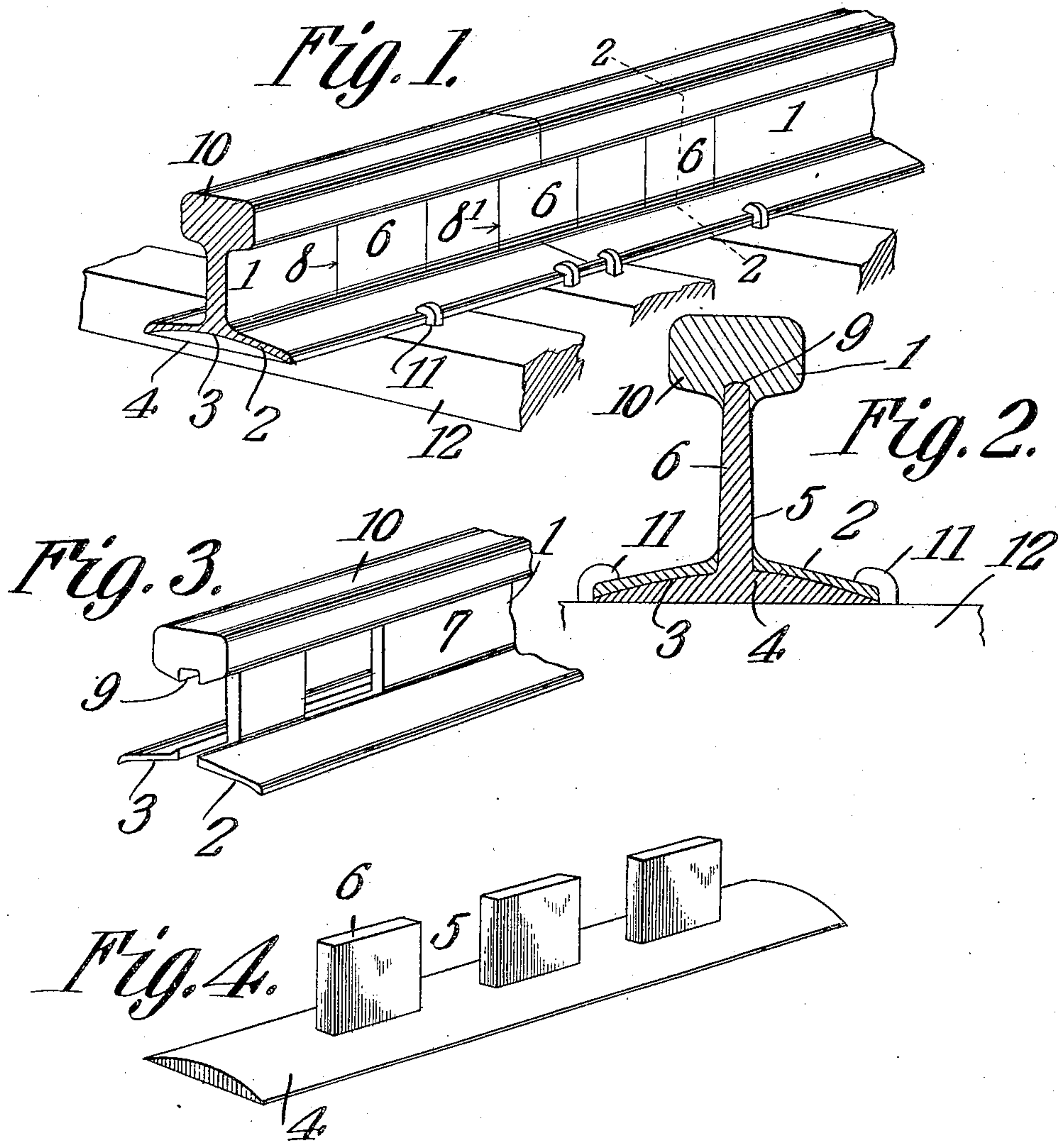


No. 886,972.

PATENTED MAY 5, 1908.

J. C. HAFFORD.  
RAIL JOINT.

APPLICATION FILED OCT. 24, 1907.



Witnesses

*E. J. Hafford*  
*Geo. M. Walker*

*John C. Hafford.* Inventor

By *C. Snow* Attorney

# UNITED STATES PATENT OFFICE.

JOHN COLMAN HAFFORD, OF LINCOLN, ARKANSAS, ASSIGNOR OF ONE-THIRD TO DAVID WILLIAM HARRISON AND ONE-THIRD TO VIRGE ALBERT HAFFORD, OF LINCOLN, ARKANSAS.

## RAIL-JOINT.

No. 886,972.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed October 24, 1907. Serial No. 398,987.

*To all whom it may concern:*

Be it known that I, JOHN COLMAN HAFFORD, a citizen of the United States, residing at Lincoln, in the county of Washington and State of Arkansas, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention has relation to rail joints and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a means for effectually holding the ends of rails together without the use of bolts or fish plates or other parts which lie beyond the general perimeter of the rails.

The base flanges of the rails are hollowed out upon their under side and at their end portions and a locking key is provided which lies in the space occurring in the under side of the base flanges of the rails and said key is provided at intervals upon its upper side with studs which lie in openings provided in the webs of the rails and enter recesses located under the heads of the rails. The rails are secured to the ties by means of spikes usually employed for this purpose.

In the accompanying drawing, Figure 1 is a perspective view of meeting rail sections provided with the rail joint. Fig. 2 is a transverse sectional view of one of the rails and the joint cut on the line 2—2 of Fig. 1. Fig. 3 is a perspective view of the end portion of one of the rails with the locking key removed, and Fig. 4 is a perspective view of the locking key detached.

The rails 1 are provided at their ends and in the under side of their base flanges 2 with the hollow concavities 3 which are adapted to receive the body portion 4 of the locking key 5. Said key is provided upon its upper side and at regular intervals apart with vertically disposed studs 6, the said studs lie in

alinement with the webs 7 of the rails and in the recesses 8 provided therein. The recesses 8' occur at the extreme end of the rails 1 while the recesses 8 are in the vicinity of the ends of the rails but are spaced therefrom by portions of the web 7. The upper ends of the studs 6 lie in the recesses 9 provided in the under side of the heads 10 of the rails 1, the spikes 11 secure the base flanges of the rails 1 to the ties 12 in the usual manner. By this form of rail joint it will be observed that the extreme ends of the rails 1 are supported by an integral key which extends across the joint with its end portions lying at opposite sides of the meeting ends of the rails. Also, it will be seen that the rails cannot move longitudinally with relation to each other nor can the locking key move laterally with relation to the rails.

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

In combination with rails having heads which abut directly one against the other so that the tread surfaces of the rails are continuous and uninterrupted by intervening parts, said rails having in their bases concavities and in their webs recesses which are located at the ends and near the ends of the rails and which project into the under sides of the rail heads, a locking key having a base portion which fits within the concavities in the rail bases, and studs mounted upon the key which lie within the recesses in the rail webs and heads and which fit snugly against the under sides of the rail heads.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN COLMAN HAFFORD.

Witnesses:

J. W. COLE,

V. A. HAFFORD.