

C. LAKOSKY.
RAIL JOINT.
APPLICATION FILED JULY 21, 1910.

977,020.

Patented Nov. 29, 1910.

Fig. 1

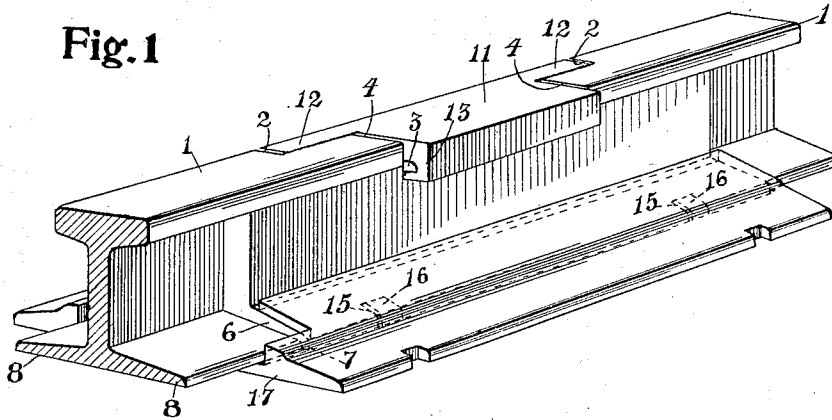


Fig. 2

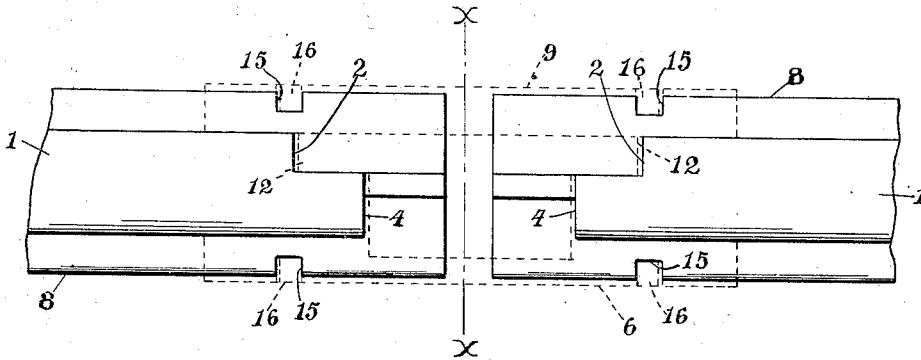
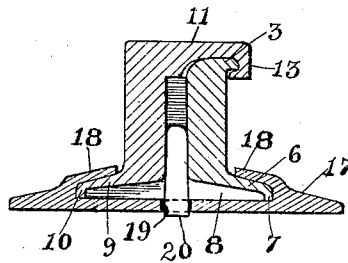


Fig. 3



Witnesses
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RAIL-JOINT.

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To all whom it may concern:

Be it known that I, CHARLES LAKOSKY, a citizen of the United States of America, residing at Cooks Mills, in the county of Schoolcraft and State of Michigan, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to rail joints for railroads and more particularly to a construction whereby the rail ends are held in place without the use of bolts, screws or the like and whereby freedom for movement under expansion is afforded without possibility of lateral movement.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view in perspective of an assembled rail joint that embodies features of the invention; Fig. 2 is a plan view of a pair of rail ends showing fish plates in dotted lines; and Fig. 3 is a view in cross section taken centrally through the joint at or about line $x-x$ of Fig. 2.

As herein indicated, a pair of T rails of the usual conventional cross section have their treads 1 cut away at their extremities, one marginal portion of each tread being transversely gained to form a shoulder 2. A pair of fish plates are provided, one of which has a projecting lip 3 of sufficient length to span the interval between the adjacent end faces 4 of the rail treads when the rails are placed with a short interval between the ends. A foot flange 6 of the fish plate has a depending marginal rib 7 adapted to overlap the adjacent margin of the rail flange 8. The companion fish plate which has a foot flange 9 and depending rib 10 similar to the other fish plate, is provided with a tread 11 having extending portions 12 fitting the rail gains, the tread of the fish plates forming a continuation of the rail treads and bridging the gap between them smoothly. The outer margin 13 of the latter fish plate extends over the lip 3 of the companion fish plate and is under-cut or longitudinally channeled on its inner face to hook over said lip. To prevent longitudinal movement of the fish plates on the rail marginal notches are formed in the foot flanges of the plates which register with corresponding notches 15 in the rail flanges and

the notches when in register are filled with locking blocks 16.

