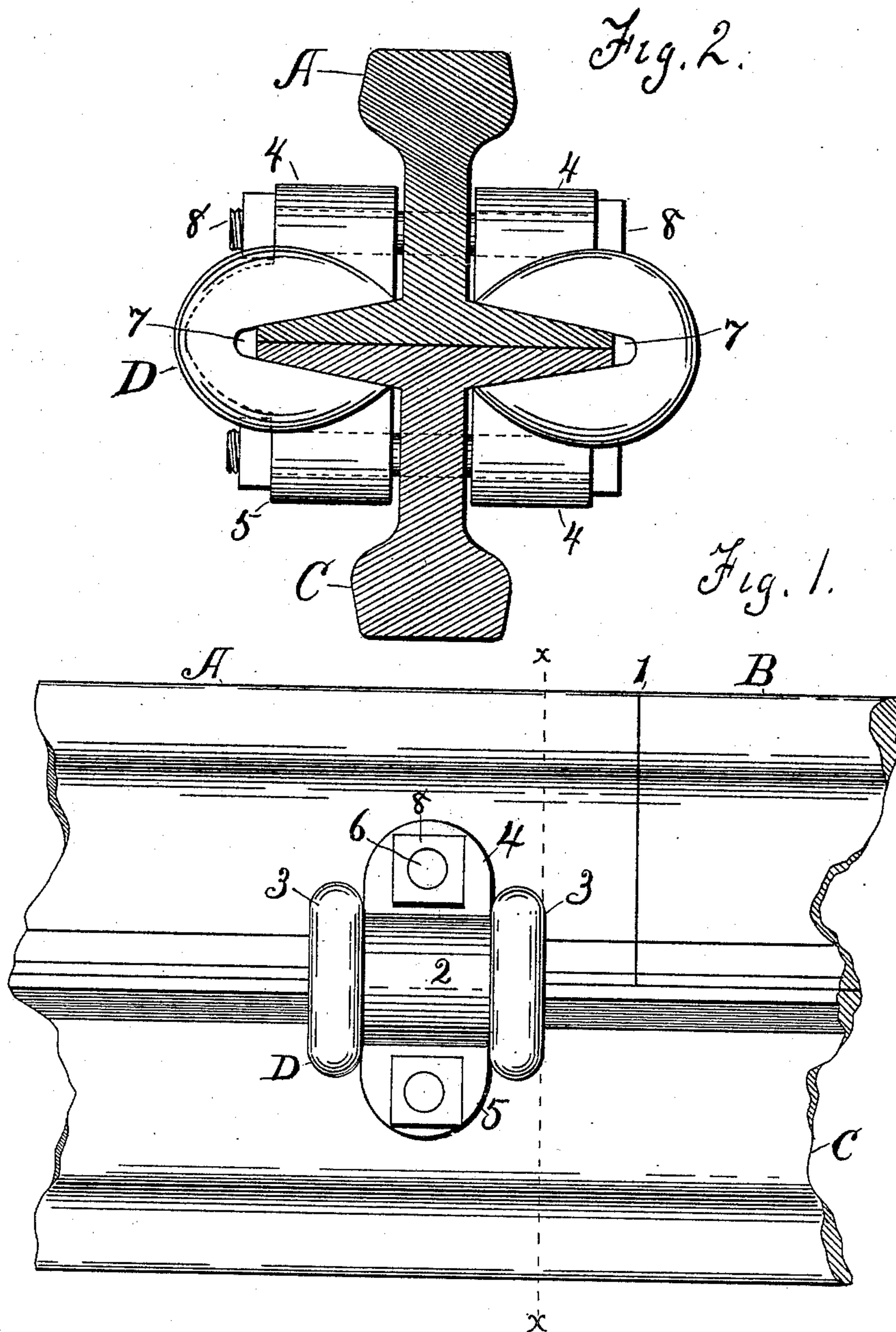


(No Model.)

W. A. SWEET.
RAIL JOINT.

No. 436,441.

Patented Sept. 16, 1890.



Witnesses.

H. A. Carhart.
E. V. Mack.

Inventor.

