

(No Model.)

S. PHILLIPS.

FISH PLATE.

No. 383,763.

Patented May 29, 1888.

Fig. 1.

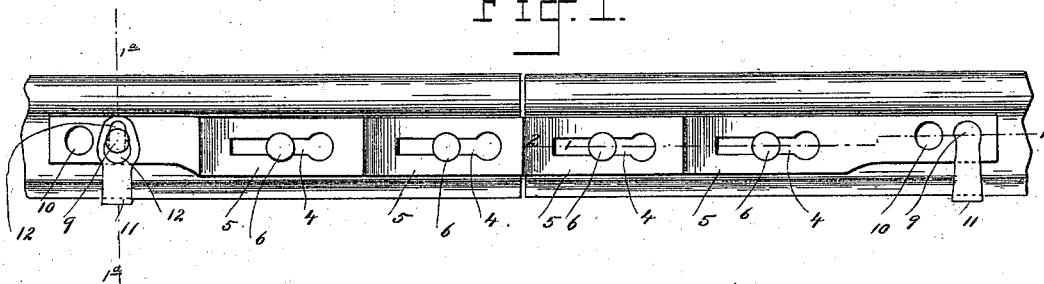


Fig. 2.

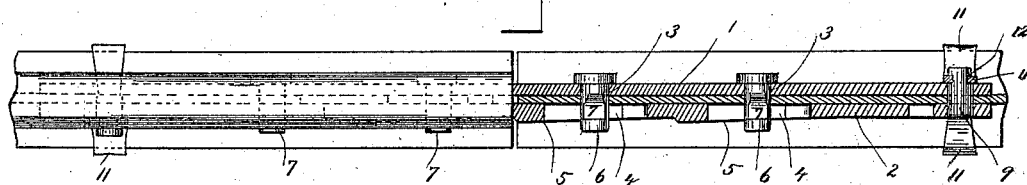


Fig. 3.

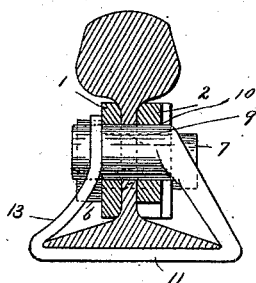
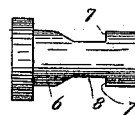


Fig. 4.



Witnesses
John F. Nelson
Lillie Hanna

Inventor
Delah Phillips
By *Smith Bros*
Attorneys

UNITED STATES PATENT OFFICE.

SELAH PHILLIPS, OF ARNOT, PENNSYLVANIA.

FISH-PLATE.

SPECIFICATION forming part of Letters Patent No. 333,763, dated May 29, 1888.

Application filed February 1, 1888. Serial No. 262,655. (No model.)

To all whom it may concern:

Be it known that I, SELAH PHILLIPS, a citizen of the United States, residing at Arnot, in the county of Tioga and State of Pennsylvania, have invented certain new and useful Improvements in the Manner of Securing Fish-Plates, of which the following is a specification.

This invention relates to that class of joints for railway and other rails where a fish-plate provided with cam-faces through which slots are made is employed in conjunction with double-headed bolts, or bolts having a head at each end, which pass through the said slots and through corresponding holes in the rails, for clamping the ends of the rails together; and the invention has for its object to provide an efficient and simple means for locking the plate in its effective position.

With this end in view my invention consists in locking the fish-plate against retrograde movement by anchoring it to some stationary part, and in other features of novelty which I will now describe with reference to the accompanying drawings, which form a part of this application, and then point out my invention more specifically in the claims hereto annexed.

In the said drawings, Figure 1 is a side elevation of the ends of two railway-rails showing my improvements applied thereto. Fig. 2 is a plan of the same, partly in section, on line 1 2. Fig. 3 is a transverse section on line 1^a 1^a. Fig. 4 is an enlarged view of the bolt employed.

In carrying out my invention I employ two fish-plates, 1 2, the former being provided with the ordinary bolt-holes, 3, while the latter is provided with key-hole slots 4 on the cam or inclined faces 5, the inclinations of which are toward the eye of the slots. The bolt 6, which passes through the hole 3 and slot 4, is preferably composed of an ordinary bolt, having the usual head at one end and having a shoulder or head, 7, formed at its other end by notching the same on opposite sides, so as to form a neck, 8. This bolt is passed through the hole 3, through a corresponding hole in the rail, and through the eye of the key-hole slot 4, whereupon the fish-plate 2 may be slid in the direction of the bolt and cause the neck 8 to enter the elongation of the slot and the cam or inclined faces 5 to wedge under the edges of the head 7, and thus clamp the parts firmly together. When this is accomplished, cotters 9 are inserted in

the holes 10 at each end of fish-plates, and, passing through corresponding holes in the rail, are prevented from falling out by bands or straps 11, of sheet metal or other suitable material, that may be secured to the cotters in any desirable manner, or may be made integral therewith, and which are passed under the foot of the rail and bent up on the other side. A key-hole slot, 12, formed on the end of the strap 11, passes over the end of the cotter, and by bending the strap at 13, by a blow or otherwise, it is secured by the elongated part of slot 12 setting down over a neck on the cotter 9, as shown.

In case the plates wear enough to render the inclines 5 ineffective, a washer may be placed between the head of the bolt 6 and plate 1 to compensate for such wear; or one or more additional holes in each end of plate 2 may be prepared, so that by taking the cotters out and sliding the plate 2 along until its next hole comes opposite that in the rail the cotters can be inserted, as before, with the result of tightening the bolts 6 by the further movement of the inclines 5 against the shoulders 7 of the bolts.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a joint, the combination, with the rail and fish-plate having a slot with a bolt therethrough, of a cotter inserted in an independent slot, and a band or strip bearing against said cotter and passing partially around the rail, substantially as and for the purposes set forth.

2. In a joint, the combination, with the rail and fish-plate having a slot therethrough, of a cotter inserted in an independent hole, a band or strip on one end of said cotter adapted to pass partially around the rail, and having a slot therein for the reception of the other end of said cotter, as set forth.

3. In a joint, the combination, with the rail and a fish-plate having cam-surfaces with slots and holes therein and bolts therethrough, of a cotter inserted transversely through said rail and plate, and a strip or band passing partially around the rail and bearing at both ends on said cotter.

SELAH PHILLIPS.

Witnesses:

D. C. WATERS,
LAURE BROWNE.