The rail ends are supported in a cradle plate 17 having inwardly projecting flanges 18 embracing the foot flanges 6 and 9 of the fish plates and holding the latter from spreading. In assembling the joints the rails when in alined position are connected by the fish plates and the cradle is then slid over the assembled parts. To facilitate the placing of the locking blocks in their notches, the flanges 18 of the cradle are cut away at one end so that when the cradle is drawn over the fish plates a block 16 is dropped into the notch just before the cut away end of the flange covers the slot, the base of the cradle preventing the block from falling through. When fully in place and spiked to the ties the cradle retains the rails in alinement. The filler blocks are somewhat shorter than the notches and this allows a limited longitudinal play between the fish plates and the rails.

If it is desired to positively hold the cradle in relation to the rail ends as is sometimes desirable in bridge construction and the like a central opening 19 is formed in the base of the cradle adapted to register with the open space between the ends of the rails, and a suitable wedge or keeper 20 can then be inserted which effectually prevents longitudinal displacement of the cradle.

It is further to be noted that the tread of the inner fish plate which extends beyond the outer margins of the rail treads prevents the use of a double flanged wheel on a track rail thereby barring the tracks against the illegitimate use by owners of third wheel adjustments for bicycles and the like.

Obviously changes in the details of construction may be made without departing from the spirit of the invention and I do not care to limit myself to any particular form or arrangement of parts.

I claim as my invention:

1. The combination with a pair of alined railroad rails whose adjacent ends are separated by an interval, of a pair of fish plates having foot flange ribs overlapping the margins of the rail base flanges and upper portions interlocking against lateral displacement and forming a continuation of the rail tread between the rail ends, a cradle supporting the rail ends and locking the fish plates against lateral displacement, and

means interlocking the rails and fish plate flanges against longitudinal movement.

2. The combination with a pair of alined railroad rails whose adjacent ends are separated by an interval, of a pair of fish plates having foot flange ribs overlapping the margins of the rail base flanges and upper portions interlocking against lateral displacement and forming a continuation of the rail tread between the rail ends, a cradle supporting the rail ends and locking the fish plates against lateral displacement, the superposed fish plate and rail flanges being correspondingly notched, and filler blocks in the notches resting on the cradle.

3. The combination with a pair of alined railroad rails whose tread portions near their ends are cut away and correspondingly gained, of an outer fish plate having a foot flange rib that overlaps the margins of the rail base flanges and an upper marginal lip, an inner fish plate having a foot flange rib that overlaps the margins of the rail base flanges and an upper tread portion interlocking with the companion plate lip and filling the interval between the ends of the rail treads, and a rail cradle supporting the rail ends and locking the fish plates against lateral displacement.

4. The combination with a pair of alined railroad rails whose tread portions near their ends are cut away and correspondingly gained, of an outer fish plate having a foot flange rib that overlaps the margins of the rail base flanges and an upper marginal lip,

an inner fish plate having a foot flange rib that overlaps the margins of the rail base flanges and an upper tread portion interlocking with the companion plate lip and filling the interval between the ends of the rail treads, and a rail cradle supporting the rail ends and having inturned longitudinal flanges adapted to retain the fish plates against lateral movement.

5. The combination with a pair of alined railroad rails whose tread portions near their ends are cut away and correspondingly gained, of an outer fish plate having a foot flange rib that overlaps the margins of the rail base flanges, and an upper marginal lip, an inner fish plate having a foot flange rib that overlaps the margins of the rail base flanges and an upper tread portion interlocking with the companion plate lip and filling the interval between the ends of the rail treads, a rail cradle supporting the rail ends and having inturned longitudinal flanges adapted to retain the fish plates against lateral movement, and filler blocks removably secured in mating notches of the fish plate and rail flanges, and adapted to permit slight longitudinal movement of the rails.

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

CHARLES LAKOSKY.

Witnesses:

JOHN ROBERTS,
GEBBERT OLSEN.