A. SPENCER.

Railroad Rail-Joint Fastenings.

No. 166,229. Patented Aug. 3, 1875.

Fig. 1.

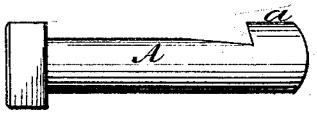


Fig. 2.

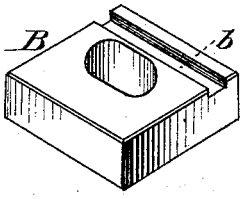


Fig. 3.

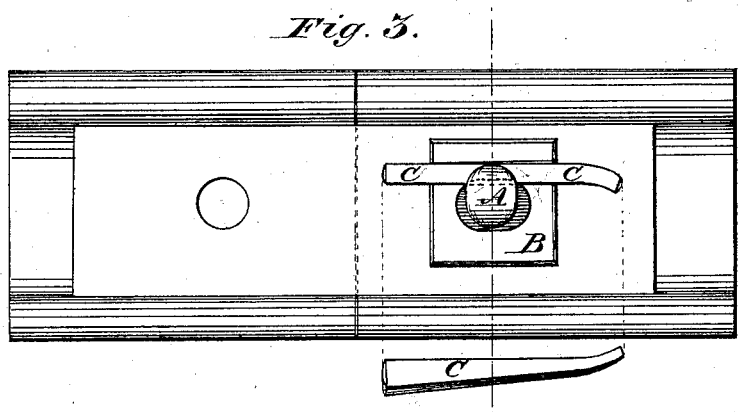
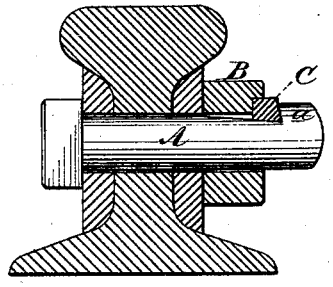


Fig. 4.



Witnesses:

John L. Lewis

Charles Ketchum.

Inventor:

Abel Spencer

UNITED STATES PATENT OFFICE.

ABEL SPENCER, OF PENN YAN, NEW YORK, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO MARTIN S. HICKS, OF SAME PLACE.

IMPROVEMENT IN RAILROAD-RAIL-JOINT FASTENINGS.

Specification forming part of Letters Patent No. **166,229**, dated August 3, 1875; application filed June 4, 1875.

To all whom it may concern:

Be it known that I, ABEL SPENCER, of Penn Yan, in the county of Yates and State of New York, have invented a Bolt, Washer, and Key, of which the following is a specification:

The object of my invention is to form a bolt, washer, and key to hold plates to the sides of railroad-rails at their ends when laid in a continuous line, and constructing them so that they cannot come apart by the action of cars on the rails, as shown in the accompanying drawings, in which—

Figure 1 is the bolt; Fig. 2, the washer; and Figs. 3 and 4, the bolt, washer, and key applied to the end of a railroad-rail.

A is the bolt. The head is made in any ordinary manner. The shaft of the bolt from the head to near the point is nearly round, and may be made any size or length required. At the end there is a projection made, as shown at *a*, Fig. 1. The projection and bolt must be made to pass freely through the washer. That part of the projection that the key comes against should be made angular, as represented in the figure. B is the washer. It may be made any size or thickness needed. The hole through it is elliptical, so that the end of the bolt will pass through it. It has a channel, *b*, in the outer face for the key to be placed in, to hold it in position and prevent the bolt turning in the washer after they are all put together. C is the key. It may be made any size or length required, and must be made to fit the channel *b* and the angle of the projection *a*, and be made tapering, so that it may be driven to compensate for any inequality there may be in the rail or plates.

To use my invention, it may be applied to the common rail and plates that have elliptical holes through them by putting them together. Then put the bolt A through them. Put the washer B on the bolt and turn it so as to admit the key. Then drive in the key C and bend the point, so as to effectually prevent the key coming out by the action of the cars on the rail.

I claim as my invention—

The bolt A, washer B, and key C, when made and used to hold plates and rails together, substantially as herein specified.

ABEL SPENCER.

Witnesses:

JOHN L. LEWIS,

CHARLES KETCHUM.