

(No Model.)

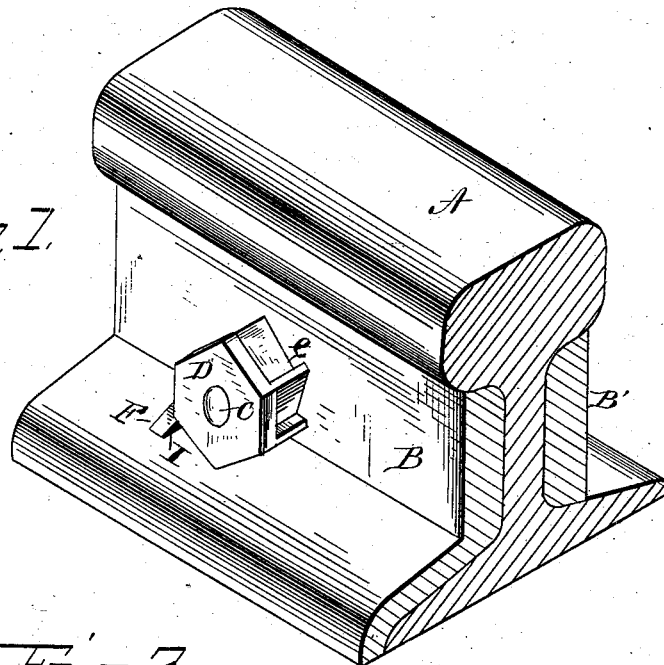
2 Sheets—Sheet 1.

F. HOLTON.  
FISH PLATE JOINT.

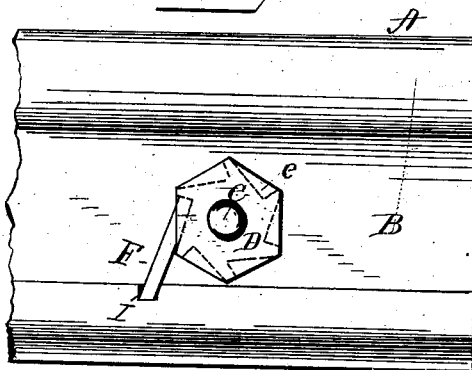
No. 260,025.

Patented June 27, 1882.

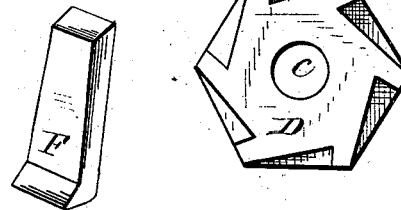
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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(No Model.)

2 Sheets—Sheet 2.

F. HOLTON.  
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Fig. 4.

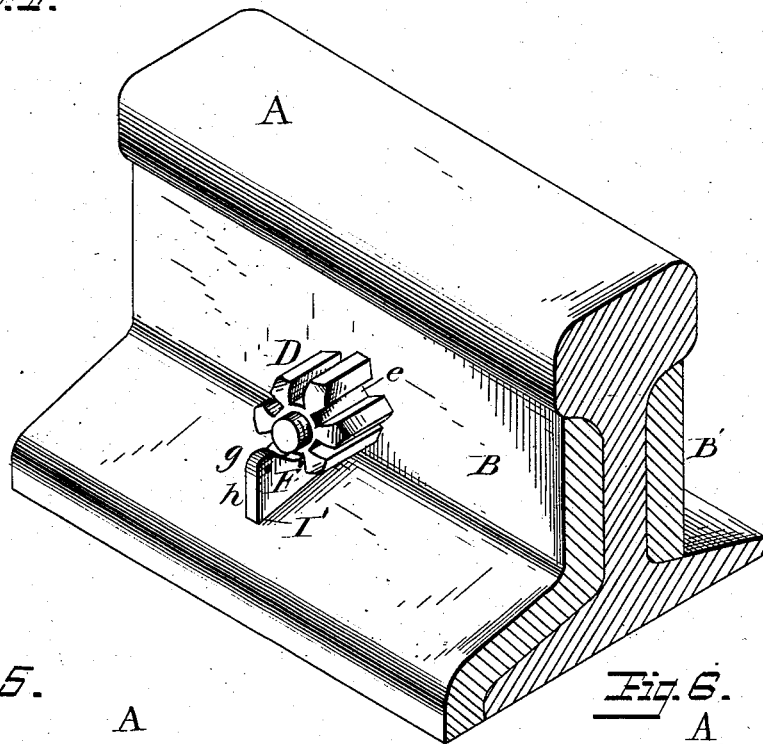


Fig. 5.

