

(No Model.)

G. P. ROSE.
RAILWAY SPLICE BAR.

No. 395,922.

Patented Jan. 8, 1889.

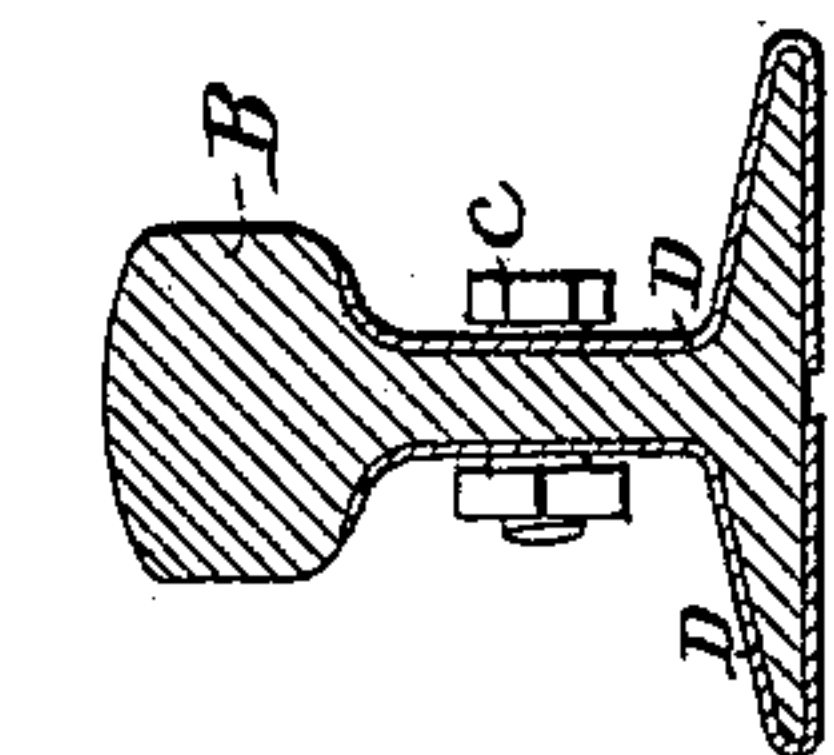


Fig. 2a.

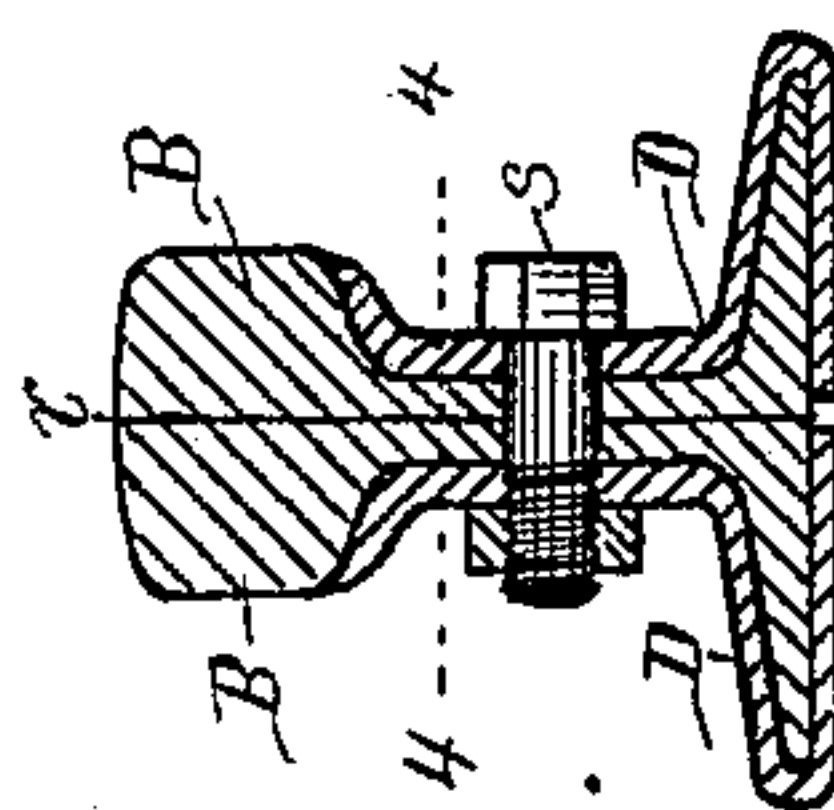


Fig. 2.

