

(No Model.)

H. W. LIBBEY.
FISH PLATE.

No. 461,387.

Patented Oct. 13, 1891.

Fig. 1.

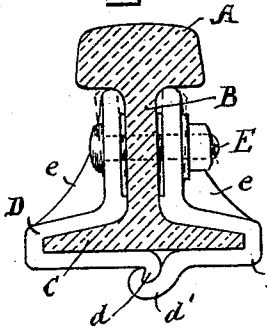


Fig. 2.

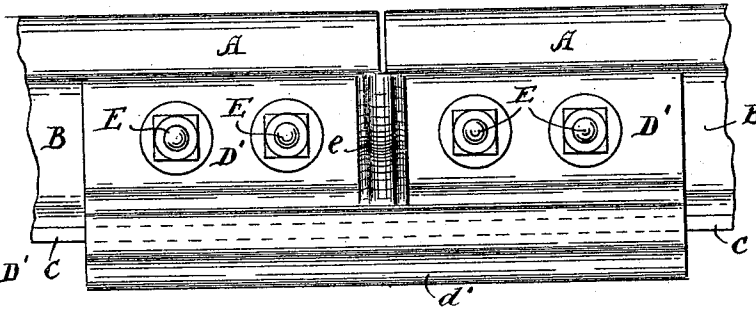


Fig. 3.

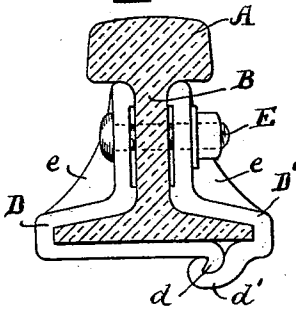


Fig. 4.

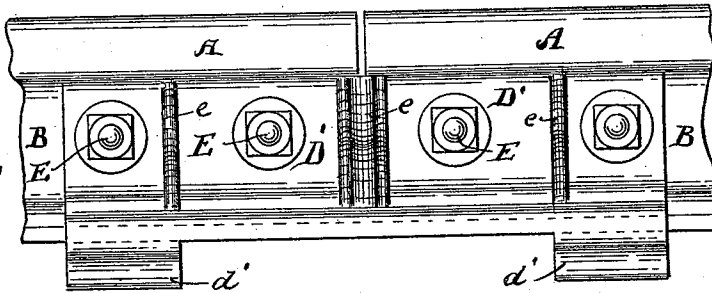


Fig. 5.

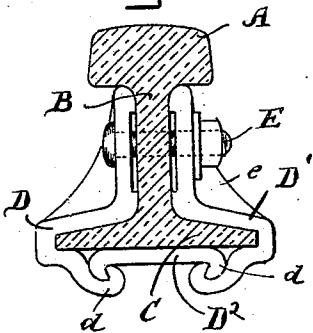
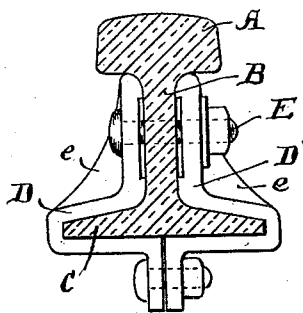


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

HOSEA W. LIBBEY, OF BOSTON, MASSACHUSETTS.

FISH-PLATE.

SPECIFICATION forming part of Letters Patent No. 461,387, dated October 13, 1891.

Application filed September 5, 1890. Serial No. 364,055. (No model.)

To all whom it may concern:

Be it known that I, HOSEA W. LIBBEY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fish-Plates, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to fish-plates for holding the ends of railroad-rails together, as hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a vertical cross-section of a rail and end view of fish-plates embodying my invention. Fig. 2 is a side view of the ends of two adjacent rails connected together by the fish-plates. Fig. 3 is a section of the rail and end view of the fish-plates with the locking device on one side. Fig. 4 is a side view of the ends of two adjacent rails connected together by fish-plates having the locking device at each end. Figs. 5 and 6 are views of modifications.

A represents the treads, B the webs, and C the flanges, of the rails, which are of the ordinary construction.

D D' are the fish-plates, and are of the form shown, so as to embrace the web B, and flanges C, of the rail, each plate passing under the flanges and connected together by a lock-joint consisting of hooks *d d'*. I also form the fish-plates with one or more ribs *e*, to give additional stiffness to the ends of the rails and prevent them from spreading.

E E are bolts for connecting the fish-plates and rails together.

In placing the fish-plates upon the rails, they are placed end to end and then slipped along, so that the two hooks *d d'* will engage each other, and the plates are so formed that when upon the rail before being bolted together the upper edges will stand a short dis-

tance from the rail, and when the bolts are inserted and the nuts screwed up the ends will be drawn into contact with the web of the rail, but will have a slight tendency to spring outward, thus exerting sufficient pressure upon the nuts to keep them from turning and becoming loose.

If desired, the fish-plates may be formed with hooks only at the ends, as shown in Fig. 4, in which case they would have to be slipped only a short distance to lock them together.

In the modification shown in Fig. 5 the fish-plates could first be placed upon the rails and the plate D² slipped in afterward, or, if desired, the hooks might be dispensed with and the two plates be connected together under the rail by bolts, as shown in Fig. 6.

It will be seen that by this construction of fish-plates the ends of the rails have a bearing underneath, and by means of the ribs the tread of the rail is firmly held, thus preventing any liability of the rail spreading.

What I claim as my invention is—

In combination with the ends of two adjacent railroad-rails, fish-plates D D', embracing the webs and flanges of the rails and passing under the said flanges, the inner ends of the fish-plates having hooks *d d'*, that interlock with each other under said flanges, each plate having one or more ribs *e* between the portions that fit against the webs and the flanges of the rails, and bolts E E, passing through the sides of the fish-plates and webs of the rails, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 22d day of August, A. D. 1890.

HOSEA W. LIBBEY.

Witnesses:

CHAS. STEERE,
EDWIN PLANTA.