No. 773,755. PATENTED NOV. 1, 1904.

J. H. KLINE.

RAIL SPLICE OR JOINT.

APPLICATION FILED FEB. 3, 1904.

NO MODEL.

Fig. 1.

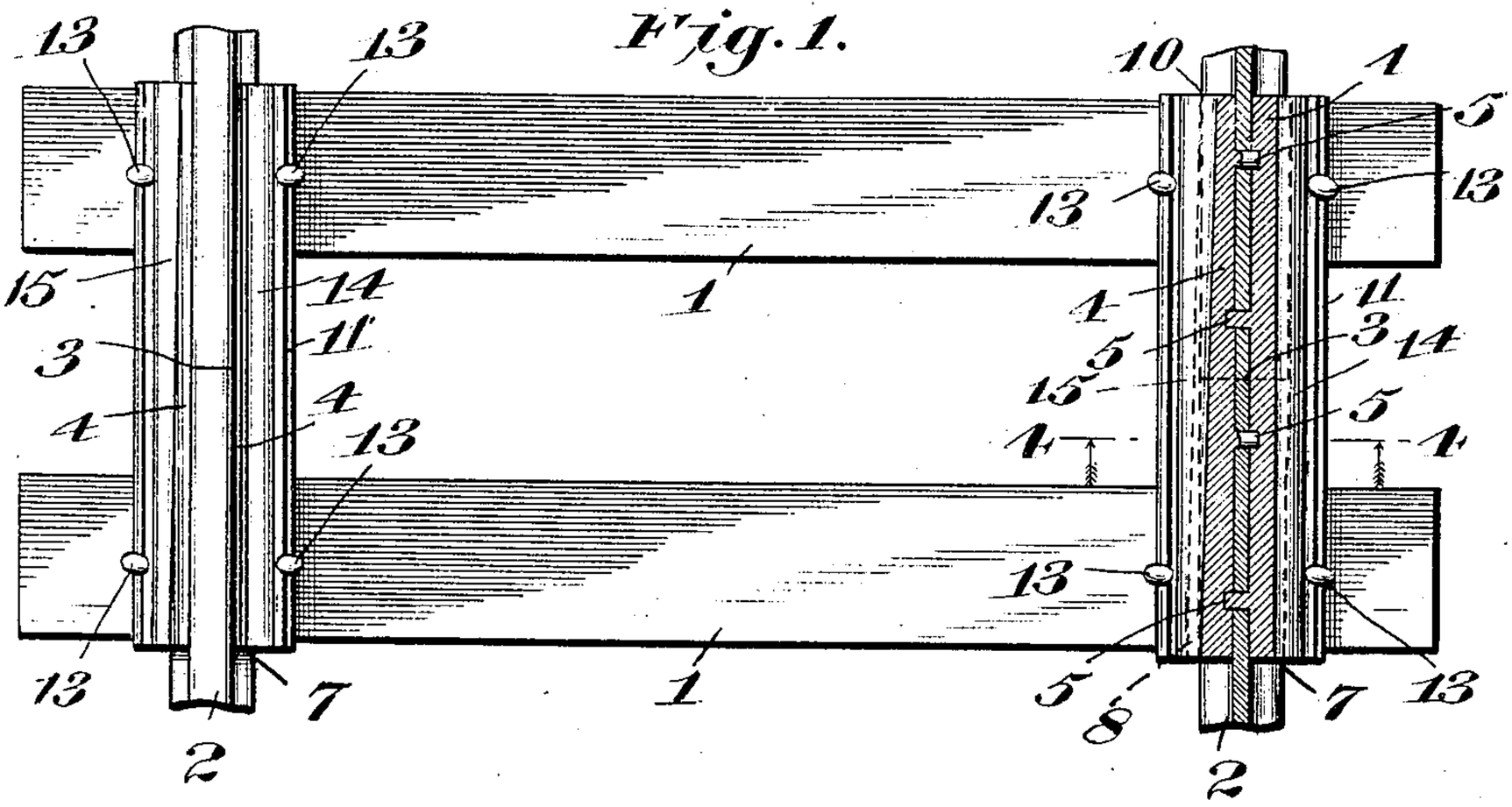


Fig. 2.