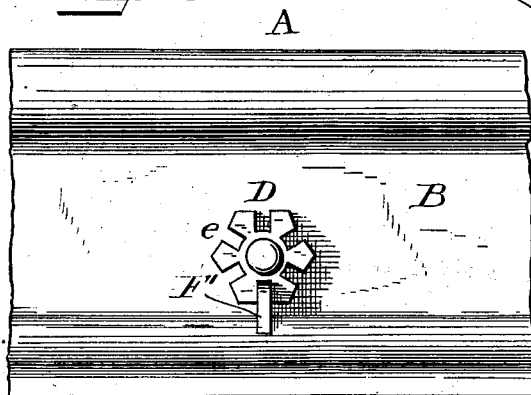


Fig. 6.

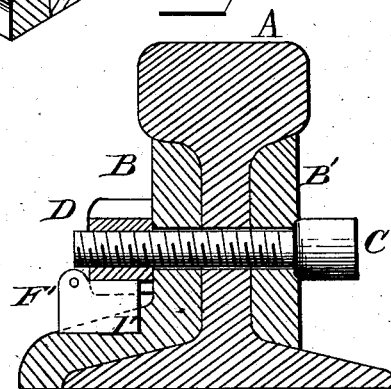
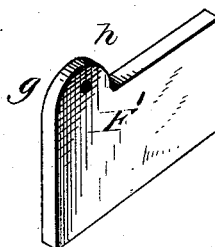


Fig. 7.



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# UNITED STATES PATENT OFFICE.

FORBES HOLTON, OF NEW CASTLE, PENNSYLVANIA.

## FISH-PLATE JOINT.

SPECIFICATION forming part of Letters Patent No. 260,025, dated June 27, 1882.

Application filed May 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FORBES HOLTON, a citizen of the United States, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Fish-Plate Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object the improvement in the forms of fish-joints now commonly in use, which, while it prevents the rails from opening, spreading, or sagging, greatly simplifies and facilitates the means for locking and unlocking the fish-plates and holding the same securely in place.

It consists in a nut provided with recesses and applied to the ordinary form of screw-bolt, with a suitable-shaped key to engage in the recesses of the nut and in a groove in one of the fish-bars, as hereinafter described, and which construction is designed to hold the bolt securely and prevent the nut from turning while the key is in place.

It is illustrated in the accompanying drawings, in which Sheet 1 illustrates one form of my invention, and Sheet 2 a modification thereof.

Figure 1 is a perspective view of a section of rail and fish-bars with my improvements attached; Fig. 2, a side view, and Fig. 3 comprises a rear view of the improved nut and a view of one form of key; Fig. 4 of Sheet 2, a perspective view of the modification; Fig. 5, a side view; Fig. 6, a transverse sectional view on the line of the bolt, and Fig. 7 a detached view of the key.

The same letters and figures indicate corresponding parts in the several views.

A is the ordinary form of rail, and B B' are usual forms of fish-bars. The bar B, however, in which is formed the groove to receive the key, has a bend which laps upon the foot of the rail and a drooping flange.

C is a screw-bolt, having a flat, round, or square head, and which extends through bolt-holes in the web and bars, said holes being of

sufficiently greater diameter than the bolt to permit of the contraction and expansion of the rail without injury to the bolt or without impeding its operation.

D is a nut screw-threaded to be screwed on to outer end of bolt C, and provided with recesses *e*, formed on the side of the nut, as shown on Sheet 1, or running the full length of the nut, as shown in the modification Sheet 2.

F is a metallic key, beveled at its upper end to fit snugly against the head of notches *e*, and also beveled and formed with a slight lip at its lower end to fit into a corresponding groove, I, in plate B.

The plates B B' being applied to the rails A, as shown, the bolt C is screwed in place and the nut D is screwed onto the end of bolt C. The key F is then dropped into place, its upper edge in one of the recesses in nut D, and its lower end in notch I, and the nut turned back to fit against the key, and the bolt then turned to secure the nut tightly against the key; or, after the nut is screwed tight, the key is dropped in place, and a slight turn of nut backward locks it. Should the recess in the nut in tightening in this manner be carried too far past the key to lock close, a leather washer may be employed to make a thorough fit.

In the modification the key F' is square-cut or rectangular in form, provided with a shoulder, *g*, and a hole, *h*, its lower edge, resting in groove I', its upper edge fitting in one of the recesses *e*, and its shoulder *g* pressed against the outer edge of the nut, as clearly shown in the drawings. The office of hole *h* in this key is to provide for its attachment to bar B, if desired, by means of a chain, or for the insertion of a suitable handle to aid in inserting and withdrawing the same.

I prefer to use the form of device shown in Figs. 1, 2, and 3. It will be seen that this device is effective in holding the bolt in place and in preventing any turning or displacement of the nut, while it is simple and cheap in construction and easily applied and removed.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent,  
is—

5 In a fish-plate joint, the combination of the  
bars, screw-bolt, recessed nut and key, the up-  
per edge of the key resting in a recess of said  
nut and its lower edge in a groove in one of  
said bars, substantially as and for the purpose  
described.

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

FORBES HOLTON.

Witnesses:

J. P. JONES,  
JOHN McCLOSKEY.