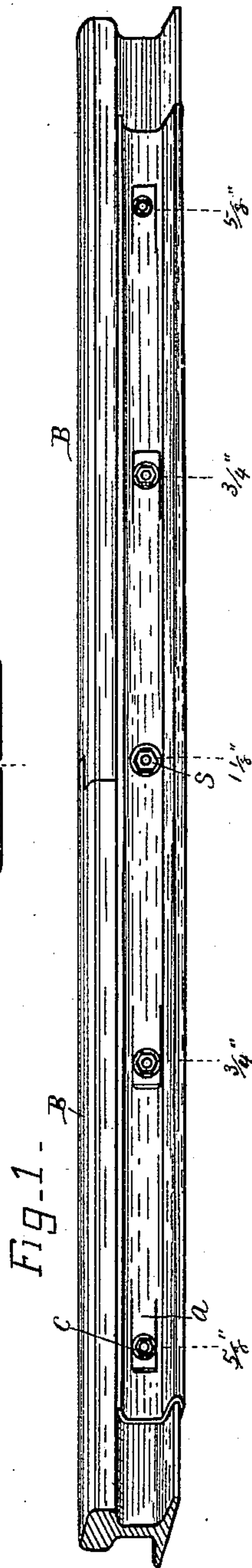


Fig. 1.

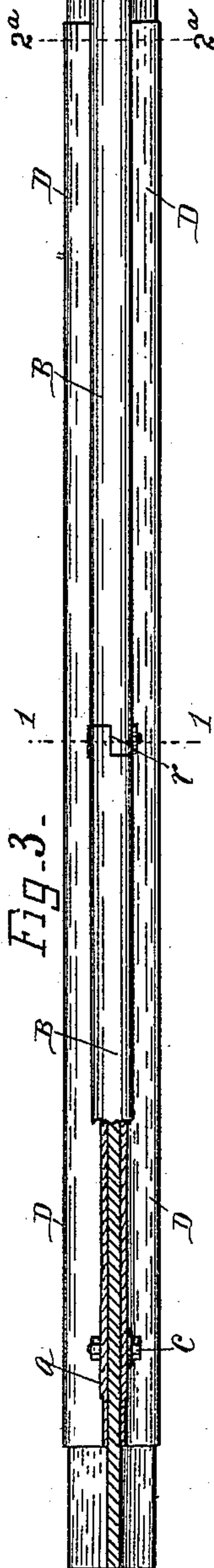


Fig. 3.