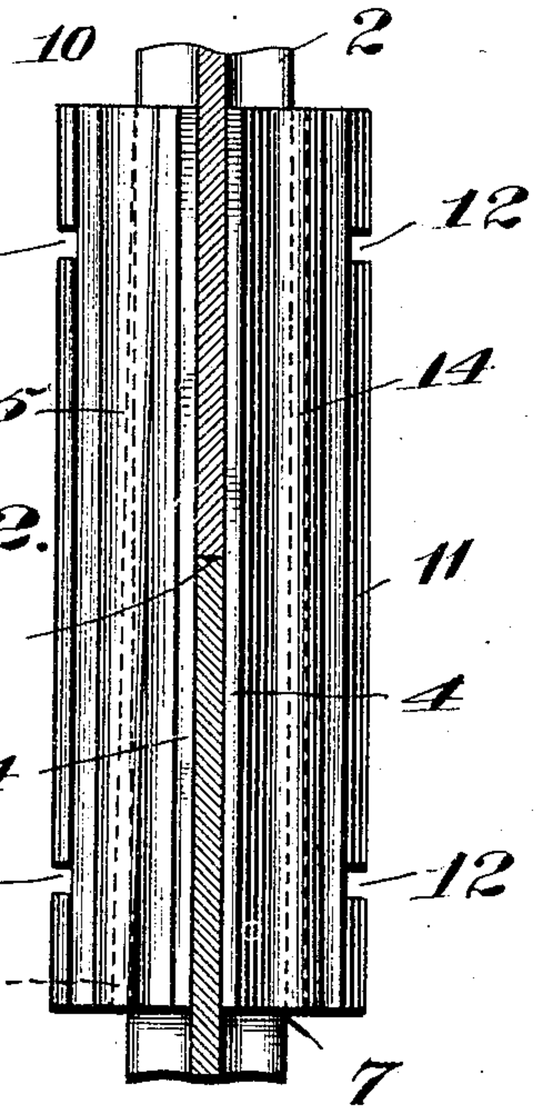


Fig. 3.

