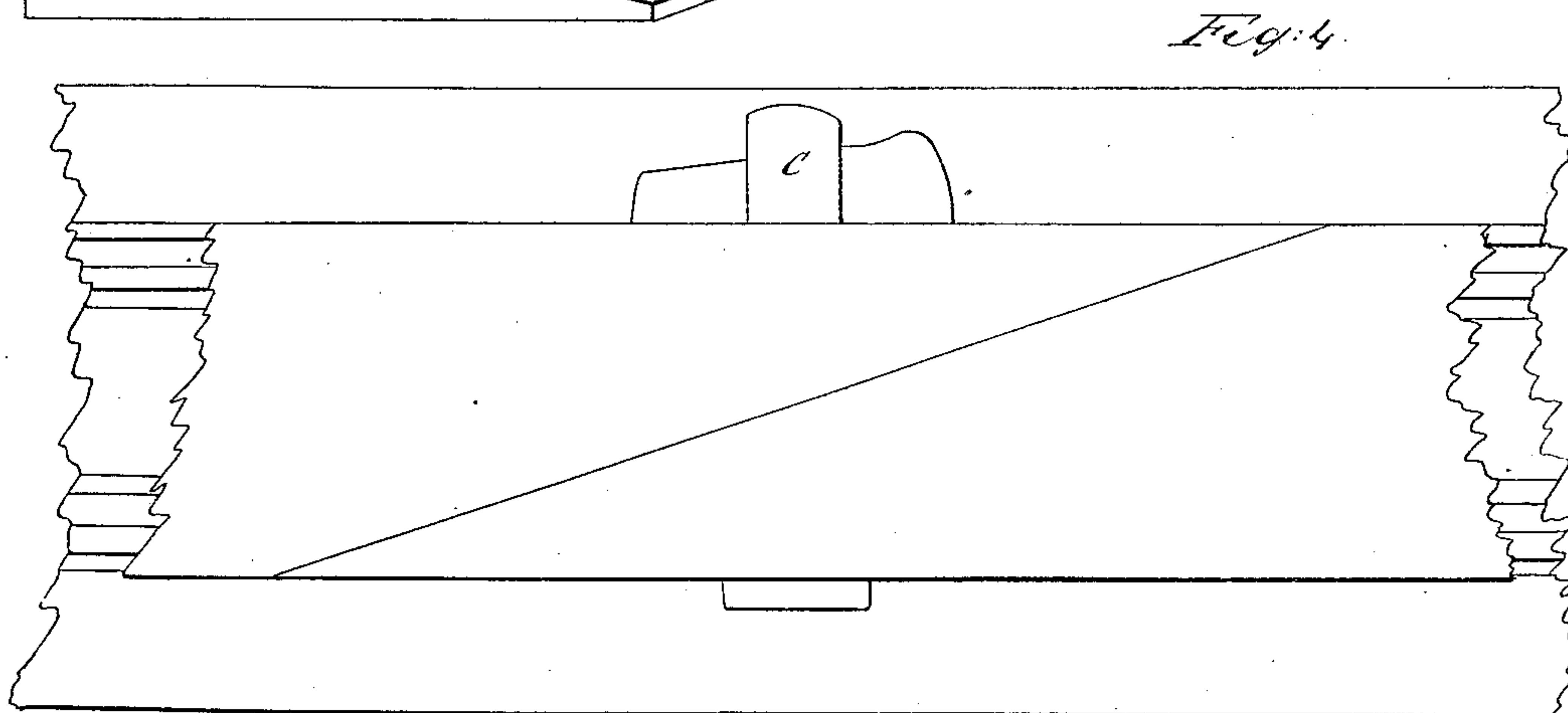
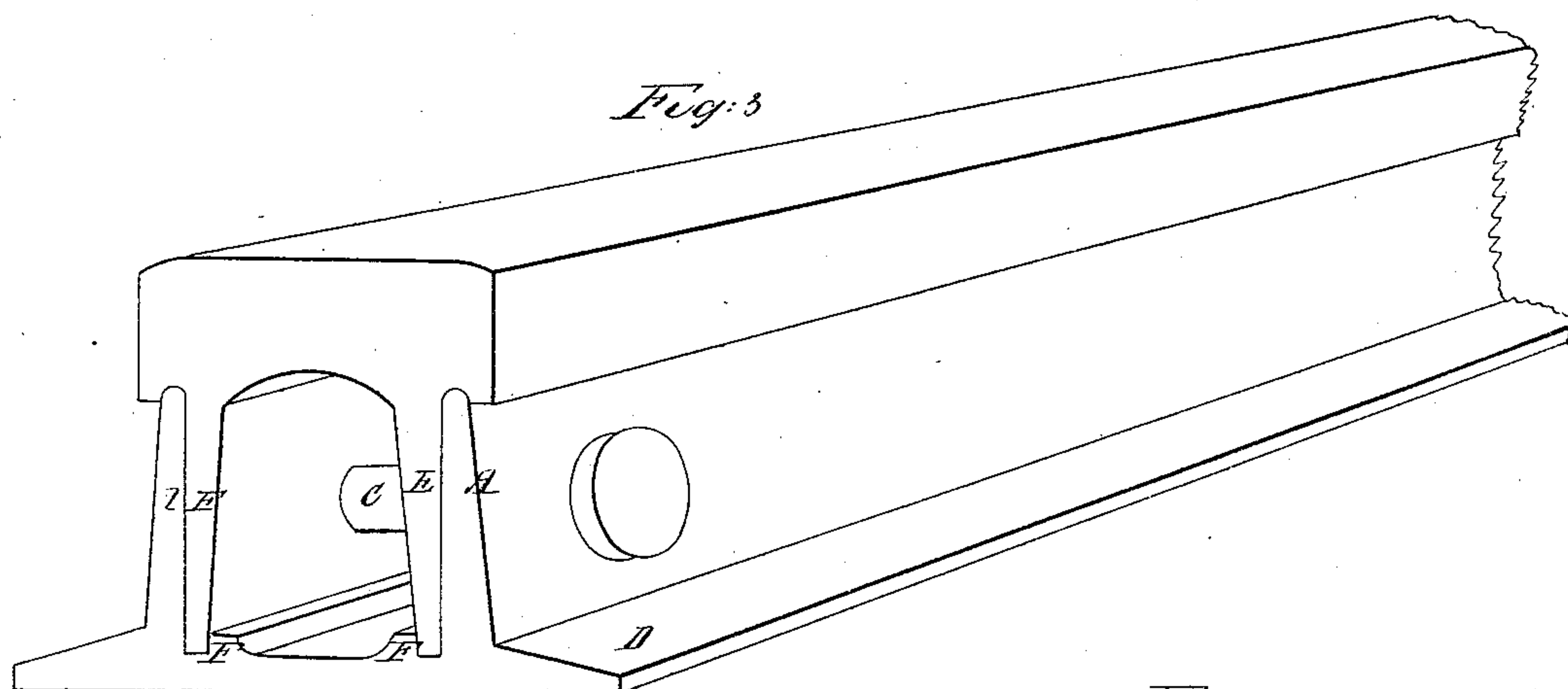
