(No Model.)

W. SANDFORD, W. THORNLEY & E. SILCOCKS.

FISH JOINT FOR RAILWAYS.

No. 507,595. Patented Oct. 31, 1893.

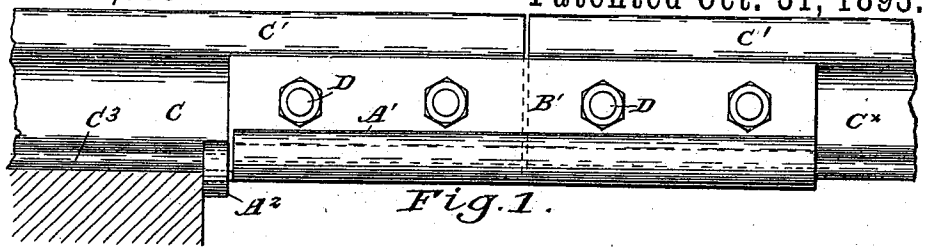

Fig. 1.

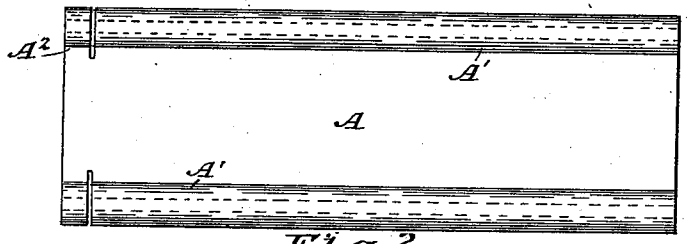

Fig. 2.

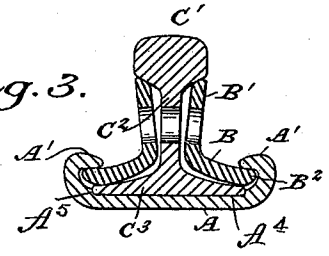

Fig. 3.

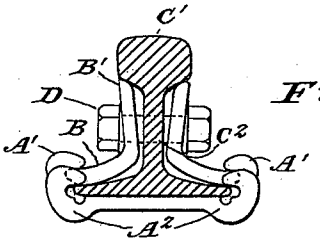

Fig. 4.

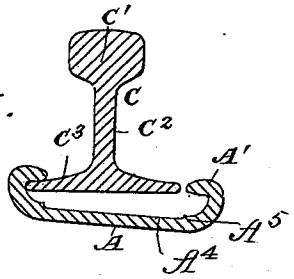

Fig. 5.

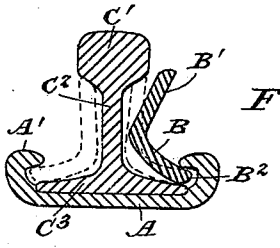

Fig. 6.

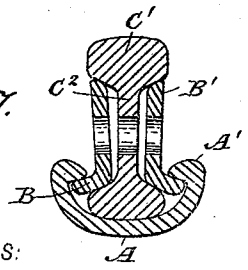

Fig. 7.

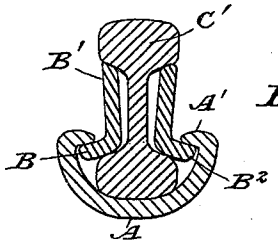

Fig. 8.

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FISH-JOINT FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 507,595, dated October 31, 1893.

Application filed December 5, 1892. Serial No. 454,135. (No model.) Patented in New South Wales June 23, 1892, No. 3,827; in South Australia June 30, 1892, No. 2,274; in Tasmania July 4, 1892, No. 1,083/10, and in Western Australia July 26, 1892, No. 356.

To all whom it may concern:

Be it known that we, WILLIAM SANDFORD, iron-master, residing at Lithgow, WILLIAM THORNLEY, mechanical engineer, residing at Marrickville, near Sydney, and EDWARD SILCOCKS, railway inspector, residing at Sydney, in the British Colony of New South Wales, all subjects of the Queen of Great Britain, have invented a new and useful Fish-Joint, entitled an Improved Fish-Joint for Railways, (for which we have obtained Letters Patent in the following countries, namely: New South Wales June 23, 1892, No. 3,827; South Australia June 30, 1892, No. 2,274; Tasmania July 4, 1892, No. 1,083/10, and Western Australia July 26, 1892, No. 356,) of which the following is a specification.

This invention relates to an improved fish-joint for railways, by which the junctions of juxta-terminous rails may be easily and firmly "fished" or joined and have a rigidity heretofore unattainable at such fishes or junctions, and by which, if necessary or desirable, a preventive to "creeping" or longitudinal movement of the rail may be provided. But in order that this invention may be clearly understood reference will now be made to drawings herewith, in which—

Figure 1 is an elevation of this improved fish-joint applied to T rails. Fig. 2 is a plan of the fish-brace thereof. Figs. 3 and 4 are cross section and end elevation respectively of the same; while Figs. 5 and 6 are sections of the fish in course of construction. Figs. 7 and 8 are sections of this improved fish-joint applied to a bull-headed rail and a double-headed rail respectively.

This improved fish-joint in a finished state has its fish-brace A with its hooks A′ taking over the edges of the base bars B of the angular fish-plate, whose rail bars B′ take under the head C′ of the rails C and C×, the whole being fastened together by bolts D taking through said rail bars B′ and web C^2 of the rails against the foot or base C^3 of which the brace A takes. It will be seen that the tightening or screwing up of the nuts of bolts D that the fish-brace A is firmly fixed in place by the leverage on the edges of base bar B′ tending to raise the hooks A′, and that the head C′ of the rails has a firm support by the forcing thereunder of the rail bars B′.

In making this fish-joint the fish-brace A is inserted under the rail and hooked thereon, as shown in Fig. 5, and the other hook A′ brought up until the other end of foot C^3 of the rail passes inside the two hooks A′, when said brace A being supported centrally up to the foot C^3 the fish-plates are positioned by inserting edges B^2 under hook A′, (as shown in Fig. 6,) and pressing them to place when bolts or other fastenings, as well understood, are inserted through suitable holes in rail bars B′ and web C^2, and the whole fastened in the manner described.

The stop pieces A^2 on the fish-brace A are made, by saw-cutting during manufacture, into end of sides of said brace (as shown in Fig. 2), and then when in place swaging or hammering down said cut pieces to the position shown in Fig. 4. These stop pieces A^2 are provided only when it is necessary or desirable to have "creeping" preventives on the line of rail, and the ends of the braces A being interchangeable they are only made at one end thereof. The rail bars B′ of the fish plates abut against these stop pieces, and the fish-braces abut against a sleeper, and thus the fish and rail are prevented from creeping or longitudinal movement.

It will be noticed that the fish brace has a depressed central portion forming a seat A^4 adapted to receive the base of the rail which fits therein between the shoulders A^5. The brace is thus centered in proper position and is held against lateral displacement.

Having now particularly described and explained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

1. In combination, the rail having a base C^3, the angular fish plates B, the bolts for drawing the fish plates into position and the fish braces passing under the rail base and having hooks to receive the edges of the angle plates and having also a depressed seat and

shoulders A^5 to receive the base of the rail, substantially as described.

2. In a railway fish-joint of the class set forth the combination and arrangement with the abutting rails such as C and $C^\times$ bolts such as D and angular fish-plates such as B B′ of a fish-brace such as A having hooks such as A′ and a stop piece or stop pieces such as A^2 substantially as herein described and explained and as illustrated in the drawings.

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