

No. 897,945.

PATENTED SEPT. 8, 1908.

G. WENDLING.
FISH PLATE.

APPLICATION FILED JULY 1, 1907.

Fig. 1.

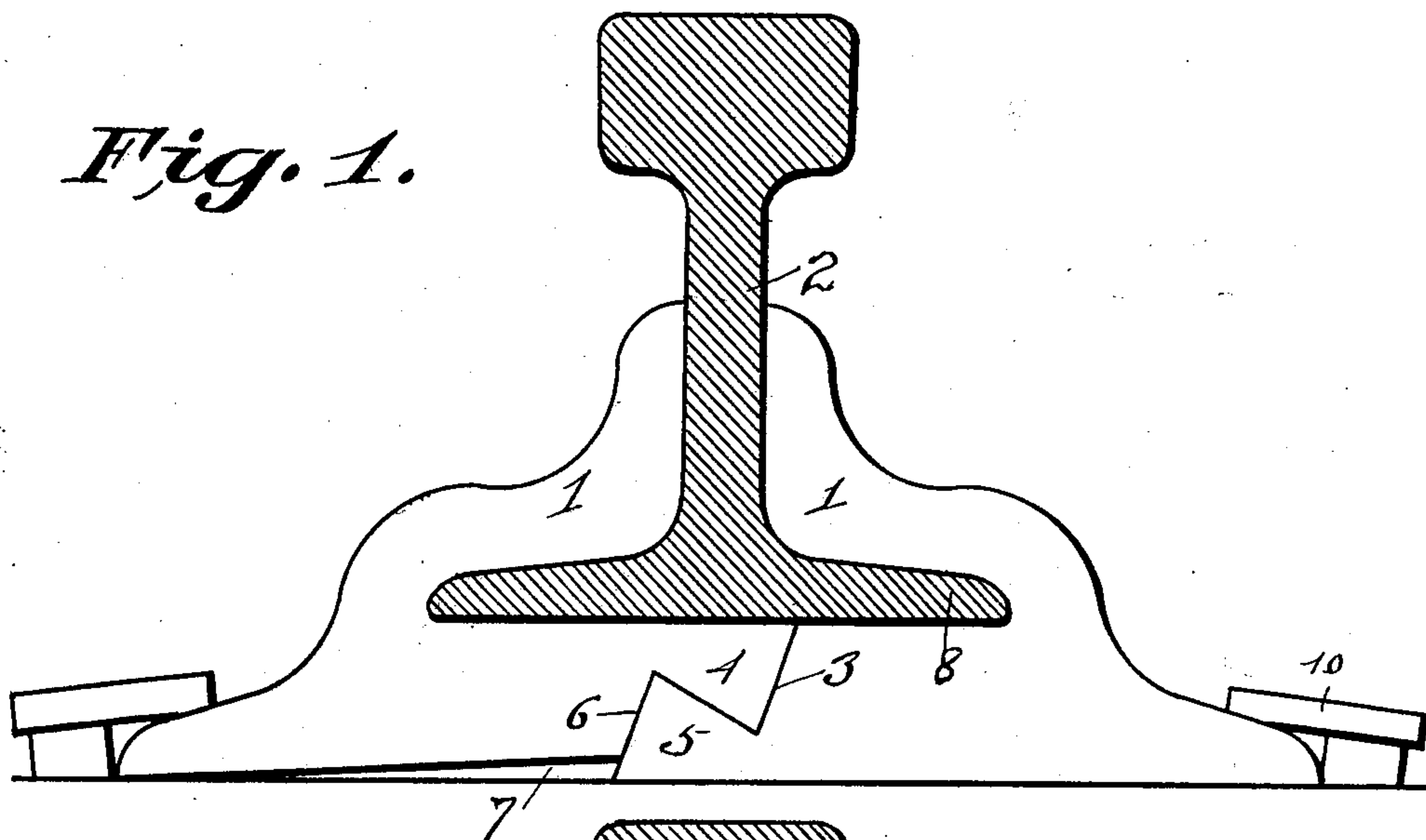
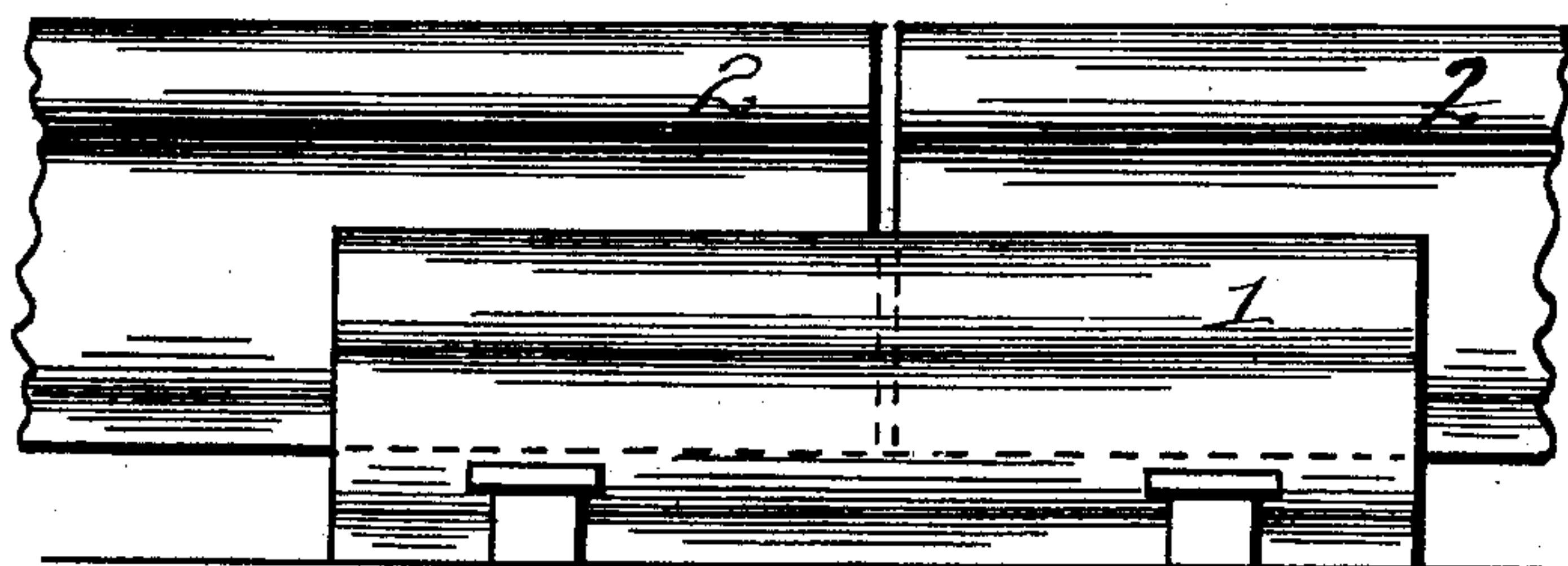
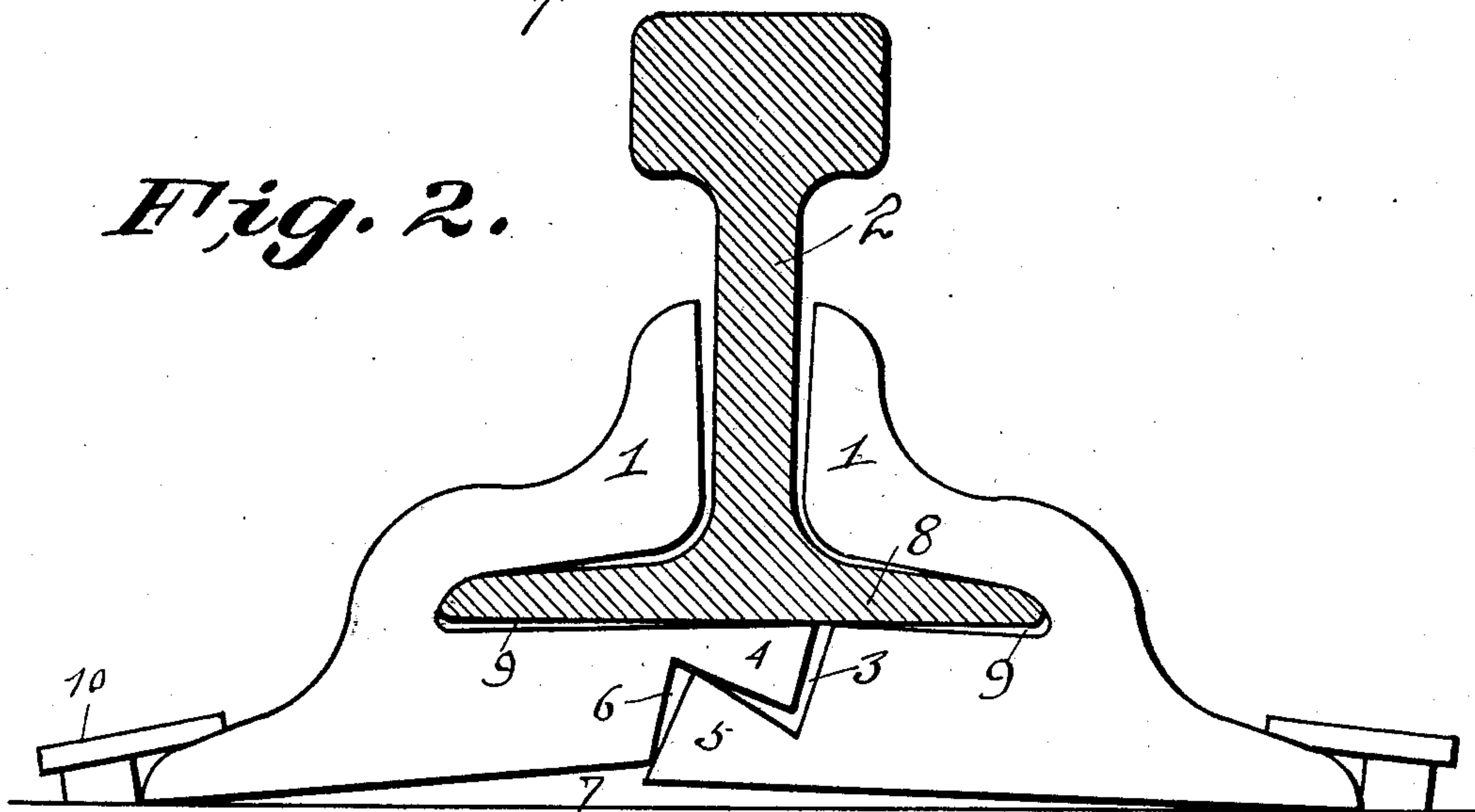


Fig. 2.



