

(No Model.)

C. FISHER.
RAILROAD TIE.

No. 285,986.

Patented Oct. 2, 1883.

Fig. 1.

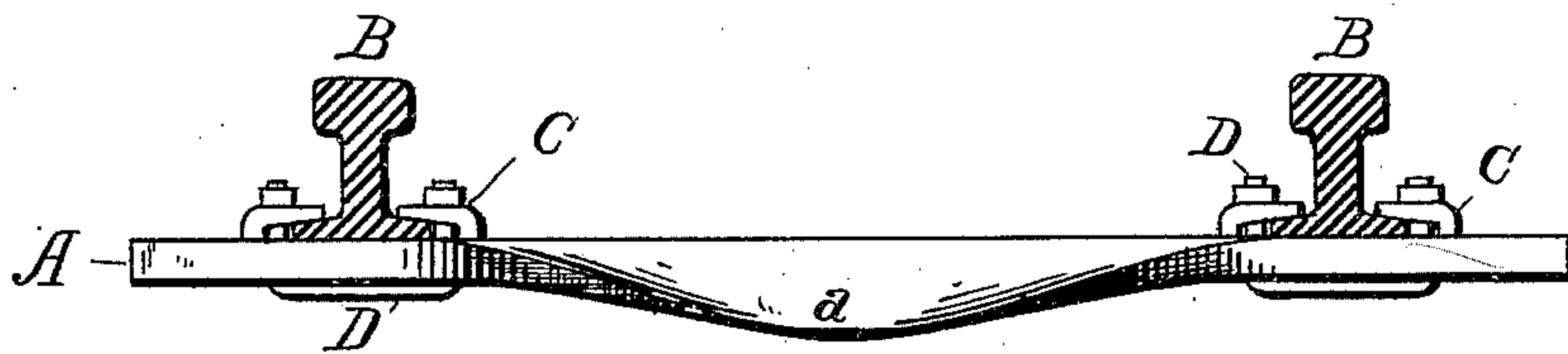


Fig. 2.

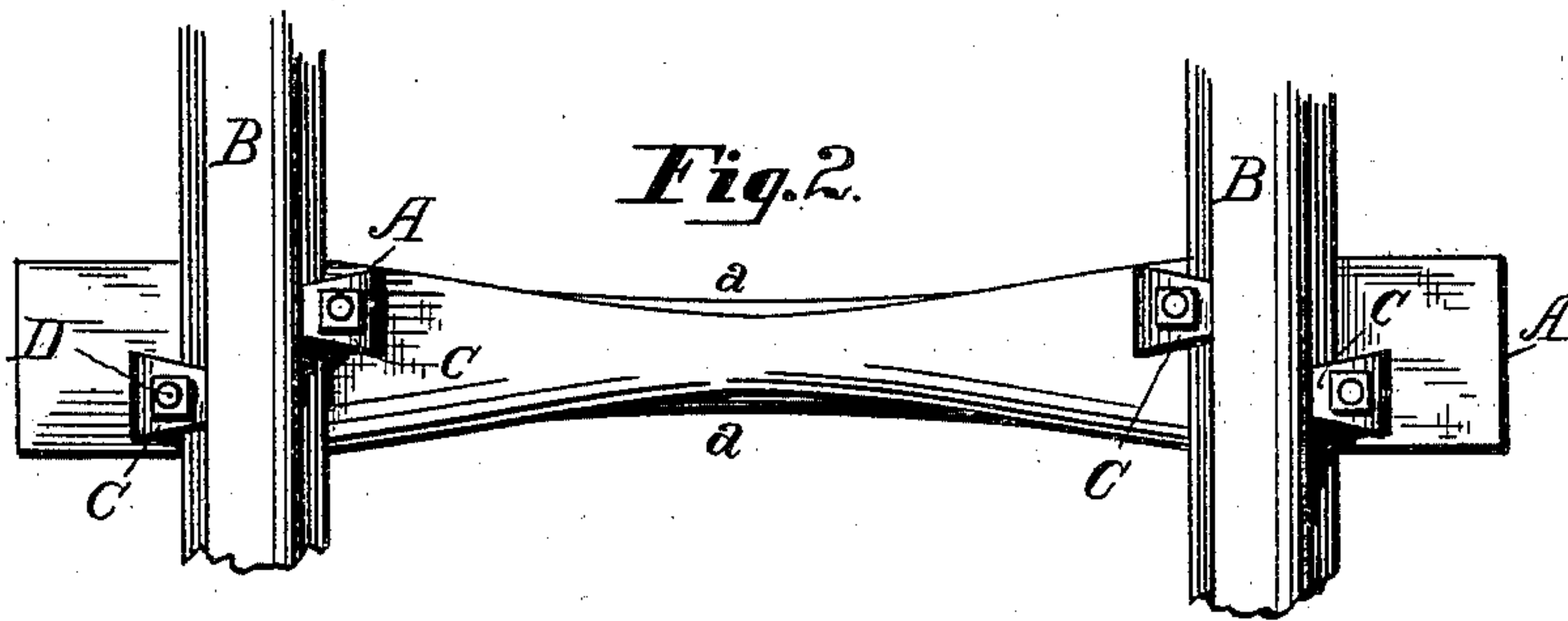


Fig. 3.