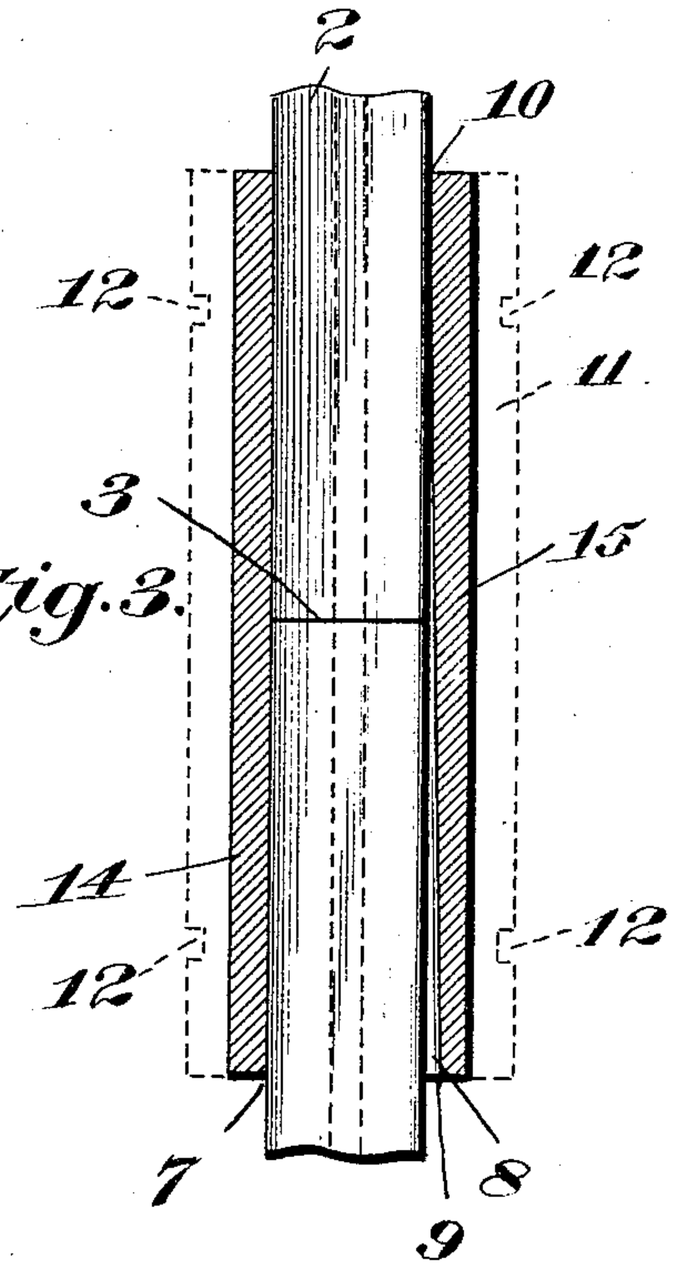
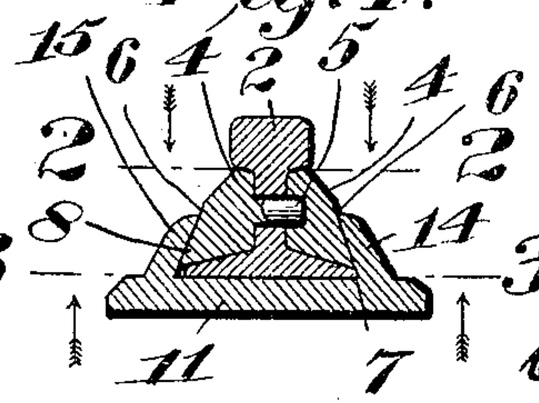


Fig. 4.



Witnesses

Elmer Seavey

Sarah C. Lockwood

Inventor

John Hoey Kline

by Geo. N. Hamlin

his Attorney

No. 773,755. Patented November 1, 1904.

UNITED STATES PATENT OFFICE.

JOHN HOEY KLINE, OF BROCKPORT, PENNSYLVANIA.

RAIL SPLICE OR JOINT.

SPECIFICATION forming part of Letters Patent No. 773,755, dated November 1, 1904.

Application filed February 3, 1904. Serial No. 191,873. (No model.)

To all whom it may concern:

Be it known that I, JOHN HOEY KLINE, a citizen of the United States, residing at Brockport, county of Elk, and State of Pennsylvania, have invented certain new and useful Improvements in Rail Splices or Joints, of which the following is a specification.

This invention relates to rail splices or joints.

The object of the present invention is the provision of a rail splice or joint of few parts, simple construction, inexpensive of manufacture, and which can be quickly and easily assembled and will be of such construction that it can be spiked to the ties, and thus serve as a chair for the rails, as well as a splice or joint.

Further objects are to provide a rail joint or splice of the wedging-action type, wherein keys will be dispensed with and the only parts employed being the fish-plates or splices of novel form and the chair of improved construction which wedges the fish-plates in position.

To accomplish the foregoing objects, I provide fish-plates or splice-bars for the opposite sides of the meeting ends of the rails and provided with dowels which pass through the rail-web and into the splice-bar or fish-plate on the opposite side, one of said fish-plates or splice-bars having its base portion tapered from one end to the other and extending laterally from the rail and a rail chair or connector which is adapted to be slid over the splice-bars or fish-plates and is properly beveled or tapered on the interior of one of its walls to exert a wedging action on the fish-plates to hold the meeting ends of the rails and said fish-plates perfectly rigid, said chair being of a proper form to bridge adjacent ties and adaptable for spiking thereto.

