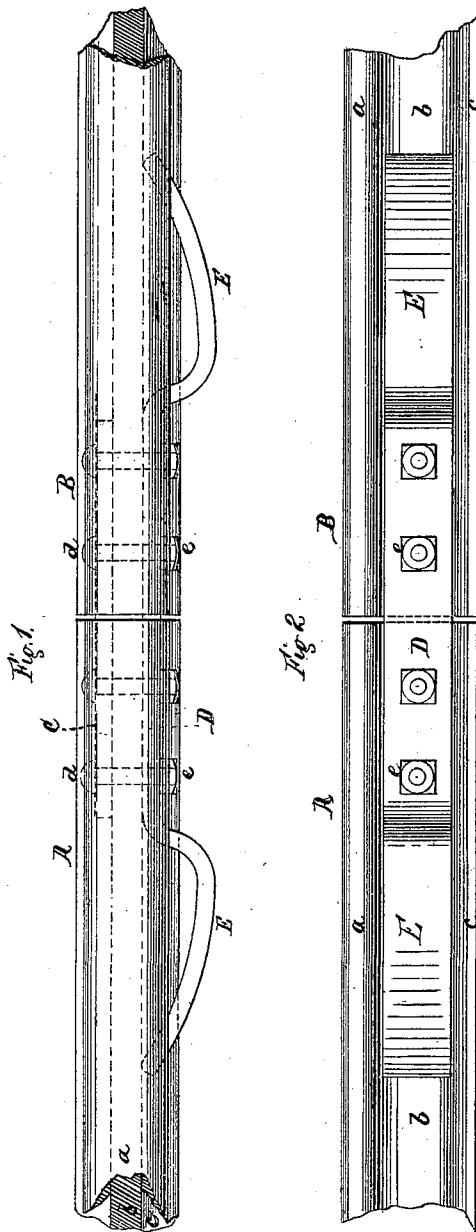


H. DECKER.
Railroad Rail-Joints.

No. 142,996.

Patented September 23, 1873.



WITNESSES

H. Decker
Timothy Kane

INVENTOR:

Hiram Decker
by *M. M. Zimpton*
his Attorney

UNITED STATES PATENT OFFICE.

HIRAM DECKER, OF COCHECTON, NEW YORK.

IMPROVEMENT IN RAILROAD-RAIL JOINTS.

Specification forming part of Letters Patent No. **142,996**, dated September 23, 1873; application filed March 25, 1873.

To all whom it may concern:

Be it known that I, HIRAM DECKER, of Cochection, in the county of Sullivan and State of New York, have invented a new and useful Improvement in Fish-Joints for Railways; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, which forms part of this specification.

My invention relates to an improvement in the construction of the ordinary fish-joint connection for railroad-rails. These fish-joints, as ordinarily constructed, consist of two plates or bars placed one on each side of the abutting ends of the rails at the neck portion of the rails, and they are held in place by bolts which pass through the plates and rails, the heads of such bolts resting against the plate on one side, and the other end of each bolt having a nut, and usually a jam-nut, also, screwed upon it.

It not unfrequently occurs that one or more cars in a train, more especially in freight-trains, jump the track and run for long distances before the fact is discerned; and, in such cases, it constantly happens that the flanges of the wheels of the car or cars thus off the track ride up against the ends of the fish-joint bolts and cut them off, more frequently the ends carrying the nuts, because these ends usually project out beyond the flange of the rail, so as to be exposed to the flanges of the wheels as they ride along, pressing against the sides of the rail. This stripping of the nuts from the bolts occurs to a great extent on some of our railroads, and chiefly in the night-time, and gangs of men are constantly employed inspecting and repairing the damage done to the track in this respect alone; immediate repair being necessary, because so soon as the nuts are stripped from the bolts the latter drop or shake out and the fish plates or bars drop down, and the abutting ends of the rails are without a fastening, and great danger awaits the trains which follow; and, moreover, the expense incurred in repairing this constantly-occurring species of damage is very great on some railroads.

My present invention is designed to obviate this danger and expense; and it con-

sists in combining with a fish-joint plate an inclined or beveled extension, which incline, when the wheels of the car which is off the track reach the fish-joint plate, will slightly deflect such wheels as they pass by each successive fish-joint, and prevent their flanges from striking and cutting off the bolts or nuts which bind the fish-joint plates to the rail.

In the accompanying drawing, Figure 1 is a plan or top view of the abutting ends of two railroad-rails connected by a fish-joint and provided with my improvement. Fig. 2 is a side view of the same.

A B designate two abutting rails, *a* being the head, *b* the neck, and *c* the flange of a rail. C D designate the fish-joint plates located on respective sides of the necks of the said abutting ends of the said rails, and the bolts which pass through the rails are shown in dotted outline in Fig. 1, *d d* designating the heads of the bolts on one side, and *e e* the nuts on the other side. As I have before stated, these heads *d d* frequently, and the nuts *e e* usually, project beyond the heads and flanges of the rails, so that a wheel riding close up to the rails can hardly fail to bring its flange in contact with one of the ends of these bolts and cut off the same, thereby freeing the fish-plates from the rails, and leaving the rails bereft of one of their most important fastenings. E designates an inclined plate, or a plate with an inclined face, located at one or both ends of the fish-joint connection. In the case of a single track it should be at both ends, as a protection from trains approaching from either direction.

In the present instance I have shown the fish-plate on one side of the rail as elongated or longer than usual, and these elongated portions or ends bent outward and gradually depressed in a forward direction, the ends resting against the neck of the rails, thereby presenting a gradual incline, increasing in the direction toward the ends of the rails. This is a simple and cheap method of construction; but it is obvious that separate plates, or plates with inclined faces, may be connected to the rails at the proper place by the same or different bolts from those which hold the fish-plates.

From the foregoing description it will be readily understood that if a car be off the track, coming in either direction, with its wheels riding close to the rails, their flanges will strike the inclined plate E and be diverted, so as to keep aloof from the rail long enough for it to pass the fish-joint, and thereby prevent the cutting off of the ends of the bolts projecting from that side of the rail, whereby great danger is averted and the before-referred-to expense of repair obviated.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the plate of a fish-joint connection for railroad-rails, of an inclined plate, or plate with an inclined face, substantially as and for the purposes herein specified.

HIRAM DECKER.

Witnesses:

THEO. P. CALKIN,
J. M. SNYDER.