

No. 720,581.

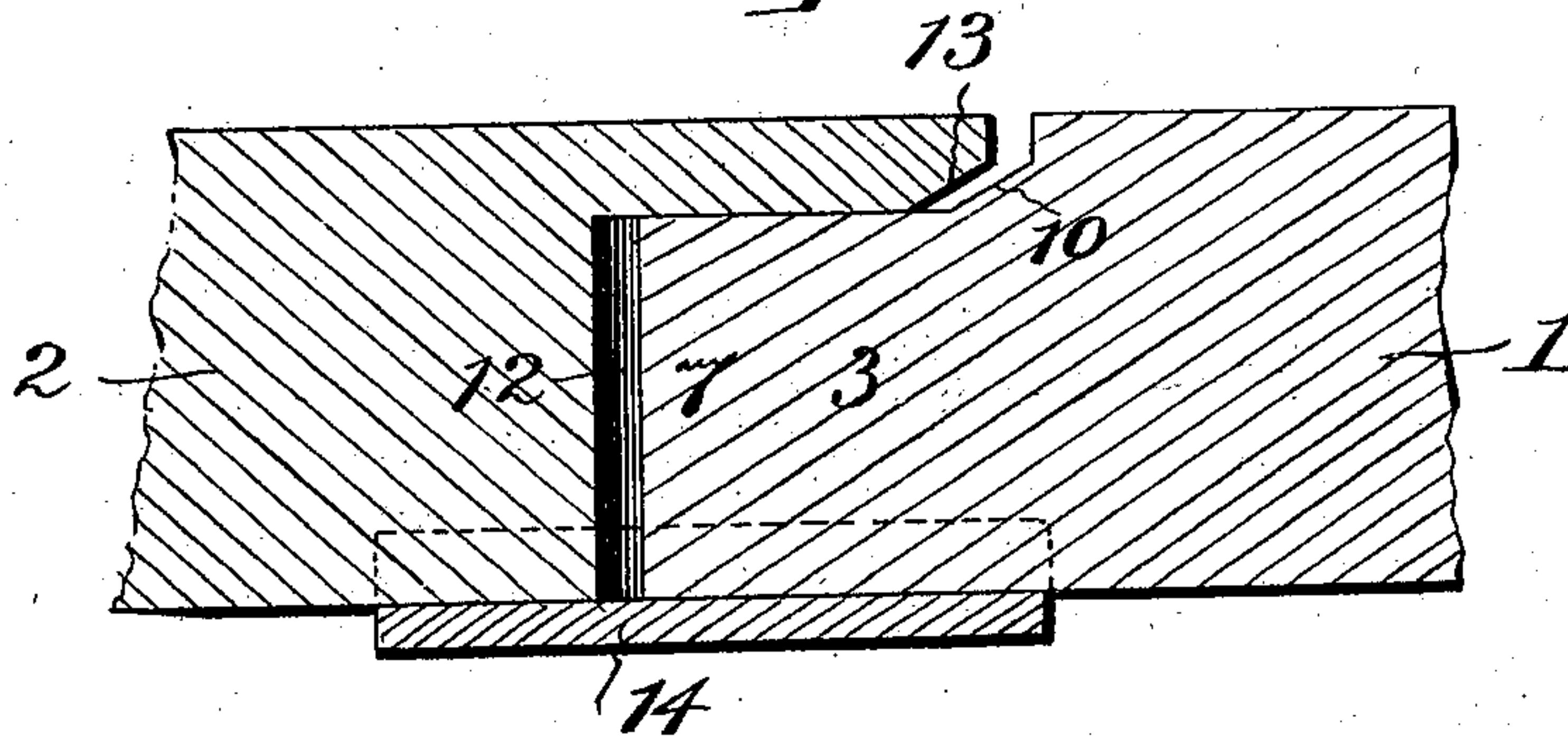
PATENTED FEB. 17, 1903.

