

No. 652,248.

Patented June 26, 1900.

W. H. CONNELL.

FISH PLATE.

(Application filed Mar. 18, 1898.)

(No Model.)

FIG. 1.

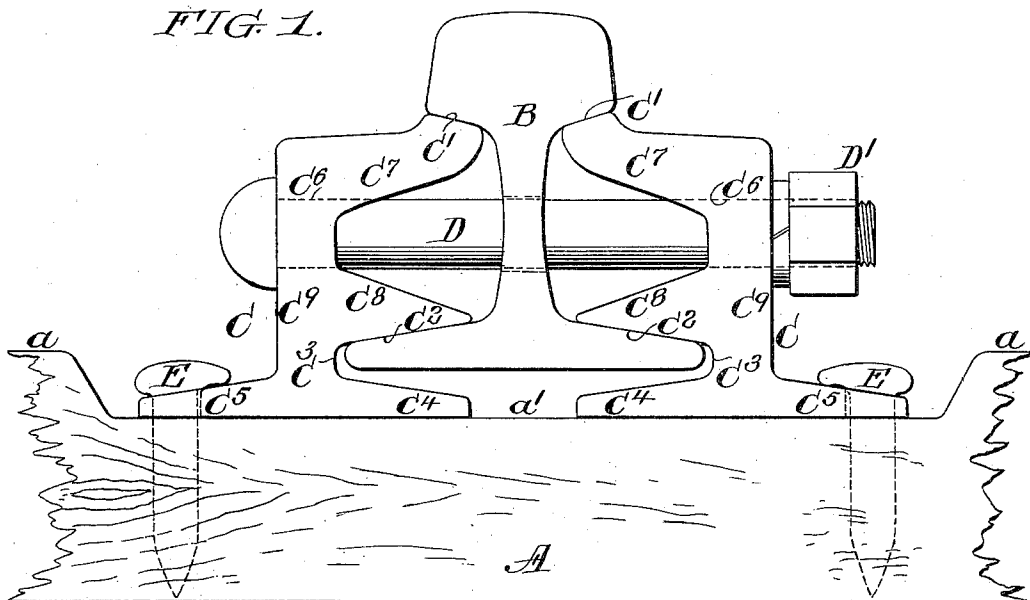
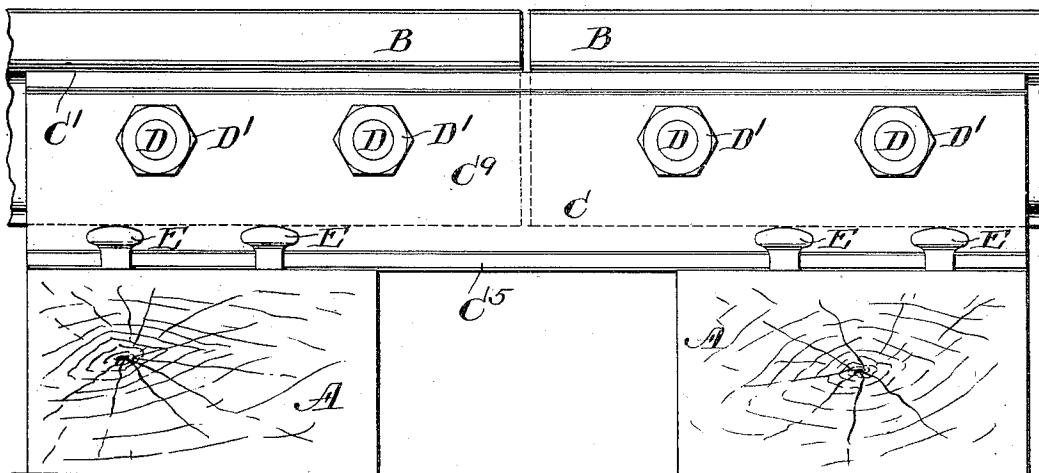


FIG. 2.



Witnesses.