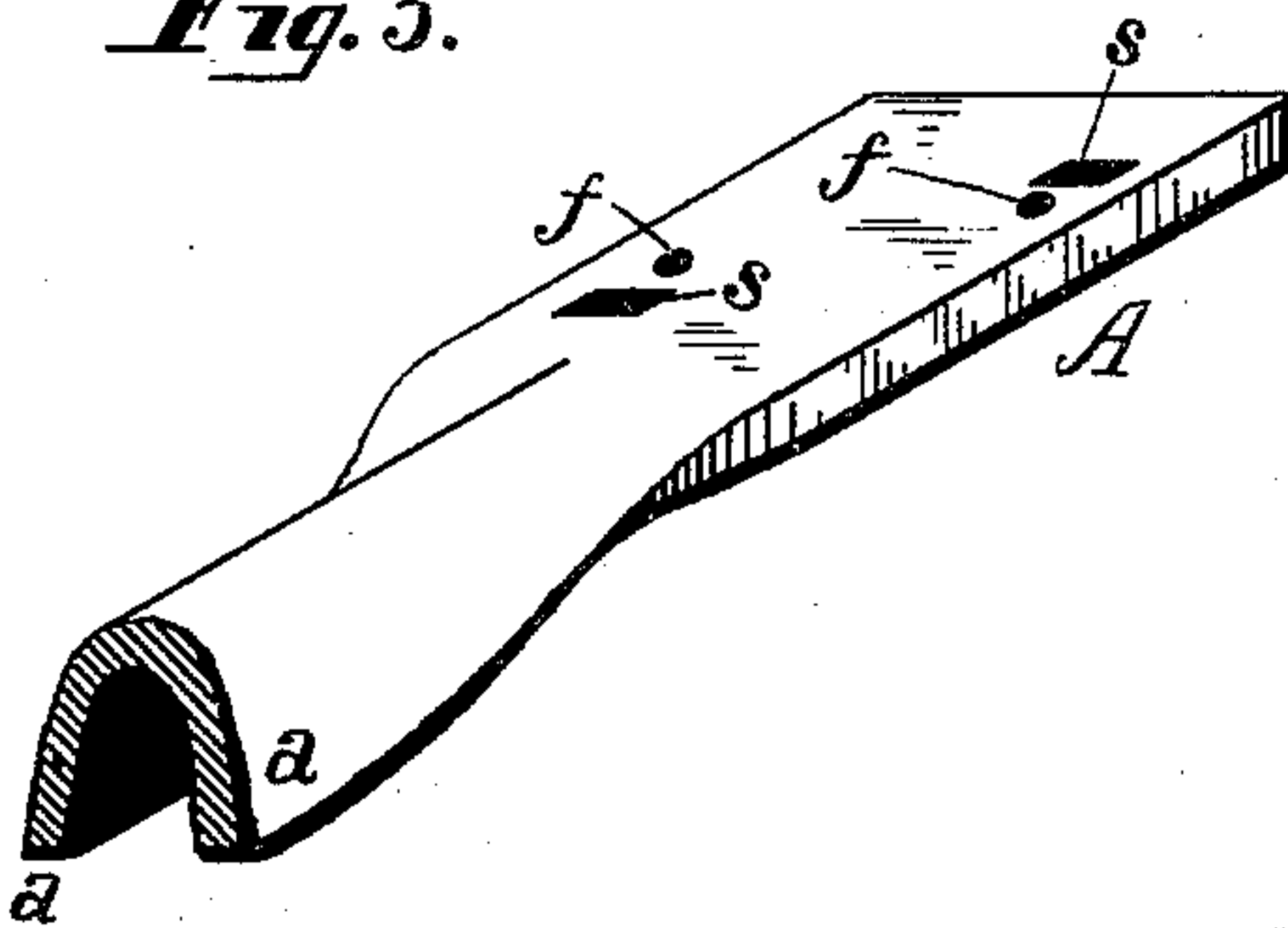


Fig. 5.