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UNITED STATES PATENT OFFICE.

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FISH-PLATE.

No. 897,945.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed July 1, 1907. Serial No. 381,725.

To all whom it may concern:

Be it known that I, GEORGE WENDLING, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fish-Plates; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in rail joints.

The object of the invention is to provide a rail joint or chair which normally is in such condition as to allow the rails to contract or expand freely without any interference from the joint devices, and which bind the rails at the joint at such time when weight is placed upon the rail at the joint, such as the passing train or engine. In arriving at these results, the fish plate on each side of the rail joint is provided with engaging members which normally do not bind each other, but when weight is placed upon the rail the effect of such pressure is to cause the interlocking portions of the fish plates to firmly engage each other, the weight upon the rail maintaining such engagement and causing the fish plates to securely bind the rail flange and the sides of the upright portion of the rail.

Preceding a more detail description of the invention, reference is made to the accompanying drawings, of which—Figure 1 designates a transverse section of a rail showing the ends of the fish plates in the position of securely clamping the rail as when weight is placed upon the rail. Fig. 2, is a similar view showing the parts more or less in a loosened or non-binding condition, as when there is no weight upon the rail. Fig. 3, is a side elevation of the joint.

In a detail description of the invention, similar reference characters indicate corresponding parts.

The fish plates 1 1 are made in two separate parts each of which has a certain amount of resiliency and both of which are secured to the ties by the usual spikes 10. The said fish plates have slots or openings 9 extending inwardly and of suitable size to receive the base flange 8 of the rail 2, said slots being of a size to snugly inclose the base flange of the

rail when weight is placed upon the rail and to snugly embrace the upright flange of said rail. The lower portions of the fish plates extend inwardly below the base flange 8 of the rail and terminate at their inner edges in male and female interlocking tongues and recesses 3—4—5 and 6. The depth of one of these base portions of the fish plates is less than the depth of the other so that there is a space 7 provided between the cross ties and said base portion which forms an important feature of the device, for example, the pressure upon the rail due to a train passing thereover, is exerted equally upon these base portions of the fish plates, and the weight or pressure exerted upon that fish plate which has its base of less depth than the other, will all be directed upon the interlocking tongues 4 and 5 to cause them to firmly engage at all points of their surfaces the recesses 3 and 6 and to thus bind the fish plates firmly around the base flange of the rail and against the opposite sides of the upright flange of the rail.

As is seen in Fig. 2, there is no weight upon the rail 2 and as a consequence, the fish plates 1 1 are more or less flexible or loose in their connection, and the interlocking tongues and recesses in the bases of the fish plates are separated to a sufficient extent, owing to the absence of weight upon the rail, to allow the fish plates to loosen their contact with the rail and to thus permit the rail to have independent movement under the effects of different temperatures.

It will be seen that the parts are entirely closed up in Fig. 1; this is the condition when weight is placed upon the rail. Fig. 2 is designed to clearly illustrate that, when weight is removed from the rail there is no clamping or binding effect between the interlocking tongues of the fish plates or between the fish plates and the sides of the rail. This view of the drawings is intended to illustrate this condition of looseness or flexibility by showing space between the sides of the rail and the fish plates and between portions of the interlocking tongues of the fish plates. The space 7 below the base of one of the fish plates is always there though such space is less when the fish plates are clamped by weights being on the rail. It will be readily seen that if one of the fish plates were not provided with a base of less depth than the other, the bases of both plates would rest in contact with the ties and the weight of the

train in passing over the rails could not be utilized for the purposes of binding the fish plates in contact with the rail to secure the joint at a time when security is most needed, 5 for example, when a train is passing over the joint. This feature of my invention I desire to claim broadly.

Having described my invention, I claim:

10 The combination with two sections of rails, of two fish plates having recesses to receive the base flanges of the rails, and the portions of said fish plates above the base flanges of said rails being adapted to clamp the sides of the rails above said base flanges, 15 the base portions of said fish plates below the rail flanges having interlocking portions with tapering matching surfaces adapted to engage each other substantially throughout their tapering surfaces when weight is placed

upon the rails to clamp the interlocking portions of said fish plates and the sides of the rails, the base portion of one of said fish plates being adapted to engage the surfaces of the ties throughout the width of said base portion, and the base portion of the other of 25 said fish plates being of less depth adjacent to the interlocking portions of said fish plates so that said base portion of less depth will be supported by the interlocking portions of the fish plates free from engagement with 30 the ties adjacent to the interlocking portions, substantially as specified.

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

GEORGE WENDLING.

Witnesses:

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