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

Figure 1 is a plan view of two of the ties and meeting ends of rails of a railroad-track equipped with my improved rail joints or splices, one of the rail-joints being shown in longitudinal section to show the dowels; Fig. 2, a plan view in section on line 2 2 of Fig. 4; Fig. 3, a bottom view in section on line 3 3 of Fig. 4, showing the bases of the meeting ends of the rails in full lines and the base of the chair in dotted lines and illustrating the lateral tapered extension of one of the fish-plates; and Fig. 4, a vertical section on line 4 4 of Fig. 1.

The ties are shown at 1 and the rails at 2, the meeting ends of the rails being shown at 3. On opposite sides of the web of the rails and of a proper length to suitably bridge the meeting ends of the rails are the fish-plates or splice-bars 4, which have integral dowels or lugs 5 projecting through corresponding openings in the web of the rail and into a socket in the splice-bar or fish-plate on the opposite side. As many of these dowels can be used as desired, and they are preferably arranged in alternation—that is, first a dowel on one fish-plate and then a dowel on the other fish-plate—which gives a more secure and satisfactory arrangement. The use of dowels which pass not only into the rail-web, but on into the rail-splice or fish-plate on the opposite side of the web, provides an absolutely secure construction, preventing longitudinal displacement of either of the splice-bars. The splice-bars are suitably beveled upwardly on their outer sides 6. These splice-bars fit in snugly between the base-flange and the head of the rails. One of the splice-bars has its outer edge exactly alined longitudinally with the outer edge 7 of the bases of the rails; but the other rail-splice has a lateral extension 8, which projects laterally beyond the outer longitudinal edges of the bases of the rails and tapers gradually from one end, 9, of said splice-bar to the other end, 10, thereof, Fig. 3, where it is in coincidence with the edge of the base of the rail.

The rail chair or connector is shown at 11 and is of such length that it will bridge adjacent ties, being provided with notches 12, whereby it can be connected by the spikes 13 to the ties or sleepers. This chair has side walls 14 and 15, which conform to the sides of the respective rail splice-bars or fish-plates, and, as seen from Fig. 4, these sides together form a dovetail channel in the chair, in which the bases of the rails and the splice-bars are seated. The side 15 is suitably tapered from

one end to the other thereof on its inner face to conform to the laterally-projecting portion 8 of the splice-bar having the same.

To apply the rail-joint, the fish-plates or rail-splices are applied to opposite sides of the web of the rail and the dowels fitted in openings in the web. The chair is then applied underneath one of the rails and slid longitudinally thereof to permit the ends of the splice-bars to enter between the sides 14 and 15, and it will be understood that the end 10 will be the end first received, rather than the end 9 of the portion 8, in order that the wedging action may be exerted by slipping the chair into position. The chair is then slid along until it comes to the position indicated in the drawings, and during this operation the wall 15 by its engagement with the portion 8 is exerting a binding action on both of the rail splices or bars to hold them tightly wedged in position. When the joint has been made properly tight, the spikes 13 are driven through the notches 12, and the joint is then completed.

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

1. In a rail-joint, the combination with the meeting ends of the rails, of fish-plates located on opposite sides of the webs of the rails, lugs or dowels on one of the fish-plates which project .through the webs of the rails into openings in the other fish-plate, a wedge-surface on one of the fish-plates, and a joint-chair having a wedge-face engaging the wedge-face aforesaid, said joint-chair receiving the meeting ends of the rails and the fish-plates and holding them together.

2. The herein-described rail-joint comprising the meeting ends of the rails, fish-plates located on opposite sides of the webs of the rails and each of said fish-plates having lugs or dowels which pass through the rail-webs into openings in the other fish-plate, one of said fish-plates having a laterally-extending tapered edge or wedge, and a joint-chair having a base in which the meeting ends of the rails are seated and sides which engage the fish-plates, one of said sides of the chair having a wedge-surface corresponding with and engaging the wedge-surface or edge on the fish-plate.

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

JOHN HOEY KLINE.

Witnesses:

H. H. BARR,

I. D. KERNS.