H. HANSON.  
RAIL JOINT.

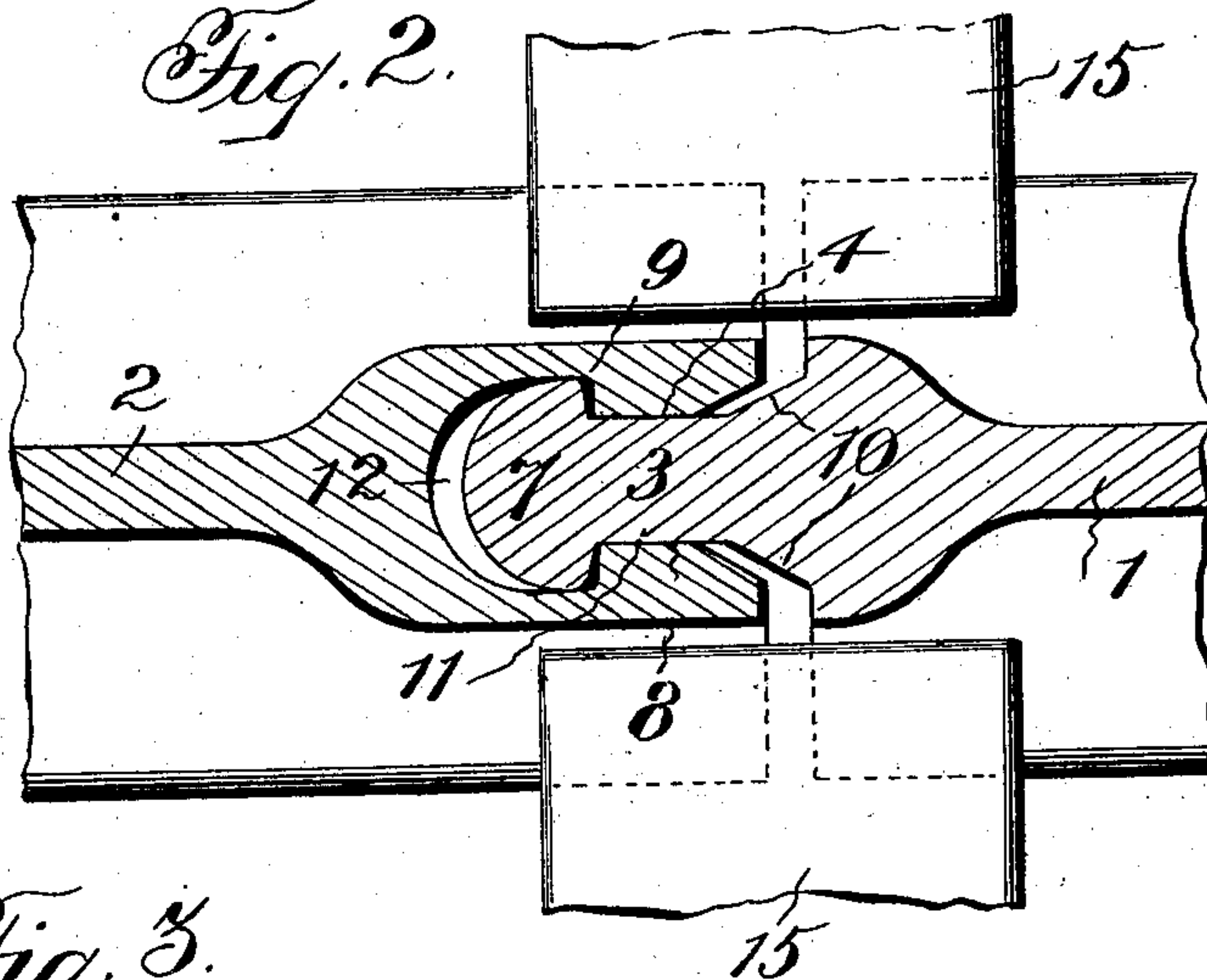
APPLICATION FILED JULY 29, 1902.

NO MODEL.