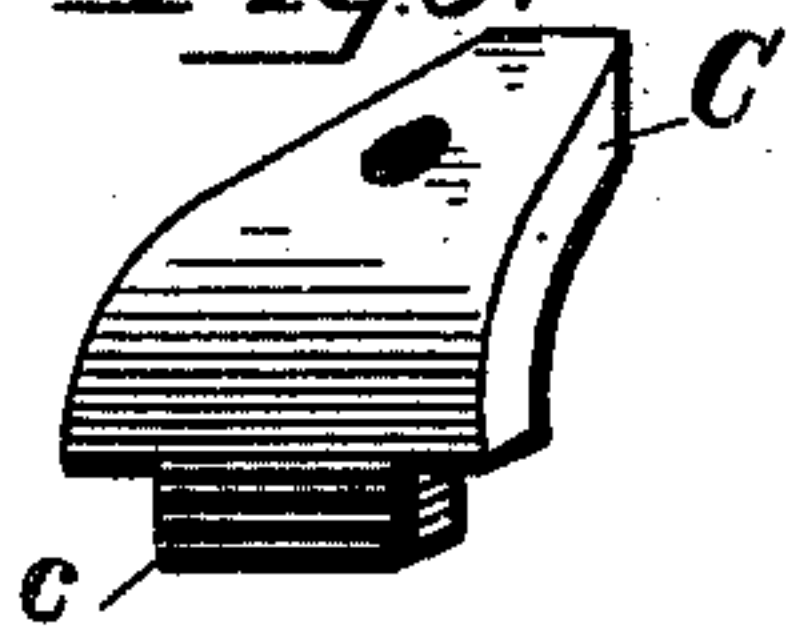
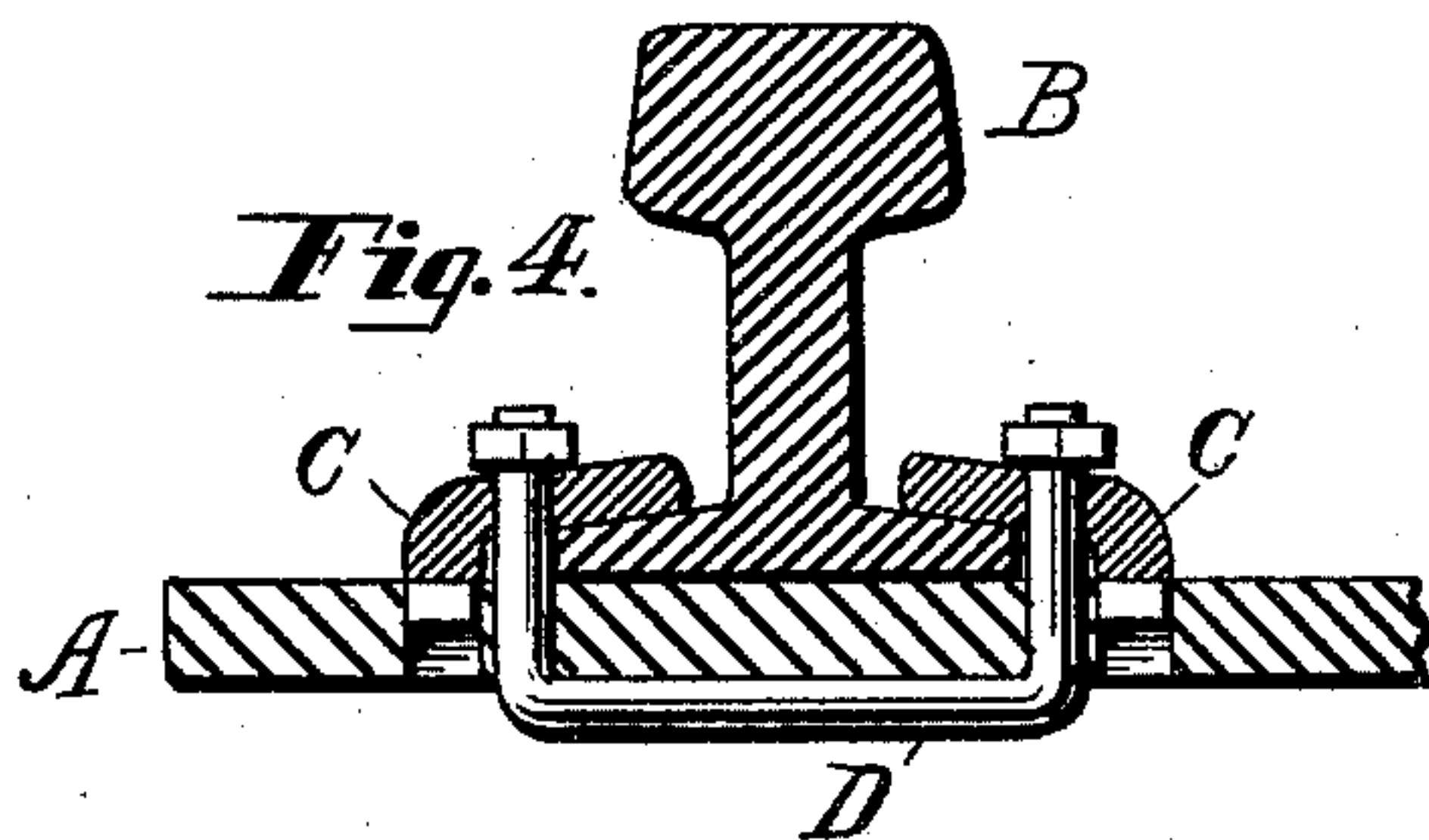


