are adapted to turn to carry the interlocking parts into and out of engagement with each other.

11. In a rail or other joint, the combination of two rails or members provided at the top with a tongue-and-socket joint and having their bottom portions overlapped and interlocked, said tongue-and-socket joint forming a pivotal connection on which the rails are adapted to turn to carry the interlocking bottom portions into and out of engagement with each other.

12. In a rail or other joint, the combination of two rails or members having their bottom portions overlapped and interlocked, said rails or members being also provided at the top with an independent joint or connection forming a pivotal connection.

13. In a rail or other joint, the combination of two rails or members provided at their upper and lower portions with independent joints or connections, one of the joints or connections being arranged to hold the rails or members against longitudinal movement, and the other joint or connection serving to hold the rails or members against lateral movement and forming a pivotal connection.

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

WILLIAM J. HUCKABAY.

Witnesses:

W. J. BATES,

O. B. BATES.