

M. RAYMOND.

RAIL JOINT.

APPLICATION FILED MAY 16, 1908. RENEWED MAY 27, 1909.

944,908.

Patented Dec. 28, 1909.

Fig 1.

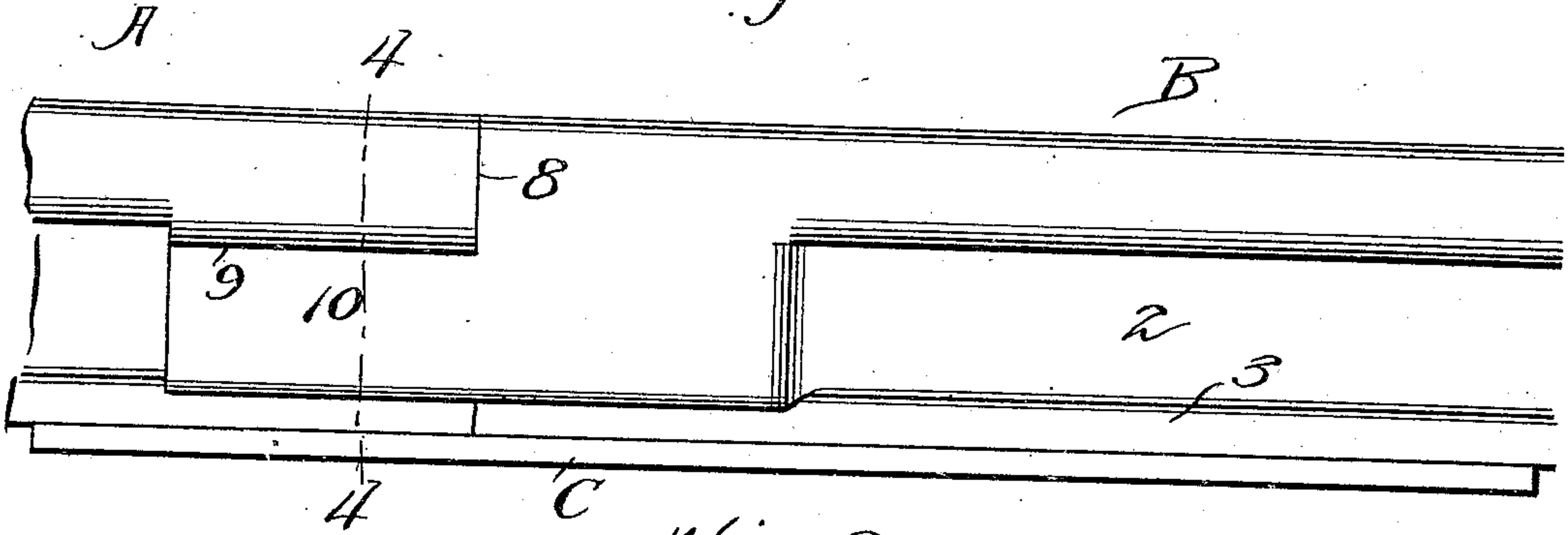


Fig 2.