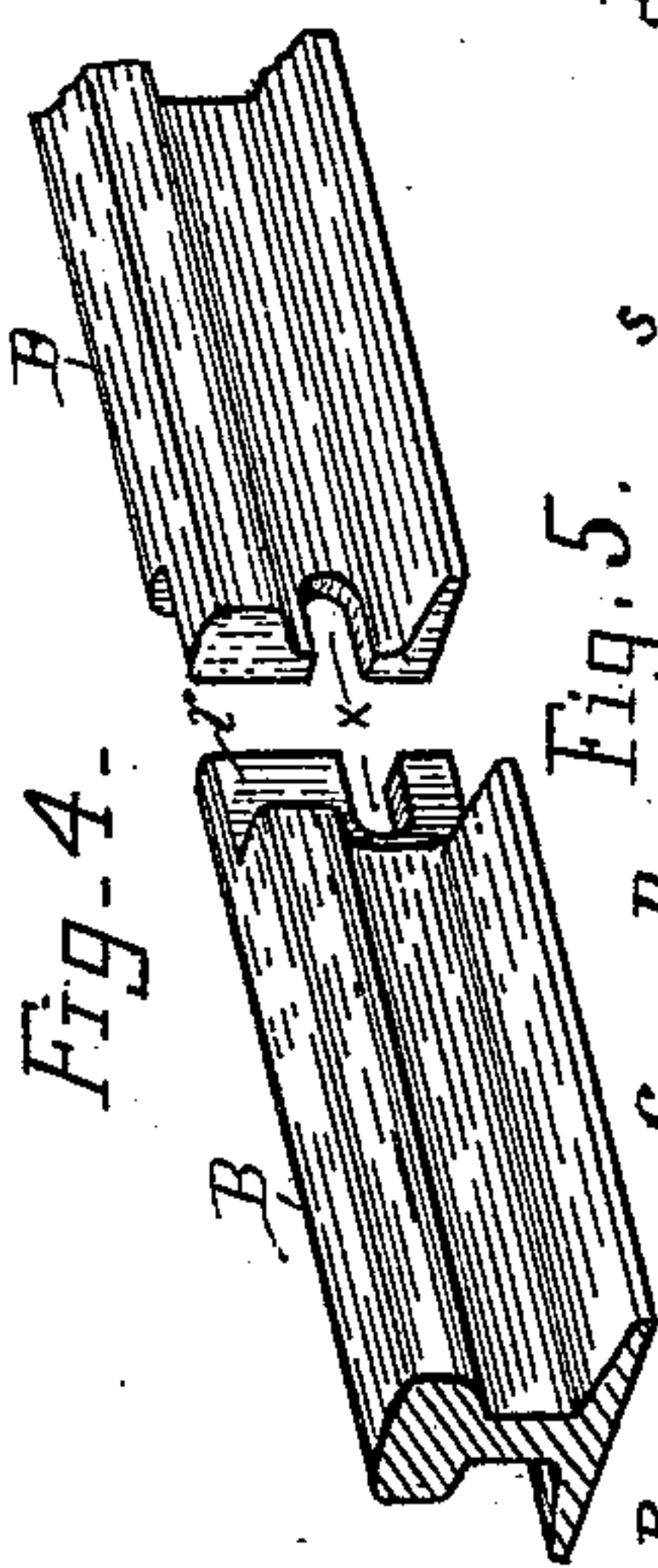


Fig. 4.

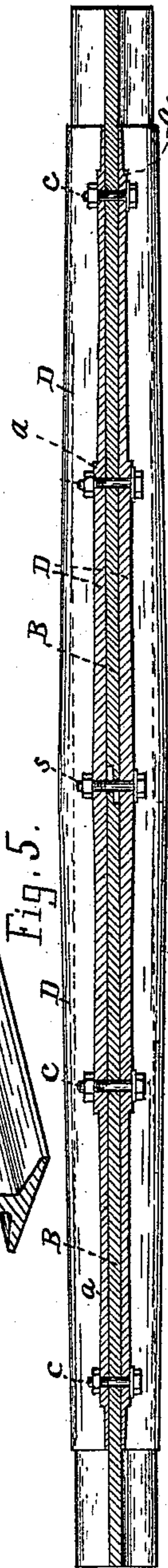


Fig. 5.

Witnesses.
Jno. C. Perkins.
E. S. Chase.

Inventor.
George P. Rose.
By Lucius C. West
Att'y.

UNITED STATES PATENT OFFICE.

GEORGE P. ROSE, OF FENTON, MICHIGAN.

RAILWAY SPLICE-BAR.

SPECIFICATION forming part of Letters Patent No. 395,922, dated January 8, 1889.

Application filed May 31, 1888. Serial No. 275,555. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. ROSE, a citizen of the United States, residing at Fenton, county of Genesee, State of Michigan, have
5 invented a new and useful Railway Splice-Bar, of which the following is a specification.