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CLARK FISHER, OF TRENTON, NEW JERSEY.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 285,986, dated October 2, 1883.

Application filed June 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, CLARK FISHER, a citizen of the United States, residing at Trenton, New Jersey, have invented an Improvement in Railroad-Ties, of which the following is a specification.

The object of my invention, generally considered, is the construction of a railroad tie or sleeper composed wholly of metal; and the special objects which I have in view are simplicity, durability, and economy.

In the accompanying drawings I have represented a preferred form of tie conveniently embodying my invention.

In the drawings, Figure 1 represents in side elevation a tie embodying my invention, the rails of a track which said tie aids to support being shown in transverse sectional elevation. Fig. 2 is a top plan view of the same parts.

Fig. 3 is a view in perspective of a portion of my tie. Fig. 4 is a transverse sectional elevational detail of a form of rail-fastening which I find it convenient to employ in connection with the tie, a portion of which latter is represented in oblique sectional elevation. Fig. 5 is a perspective view of a form of clip which I find it convenient to employ for fastening the rails to the tie.

Similar letters of reference indicate corresponding parts.

I take a plate, blank, or skelp, so to speak, of sheet-iron of the requisite texture, and made by any well-known process, which has been previously cut to a predetermined length, according to the gage of the road, and to a suitable breadth, and by any suitable means retaining the end portions flat, bend, compress, or turn the central portion down, so as to conform it to an inverted-U shape, which can be understood by reference to the drawings, and especially to Fig. 3. This plate of sheet metal so as above bent as to its central portion and left with parallel plane surfaces for the support of the rails at its extremities constitutes my tie, and is adapted to be laid directly upon any prepared road-bed, it seating itself by means of its flanged or scooped-out, so to speak, central portion directly upon and into the material of which the road-bed is composed. The flanged or bent-down portion insures vertical stiffness

to aid in the support of the rails and prevents lateral displacement.

The tie so as above formed is, as to each of its extremities, provided with two bolt-holes and with two clip-slots, which are preferably all aligned in a plane which is oblique to the longitudinal central axis of the tie, substantially as shown in Fig. 3. Opposite inclinations are given to the opposite bolts, as shown in Fig. 2.

The rails are preferably secured by means of U-bolts, the threaded shanks of which project upwardly through the holes in the ties, and also through holes in clips, preferably of the character represented in Fig. 5, which clips rest, as to one portion, upon the base of the rail and as to the other extremity within the clip-slots in the tie.

A convenient form of clip provided with a projecting boss adapted to the clip-slots in the tie is represented in Fig. 5, and in Fig. 4 is shown a U-bolt in place with respect to the tie, and retaining a rail in position by means of clips applied to the tie and rails, and through which clips the shanks of said bolt pass.

I have in the drawings designated the tie by the letter A and its central flanged portion by the letter a. The rails are lettered B, the clips C, and the bosses of the clips, when the latter are formed with a boss, c. The bolts are lettered D, the clip-slots in the tie are designated by the letter s, and the bolt-holes by the letters f.

It is of course possible for me to secure the rails to the tie by other means than the U-bolts represented, although I regard the latter as a convenient fastening device.

The tie may be made of steel or of any desired sheet metal.

Having thus described my invention, I claim—

1. As a new article of manufacture, a railroad-tie formed of a plate or blank of sheet metal the extremities of which are formed as parallel level planes, and the central portion of which is compressed upon itself, and as to its sides bent or flanged downward, so as to adapt the tie to seat itself upon the road-bed, substantially as set forth.

2. In combination with a tie formed of a plate or blank of sheet metal the extremities

of which are formed as parallel level planes
and the central portion of which is compressed
upon itself, and as to its sides bent or flanged
downward, so as to adapt the tie to seat itself
5 upon the road-bed, railroad-rails, clips adapted
to said rails, and bolts passing through the tie
and retaining the clips against both the rails
and the tie, substantially as set forth.

In testimony whereof I have hereunto signed
my name this 12th day of May, A. D. 1883. 10

CLARK FISHER.

In presence of—

J. BONSALE TAYLOR,
W. C. STRAWBRIDGE.