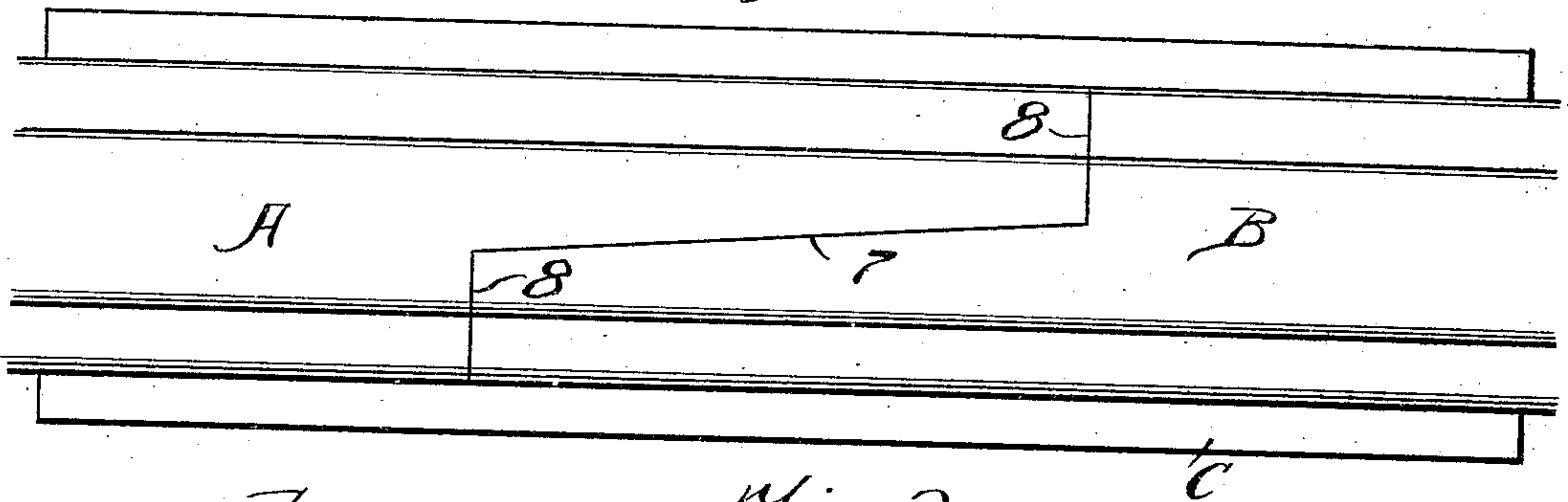


Fig 3.

