

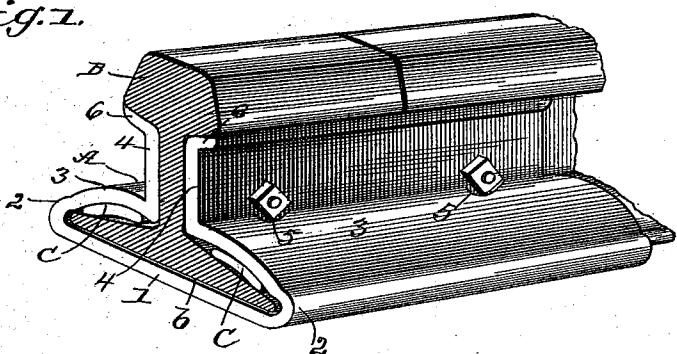
(No Model.)

E. M. COOKE.  
RAIL JOINT.

No. 402,402.

Patented Apr. 30, 1889.

FIG. 1.



# UNITED STATES PATENT OFFICE

EDWIN M. COOKE, OF BROOKLYN, ASSIGNOR OF ONE-HALF TO NOYES C. WOOSTER, OF NEW YORK, N. Y.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 402,402, dated April 30, 1889.

Application filed August 13, 1888. Serial No. 282,670. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN M. COOKE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Rail-Joints, of which the following is a specification.

This invention is an improvement in that class of rail-joints in which a jacket is formed to receive the meeting ends of the rails and wedges are driven between said jacket and the base of the rails; and the present invention consists in the novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved joint. Fig. 2 is a side view thereof. Fig. 3 is a central cross-section on about line  $z-z$ , Fig. 2. Fig. 4 is a sectional plan view, and Fig. 5 a detail view, of one of the wedges.

In my present invention I have sought to provide a rail-joint goffered or corrugated in such manner as to form the recess for the wedges or keys and at the same time have the metal forming the walls of said recess of equal thickness throughout, and in which there will be provided a space within the jacket below the rails to take up the wear of the parts.

In carrying out the invention it is designed to roll the jacket out of metal of suitable thickness, goffering or corrugating it in such manner as to form the recesses for the wedges.

The jacket A, as shown, is formed of metal of equal thickness throughout, and is bent to form the base-plate 1, the edge portions 2, at the edges of such base-plate, the goffers or corrugated portions 3, forming the walls of the wedge recesses, and the side plates, 4, the latter extending up and bearing snugly under the tread of the rail B, being provided at such end with flanges or extensions 6, while below the base of such rail B, I provide a sufficient space at b to take up the wear at the upper edges of the side plates, 4. Notches or recesses 5 enable the proper turning of the nuts on the fastening-bolts. The goffers or corrugated portions 3 are inclined from end to end, forming the desired tapered formation of the wedge recesses, and it will be seen that the inclines 50 at the opposite sides of the joint are reversed—

that is to say, the high end of one and the lower end of the other goffer 3 are at the same end of the joint, so that the fastening wedges or keys are driven into the jacket from the opposite ends thereof, as shown.

By means of the described construction it will be seen that I am able to properly form the recesses or ways for the wedges without weakening the jacket at any point, as the thickness of the goffers is the same throughout.

The keys or wedges C are made crown-shaped or arched in cross-section and have sufficient elasticity or spring to permit them to spread transversely as they are driven between the jacket and the base of the rail. This lateral or transverse spreading of the wedges is effective and desirable, for the reason that it operates to secure the wedges or keys without giving to such parts any tendency to longitudinal movement and consequent loosening or displacement thereof. At the juncture of the goffers 3 and the side plates, 4, it will be seen that the jacket is bent to properly form the inner edge wall of the recess 75 for the wedge or key.

The goffering or corrugating of the jacket is very important as an element of strength, it serving in a large measure to strengthen the jacket and at the same time serving as the means for conveniently forming the recesses or ways for the wedges.

The space below the rails, in addition to taking up the wear, affords opportunity for a sufficient yielding or spring to render the joint approximately elastic, and thus reduce the liability of breakage likely to occur where the joint is rigid. At their upper ends the side plates or wings, 4, have lateral flanges or extensions 6, which fit under the tread of the rail, furnishing a broader bearing for such part.

Having thus described my invention, what I claim as new is—

1. In a rail-joint, a jacket formed with a base-plate, 1, goffers or corrugated portions 3, made of equal thickness throughout and inclined longitudinally, and side plates, 4, all substantially as set forth.

2. In a rail-joint, the combination, with the

55

65

70

75

80

85

90

95

100

rails and the jacket fitted thereon, of the wedges or keys curved or arched transversely, substantially as and for the purposes specified.

3. The improved jacket for rail-joints, consisting of the base-plate 1, edge portions 2, goffers or corrugated portions 3, made of equal thickness throughout and inclined longitudinally, the portions 3 on opposite sides being inclined in reverse directions, and the side plates, 4, all substantially as and for the purposes specified.

4. The combination of the rails, the jacket formed with base-plate 1, edge portions 2, goffers or corrugated portions 3, inclined from

end to end, and side plates, 4, the upper edges 15 of the side plates fitting snugly under the tread of the rail, and a space being provided between the base of the rail and the base of the jacket, and the wedges or keys curved or arched transversely, all substantially as and 20 for the purposes specified.

The above specification of my invention is signed by me in the presence of two subscribing witnesses.

EDWIN M. COOKE.

Witnesses:

P. B. TURPIN,  
SOLON C. KEMON.