This invention relates to railway-joints and the splice-bars at said joints; and it has for its object certain features of improvement
10 designed to strengthen and cheapen the construction, substantially as below set forth in the description, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view;
15 Fig. 2, a cross-section on the dotted line 1 1 in Fig. 3; Fig. 2^a, a cross-section on the line 2^a 2^a in Fig. 3; Fig. 3, a plan with parts in section on line 4 4 in Fig. 2. Fig. 4 shows the rails separated at the joint in perspective,
20 and Fig. 5 is a longitudinal section of the rails and splice-bars in Fig. 1 near the bolts.

Referring to the lettered parts of the drawings, the rails B are formed with one side extended at the end, said extended end representing one half of the rail at the end, and
25 by making the said end extensions rights and lefts they are lapped by each other in forming the joint, Figs. 1 and 3, thus in effect making the rail complete and continuous, so
30 that the wheels of the cars in passing over the rail-joints bear all the time upon a solid rail.

At X are elongated slots in the ends of the end extensions of the rails, Fig. 4, through
35 which slots the center bolt, S, passes after the rails are in place, as in Figs. 1 and 3. The bolt-holes in the rails for the other bolts which hold the splice-bars D are of course elongated longitudinally, as well to admit of
40 the endwise contraction and expansion of the rails as in prior constructions.

The splice-bars D are formed to fit against the surface of the rails beneath the tread part, and are extended beneath the lower
45 flange of the rail. (See Fig. 2.) From the center portion of the splice-bars, each way from bolt S, the bars are tapered—that is, they gradually grow thinner toward the ends—and this holds good with reference to all portions

of the bars, including the flanges beneath the rails, as will appear by examining Figs. 1 and 3, and also Figs. 2, 2^a, and 5. The theory or principle of this is that the greatest strength of the bars D is where the greatest strength is needed—viz., at the center, where the joint
55 is—and by graduating the thickness in this manner I have, say, to illustrate, at the ends of the bar one-third the thickness and strength, as compared with the center, and
60 half-way between the ends and the center two-thirds the thickness and strength. On the same principle I graduate the bolts in size, as illustrated in Fig. 1, the characters $1\frac{1}{8}$, $\frac{3}{4}$, and $\frac{5}{8}$ indicating the size of the bolts, not that I
65 am limited to these sizes, but this explains the ratio of their graduation. On this same principle it will be readily seen that the bolt-holes through the splice-bars are graduated consistent with the thickness and strength of
70 the parts where they are located. By this means great economy in the material for the bolts and splice-bars is secured without any diminution of the strength and means actually required.

At the points where the heads and nuts of
75 the bolts come, the splice-bars are thickened out, as at *a*, Figs. 1 and 3, so as to make a level or straight plane at right angles to the bolt-holes for the heads and nuts to fit against.

The holes through the splice-bar, on one
80 side of the rail, are screw-threaded. The ends of the bolts are screw-threaded and screw into said holes, said ends extending a little beyond the bar, and a lock-nut is then screwed onto said threaded end of the bolts. (See
85 Fig. 2.) Thus the bolts are successfully locked from getting loose; but so far as the graduation of the thickness of the splice-bars and the size of the bolts are concerned, the ordinary bolts and nuts may be employed—
90 that is, the holes through the one of the bars need not be threaded.

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

1. A splice-bar shaped to fit against the exterior of the rail below the tread-surface, all portions of said bar, including its upper and

lower flanges, being beveled longitudinally each way from the center, substantially as set forth.

5 2. The combination of rails and splice-bars having bolt-holes graduated as to size, said bars, including their upper and lower flanges, being beveled longitudinally each way from the center, and bolts graduated in size, as stated, all substantially as set forth.

In testimony of the foregoing I have here- to
unto subscribed my name in presence of two
witnesses.

GEORGE P. ROSE.

Witnesses:

GEO. W. LOCKE,
E. D. CHASE.