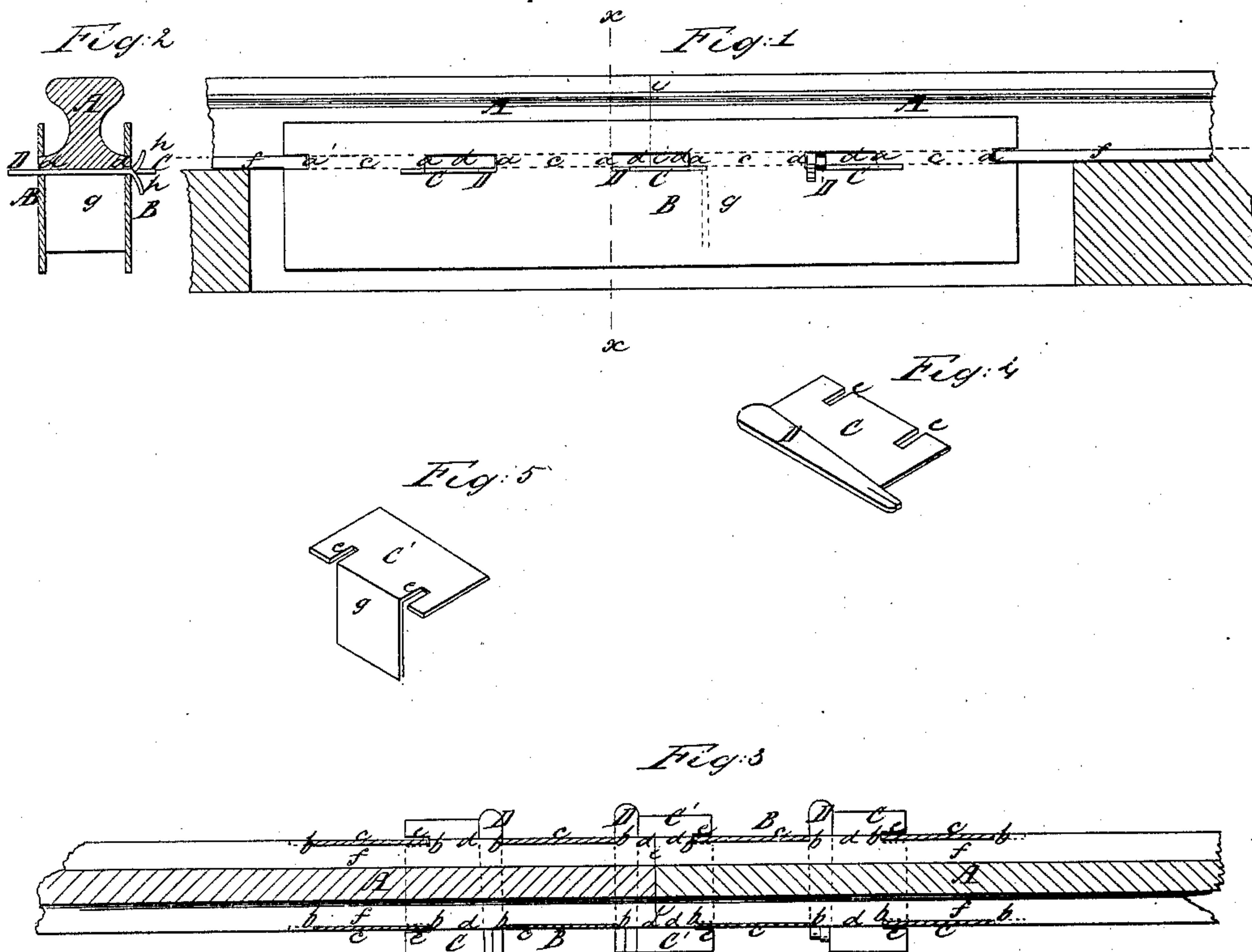


E. U. Benedict,

Railroad-Rail Joint,

N^o 21,480,

Patented Sept. 14, 1858.