Stewart
Henry Denny

Inventor.

William H. Connell

by
James J. Chambers
 His Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM H. CONNELL, OF WILMINGTON, DELAWARE.

FISH-PLATE.

SPECIFICATION forming part of Letters Patent No. 652,248, dated June 26, 1900.

Application filed March 18, 1898. Serial No. 674,293. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CONNELL, a citizen of the United States of America, residing in Wilmington, in the county of New Castle, in the State of Delaware, have invented a certain new and useful Improvement in Fish-Plates, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to fish-plates, and has for its object to provide a fish-plate by which a firm and strong union can be made between adjoining railway-rails.

The nature of my improvement will be best understood as described in connection with the drawings, in which it is illustrated, and in which—

Figure 1 is a view of a rail-joint formed with my fish-plates, and Fig. 2 a side elevation thereof.

A A indicate ties upon which the fish-plates rest. Their top surfaces, corresponding to those of the other ties upon which the rails are directly supported, are indicated at *a*, and, as shown, they are cut away or recessed at *a'* to an extent corresponding to that to which the fish-plates project below the rails.

B B indicate the rails.

C C indicate my new fish-plates, which are preferably formed of a rolled section of iron or steel, having faces *C'* *C''*, adapted, as shown, to rest against the head and base of the rail, respectively. Outside of and below the face *C''* the fish-plate is recessed, as shown at *C'''*, to clear the outer edge of the bottom flange, and an inwardly-extending bottom flange *C⁴* is formed to extend inward beneath the base of the rail and form a broad support for the joint, said flange resting on the ties, as shown, and extending to or so nearly to a perpendicular line drawn from the face *C'* that strains pressing down on said face have little or no tendency to tilt the fish-plate. Preferably, also, I form an outwardly-extending flange *C⁵* at the base of the fish-plate, so as, in connection with flange *C⁴*, to give it a broad firm seat on the ties.

D D, &c., indicate the bolts used to secure the fish-plates to the rails and passing through the bolt-holes *C⁶*, *D'* *D''* being the nuts.

E E, &c., are spikes used to secure the fish-

plates to the ties A and preferably driven into notches in the flange *C⁵*, as shown.

I form my fish-plates with their rail-abutting faces *C'* and *C''* connected with each other and with a substantially-vertical web *C⁹* by limbs or arms *C⁷* *C⁸*, angling to each other like the limbs of the letter A, and I form the bolt-holes *C⁶* through the web at the apex of the A, as shown, so that the parts when assembled assume the "A-truss" form, as shown in Fig. 1, and I find it advantageous to so proportion the metal in the fish-plates as to give them a resistance to a bending strain equal to that of the rail-section and to give them the rail-like section shown as both simple for construction and as best disposing of the necessary metal.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A fish-plate having a web, as *C⁹* substantially vertical from top to bottom, bearing-faces *C'* *C''* adapted to bear against the head and bottom flanges of the rail, and a base, as *C⁴*, extending inward from the bottom of the vertical web and adapted to extend beneath the bottom flange of the rail and serve as a support for the joint.

2. A fish-plate having a web, as *C⁹* substantially vertical from top to bottom, bearing-faces *C'* *C''* adapted to bear against the head and bottom flanges of the rail, and a base as *C⁴* *C⁵* extending inwardly and outwardly from the bottom of the vertical web and adapted to extend beneath and beyond the bottom flange of the rail and serve as a support for the joint.

3. A fish-plate having a substantially-vertical web, as *C⁹*, bearing-faces *C'* *C''* adapted to bear against the head and bottom flanges of a rail, and a base extending inward from the bottom of the substantially-vertical web and adapted to extend beneath the bottom flange of the rail, and having its faces *C'* *C''* connected by arms *C⁷* *C⁸* springing at diverging angles from the web and bolt-holes formed through the web at the apex of the angle formed by said arms.

WM. H. CONNELL.

Witnesses:

CHAS. F. MYERS,
D. STEWART.