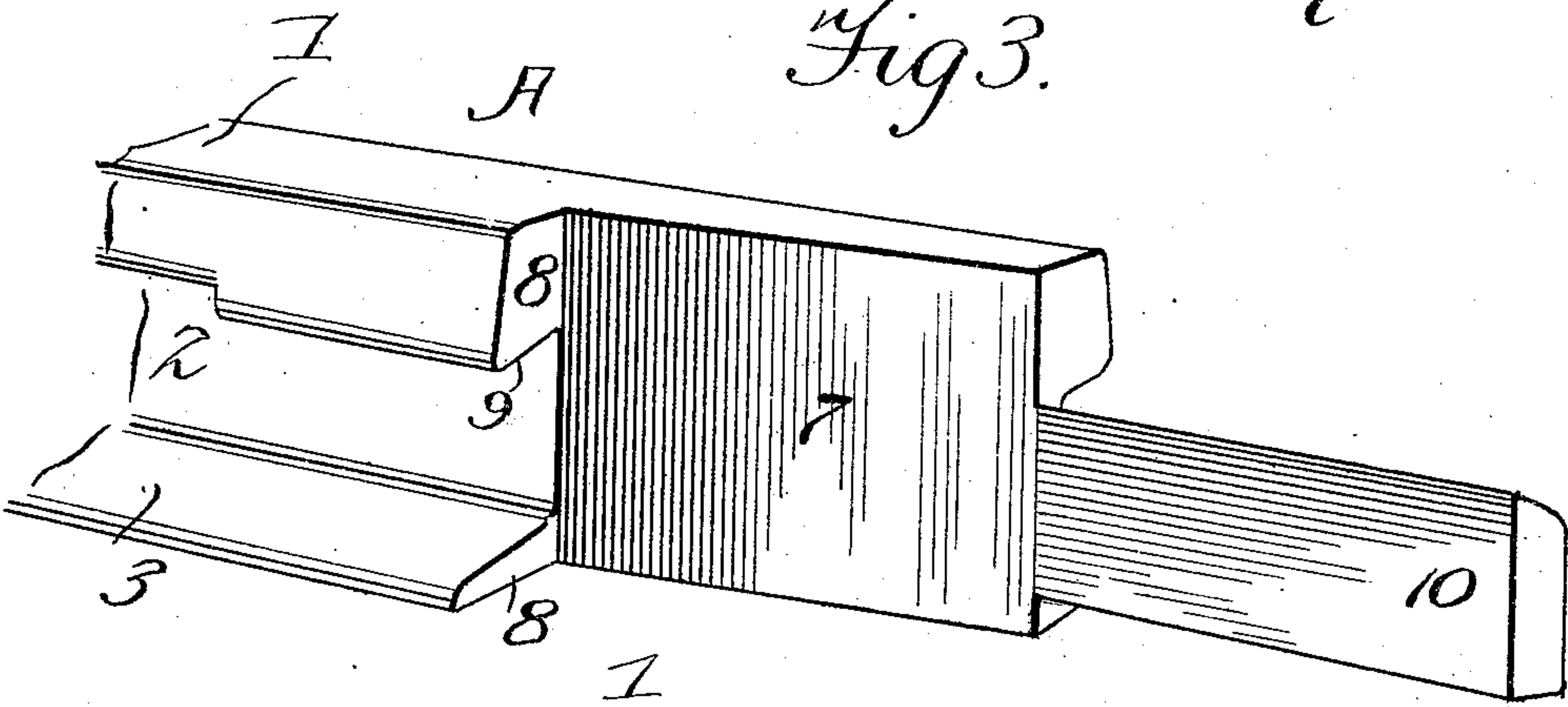


Fig 4. Malcolm Raymond

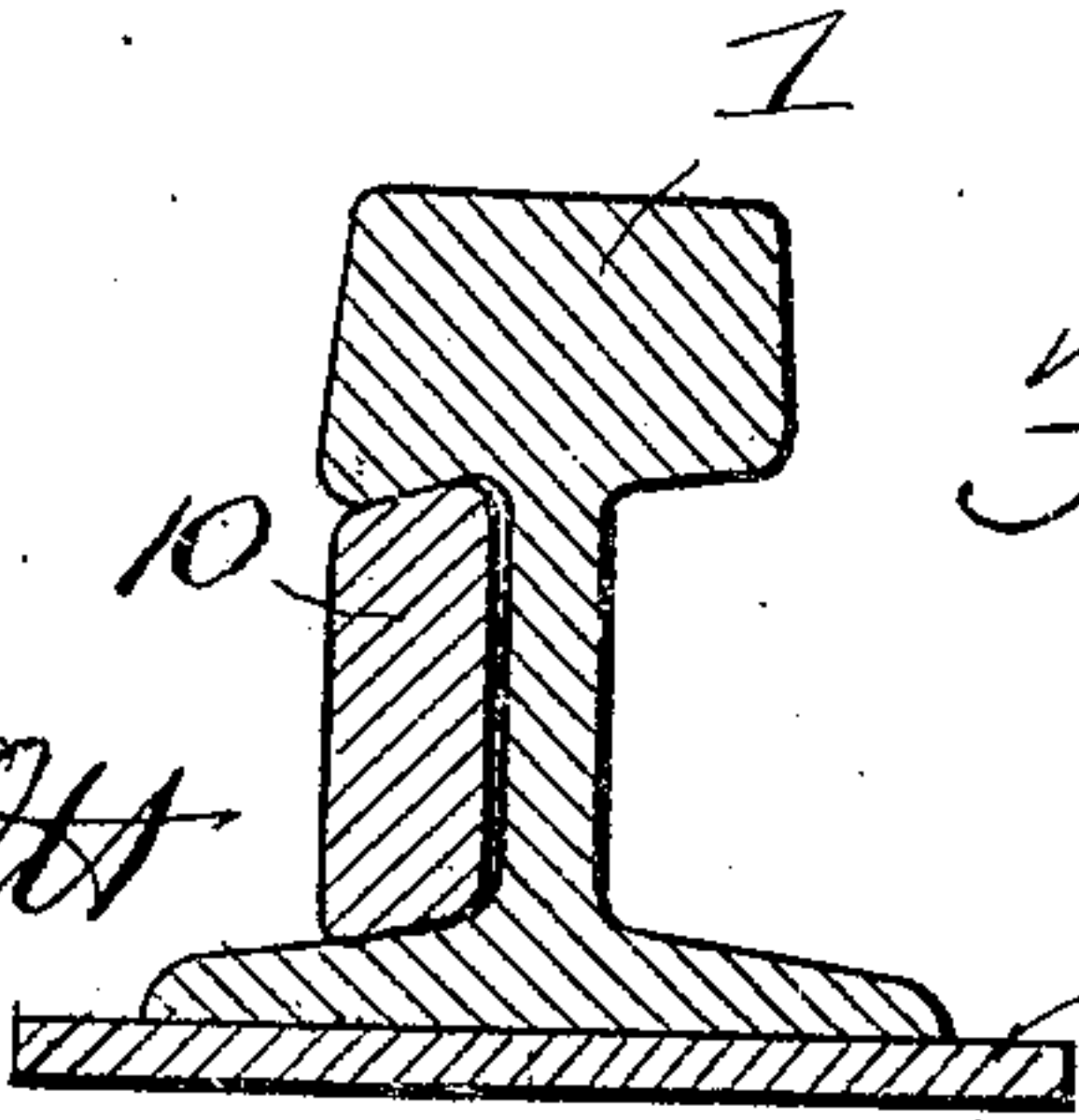
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Witnesses

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# UNITED STATES PATENT OFFICE.