UNITED STATES PATENT OFFICE.

E. U. BENEDICT, OF HORICON, WISCONSIN.

JOINT FOR T-RAILS.

Specification of Letters Patent No. 21,480, dated September 14, 1858.

To all whom it may concern:

Be it known that I, ELIAS U. BENEDICT, of Horicon, in the county of Dodge and State of Wisconsin, have invented a new and Improved Joint for T-Rails of Railways; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a side view of the joint. Fig. 2 is a transverse vertical section of the same, in the plane indicated by the line x, x , in Fig. 1. Fig. 3, is a horizontal section of the same, taken in a plane just above the base of the rails. Fig. 4 is a perspective view of one of the gibs and keys employed in the joint. Fig. 5 is a perspective view of the middle gib.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in uniting the adjacent ends of T-rails by means of two upright plates which are applied one on each side of the rails and are slotted to receive portions of the rails left projecting between notches cut in the base thereof said notches receiving portions of the said plates between the slots, and the rails and plates being secured together by gibs and keys passing through the plates in such a manner as to support the end of the rails.

To enable others skilled in the art to apply my invention, I will proceed to describe it by aid of the drawings.

A, A, are the end portions of the two rails.

B, B, are the upright plates made of stout boiler iron of from two (2) to three (3) feet in length and seven (7) or eight (8) inches in depth.

a, a , are slots in the plates B, B, of about from three (3) to four (4) inches long and of a width somewhat greater than the thickness of the flanges f, f , of the bases of the rails, and all in line with each other and nearer to the top than the bottom of the plates; said slots being formed by punching or otherwise. One of these slots is at about the middle of the length of each plate and the others at equal distances therefrom.

a', a' , are shorter slots in the ends of the plates, of a width equal to the thickness of the flanges f, f .

b, b , are recesses cut in the edges of the flanges of the bases of the rails, of a depth equal to the thickness of the plates B, B, and of a length and in positions to receive the portions c, c , of the plates between and in

line with the flanges. The slots a, a , receive the portions d, d , of the rail projecting between the recesses b, b , the central slots receiving portions of each rail at their junction i, i .

C, C, C', are the gibs made of boiler plate, having notches e, e , of a width and distance apart to receive the plates B, B, within them and lock them together. These gibs pass through opposite slots a, a , in the plates B, B, under the bases of the rails and thus serve as supports to the rails. The middle gib C', has a portion g , of a width equal to the space between the plates B, B, bent downward at a right angle, as shown in Figs. 1 and 5, to serve as a stay between the plates to prevent the lower parts of them springing toward each other when the rails are subjected to a heavy load or concussion.

D, D, are the keys which pass through the slots a, a , to lock the gibs in place, serving also as aids to the gibs in supporting the rails. The solid keys are made taper to tighten the gibs whose notches are also tapered slightly in such manner as to draw the plates B, B, close to the rail when the keys are driven. The keys are also slit at the ends, and the part on one side of the slit is bent upward and that on the other side bent downward as shown at h, h , in Fig. 2, to prevent them working out.

By this method of forming the joint, the ends of the rails are so supported by the gibs and the deep plates B, B, that neither is capable of sinking or rising without the other and both are locked together in such a manner as to prevent the lateral displacement of either and the joint is made as solid as if the rails were continuous.

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

1. The combination of the rails with the side plates B, B, by means of the slots a, a , in the plates, the recesses b, b , in the bases of the rails, the gibs C, C, C', and the keys D, D, D, the whole applied and operating substantially as herein set forth.

2. And I also claim forming the gib C', applied at the junction of the rail, with the downward rectangular projection g , to serve as a stay between the plates substantially as herein set forth.

E. U. BENEDICT.

Witnesses:

J. B. RIBBLE,

WM. E. KITTREDGE.