William A. Sweet
By Smith & Denison
his Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM A. SWEET, OF SYRACUSE, NEW YORK.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 436,441, dated September 16, 1890.

Application filed November 12, 1888. Serial No. 290,645. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. SWEET, of Syracuse, in the county of Onondaga, in the State of New York, a citizen of the United States, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation showing one of my clips, clamps, or grips in position. Fig. 2 is a vertical transverse section on line *x x*, Fig. 1.

My invention relates to devices and appliances for connecting railway-rails at their meeting ends, and designed to create a stiff joint at that spot, so that the rails will be held securely in their alignment and the joint will be stiffened against downward depression from the weight of a passing train, and thereby preventing all pounding of the wheels upon the rail ends and consequent quick wearing out and flattening of the rail end.

My object is to stiffen the joint at the meeting end of the rails by re-enforcing the joint by means of a piece of metal applied beneath the main rails and extending across the joint and a clamp or clamps embracing the flange of the main rail and a part of the re-enforcing piece of metal, said clamps being held securely by bolts through the clamps and the main rails or through both the main rails and the re-enforcement.

My invention consists in the several novel features of construction and operation hereinafter described, and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows: A B are the main rails with their ends abutting against each other, forming a joint 1.

In the drawings I show a short piece of rail C—say about two feet long—placed in a reversed position beneath the joint, and this rail constitutes the re-enforcement of the joint. Of course it will be understood that I only show this rail-piece as one style or type of a re-enforcement, my invention covering any form of a T-shaped re-enforcement applied beneath the joint and secured there, or a double L or a double T as well as a single

T, as well, also, as a re-enforced piece of metal made thicker in the center and beveling each way toward the edge, or all of the same thickness.

D is my clip or clamp or grip, consisting of a body 2, provided with the strengthening-ribs upon the ends, or they may be made heavy enough so as to dispense with the ribs and with the boss or bosses, 4 being the upper boss and 5 the lower one, when two bosses are used, these bosses standing above the body and provided with a longitudinal hole 6 to receive a securing bolt or bolts. In some instances I would only use the upper boss, dispensing with the lower one. Each of these clips or clamps is provided with a recess 7, opening into the body and shown in the drawings as double tapered, to fit the taper of the rail-flanges; but it is evident that the walls of this recess should correspond to the shape of the exterior surface of both the flange of the main rails as well as the shape of the exterior surface of the re-enforcement. In either case the bevel of the rail-flange will operate as a wedge when the clamp is placed in position.

The rails A B are provided with bolt-holes in substantially the same manner as when an ordinary fish-plate joint is made; and 8 is a bolt or bolts passing through the bosses and the rails or re-enforce, and these bolts operate to draw the clips or clamps tightly onto the rail-flange and re-enforce and hold the re-enforce and the rails firmly and securely together.

It will be observed that in the drawings I only show one of my clips or clamps; but my design is to use one or two on each side of the main-rail joint, affording separate and independent means for securing the main rails and re-enforcement together; but it will also be evident that I can also use a single elongated grip or clamp long enough to comprise two or four of these grips in one block as a means for securing the re-enforcement and rails together, and that also when I use a re-enforcement which consists of a plate of metal without any T-stem, the bolts passing through the lower bosses will simply pass under the re-enforcement and not through it,

and all this without departing from the principle of a wedging clip or clamp to hold the main rails and re-enforce them together.

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

1. In a rail-joint, a clamp comprising a body provided with recesses in the face, creating jaws, and tubular bosses integral with the body and lying above and below and be-
10 tween the jaws.

2. A rail-joint comprising main rails with abutting ends, a re-enforcement applied beneath the joint between them and against the bottom thereof, clips or clamps having edge-

jaws fitting over the edges of the rails and 15 the re-enforce and provided with tubular bosses above and below the jaws and between them, and bolts inserted through the upper bosses and the rails and bolts through the lower bosses and the re-enforce, as set 20 forth.

In witness whereof I have hereunto set my hand this 10th day of November, 1888.

WM. A. SWEET.

In presence of—

C. W. SMITH,

HOWARD P. DENISON.