MALCOLM RAYMOND, OF WAVERLY, NEW YORK.

## RAIL-JOINT.

944,908.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed May 16, 1908, Serial No. 433,287. Renewed May 27, 1909. Serial No. 498,684.

*To all whom it may concern:*

Be it known that I, MALCOLM RAYMOND, a citizen of the United States, residing at Waverly, in the county of Tioga and State of New York, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints of the scarf type provided with terminal tongues adapted to engage the webs of the rail sections and the bases and heads of the sections.

The invention has for one of its objects to provide a rail joint of this character which is comparatively simple and inexpensive in construction and so designed that the wheels of a train can pass thereover without shock and noise.

A further object of the invention is the provision of a joint which is of substantial design and in which the parts interlock so that bolts may be dispensed with, thus economizing in the construction of a track and enabling the rail sections to be laid and jointed with great despatch.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one of the embodiments of the invention, Figure 1 is a side view of the rail joint. Fig. 2 is a plan view thereof. Fig. 3 is a perspective view of one of the ends of a rail section. Fig. 4 is a sectional view on line 4—4, Fig. 1.

Referring to the drawing, A and B designate the meeting ends of two rail sections which are of standard construction and each consists of a head 1, web 2, and base 3. As shown in Fig. 3, the end of the rail is provided with an inclined surface 7 extending from one side of the web to the other and also from the top to the bottom of the rail section, the head and base at opposite sides of the surface 7 terminating at right angles to the length of the rail section. The head 1 has one side formed into an undercut shoulder 9 which is approximately parallel with the top face of the base for receiving the tongue 10 of the adjacent rail section. This tongue is an off-set longitudinal extension of the web and has its top surface inclined to fit the undercut surface 9 of the

head of the adjacent rail section. The tongues are thus interlocked with the shoulders formed by the under surfaces of the head, so that lateral displacement of the rail sections is prevented, and the necessity of bolts is thus eliminated.

In assembling the rail sections, the meeting ends of the sections are brought together so that the extremities of the tongues can be inserted by relative longitudinal movement of the sections under the shoulders 9 and over the bases 3. The tongue of one section will thus bear upon the base of the other section and under the head of such section so that relative vertical movement between the sections will be prevented. It may be preferable to employ a metal plate C under the joint so as to give stability thereto, the said plate resting on the cross-ties of the track and secured together with the rail sections to the cross-ties by spikes or other suitable fasteners.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims.

Having thus described the invention, what I claim is:—

1. The combination of a pair of rail sections connected together by relative longitudinal movement, the head of each section adjacent the end thereof having an under face inclined downwardly and outwardly from one side of the web of the section and approximately parallel with the top surface of the base of the section and each section having a longitudinally extending tongue connected with the web thereof and of such vertical dimension as to fit between the inclined face of the head of the opposite section and the base thereof, the top face of the tongue being inclined to interlock with the inclined part of the head to prevent lateral separation of the rail sections.

2. A rail joint comprising the meeting ends of two adjacent rail sections each rail comprising a head, a web, and a base, each

head having one side formed with a downwardly-inclined shoulder at its bottom substantially parallel with the top surface of the base immediately under the same, longitudinally-extending tongues off-set from the webs and having their top and bottom surfaces arranged to fit the said shoulders of the heads and bases of the sections, said sections having inclined abutting surfaces extending inwardly from the inner ends of the tongues at an inclination to the length of

the section and extending from one side of the web to the other and from the top to the bottom of the section, the tongue of one section being interlocked with the other section by relatively longitudinal movement. 15

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

MALCOLM RAYMOND.

Witnesses:

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RACHEL CRANS.