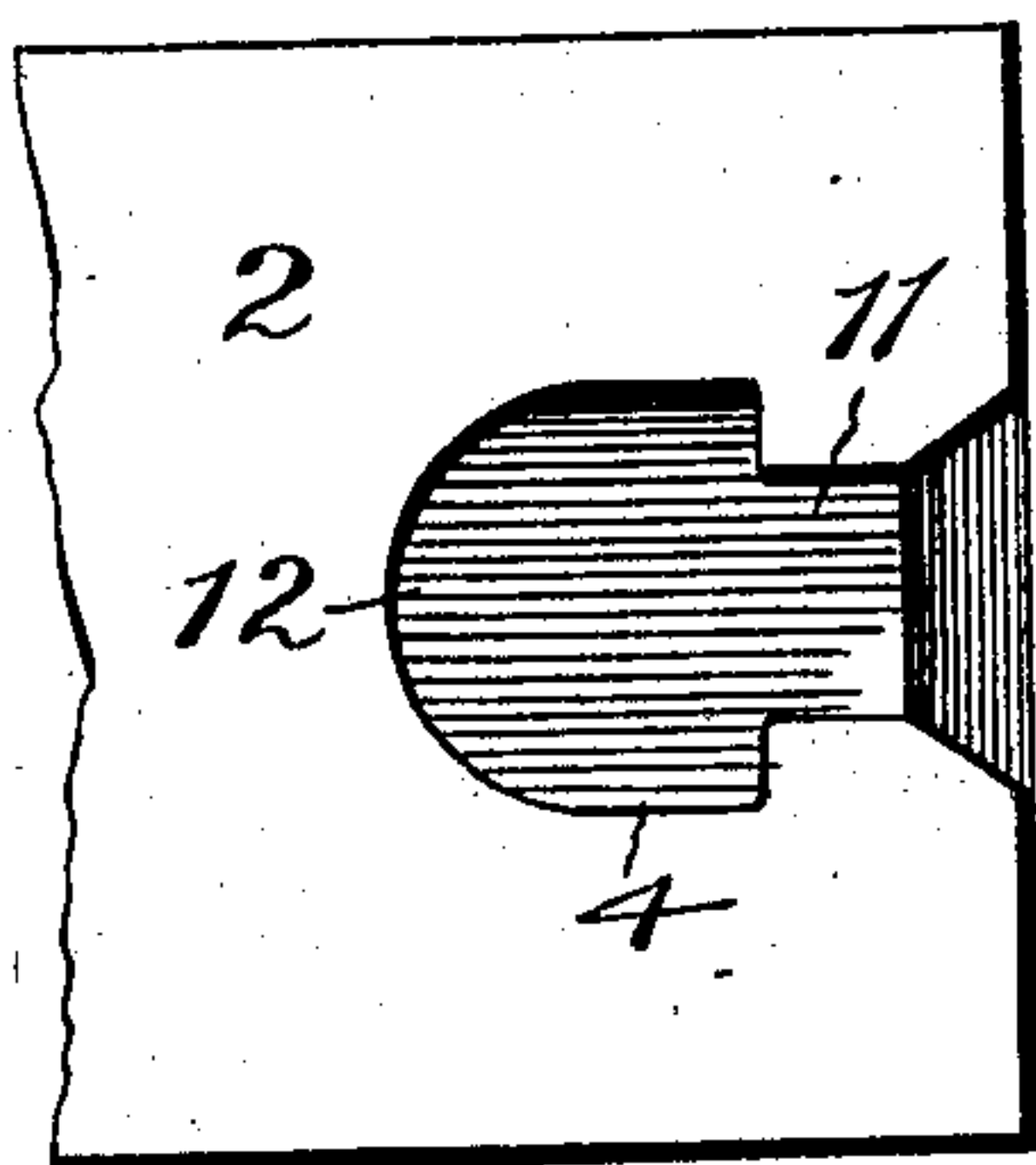
*Fig. 1.*



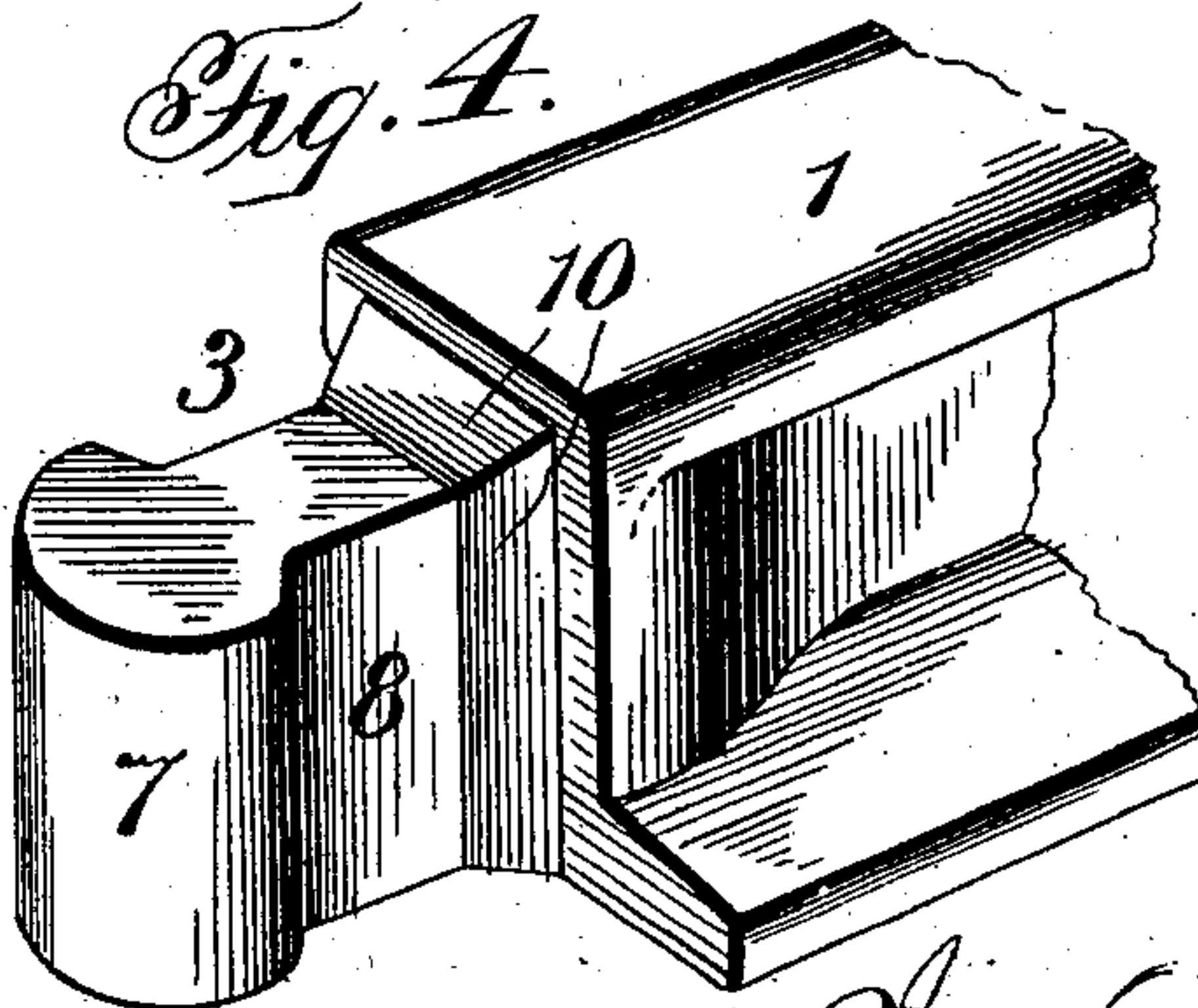
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:  
Jas. Hutchinson  
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Inventor.  
Hans Hanson,  
by Swift and Co., atty



# UNITED STATES PATENT OFFICE.

HANS HANSON, OF HOLBROOK, NEBRASKA.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 720,581, dated February 17, 1903.

Application filed July 29, 1902. Serial No. 117,504. (No model.)

*To all whom it may concern:*

Be it known that I, HANS HANSON, a citizen of the United States, residing at Holbrook, in the county of Furnas and State of Nebraska, have invented a new and useful Rail-Joint; and I do hereby 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.

The invention relates to improvements in rail-joints; and it has for its object to provide a rail-joint of a simple and comparatively inexpensive construction adapted to form practically a continuous rail and capable of dispensing with the fish-plates and bolts usually employed at rail-joints for connecting the rails.

The invention consists in the construction and novel arrangement of parts hereinafter described and shown, and particularly pointed out in the claims hereto appended.

In the drawings forming part of the specification, and in which like numerals of reference designate corresponding parts, Figure 1 is a longitudinal sectional view of a rail-joint constructed in accordance with this invention. Fig. 2 is a horizontal sectional view of the same. Figs. 3 and 4 are detailed views of the ends of the rails.

Referring to the drawings, 1 and 2 designate rails, the rail 1 being provided with a longitudinally-projecting tongue 3, which is fitted in a socket 4 of the rail 2, whereby the rails are detachably interlocked. The rail 1 is provided at its end adjacent to the tongue with lateral enlargements 5, and the tongue 3 consists of an approximately semicircular head 7 and a shank 8, the head projecting laterally beyond the sides of the shank to form shoulders 9. The inner end of the shank is connected with the rail by an enlarged portion 10, which is beveled at the top and sides, as clearly shown in Fig. 3 of the drawings. The lower face of the tongue is horizontal and is flush with the lower face of the bottom of the rail.

The socket 4, which is closed at the top to form a continuous tread for the rail 2, ex-

tends upward from the lower face of the rail to the head of the same, and it consists of a reduced portion or neck 11 and an inner enlarged approximately semicircular portion 12, and the outer end of the socket at the end of the rail is beveled at the sides and top to conform to the configuration of the beveled enlargement 10 at the inner end of the tongue. The neck is provided with straight parallel side faces, and the narrow portion of the shank is of greater length than the neck or throat of the socket and the inner enlarged portion of the socket is of greater length than the head of the tongue to permit the rails to have a limited longitudinal movement to expand and contract incident to changes in temperature. The rails form practically a continuous rail, they are imperforate, and fish-plates, which are usually employed for connecting rails, are dispensed with. The rails may be secured to the cross-ties by means of a chair 14 or rail-clamps 15, or spikes or any other suitable means may be employed for that purpose.

It will be seen that the rail-joint is exceedingly simple and inexpensive in construction, that it possesses great strength, and that it forms practically a continuous rail. It will also be apparent that the rails may be readily fitted together and quickly laid and that they are capable of a limited longitudinal movement to permit of the necessary expansion and contraction.

What I claim is—

1. A rail-joint, comprising the rail 1, provided with a tongue consisting of a shank and a head projecting laterally from the shank, and the rail 2 provided with a socket extending upward from the bottom of the rail and terminating short of the top of the same to provide a continuous tread, said socket consisting of a neck, to receive the shank and an enlarged inner portion receiving the head of the said tongue, substantially as described.

2. A rail-joint comprising the rail 1, provided with a tongue consisting of a shank having an inner enlarged beveled portion, and a head projecting laterally from the shank, and the rail 2 provided with a socket

extending upward from the bottom of the  
rail and terminating short of the head of the  
same to provide a continuous tread, said  
socket consisting of a neck of less length than  
5 the shank and beveled at the outer end, and  
an enlarged inner portion of greater length  
than the head, substantially as described.

In testimony whereof I have hereto affixed  
my signature in the presence of two witnesses.

HANS HANSON.

Witnesses:

O. G. COPPOM,  
A. M. KEYES.