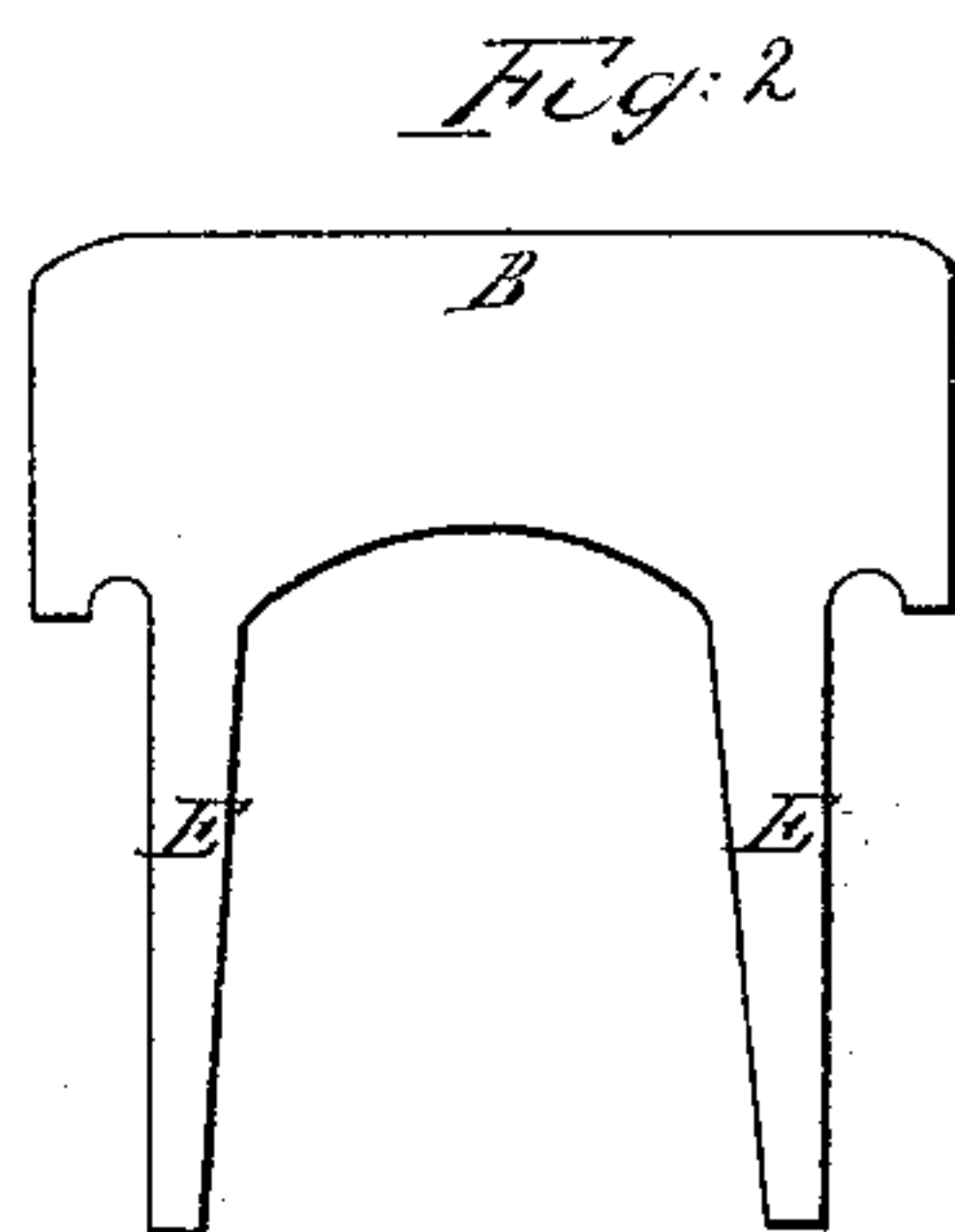
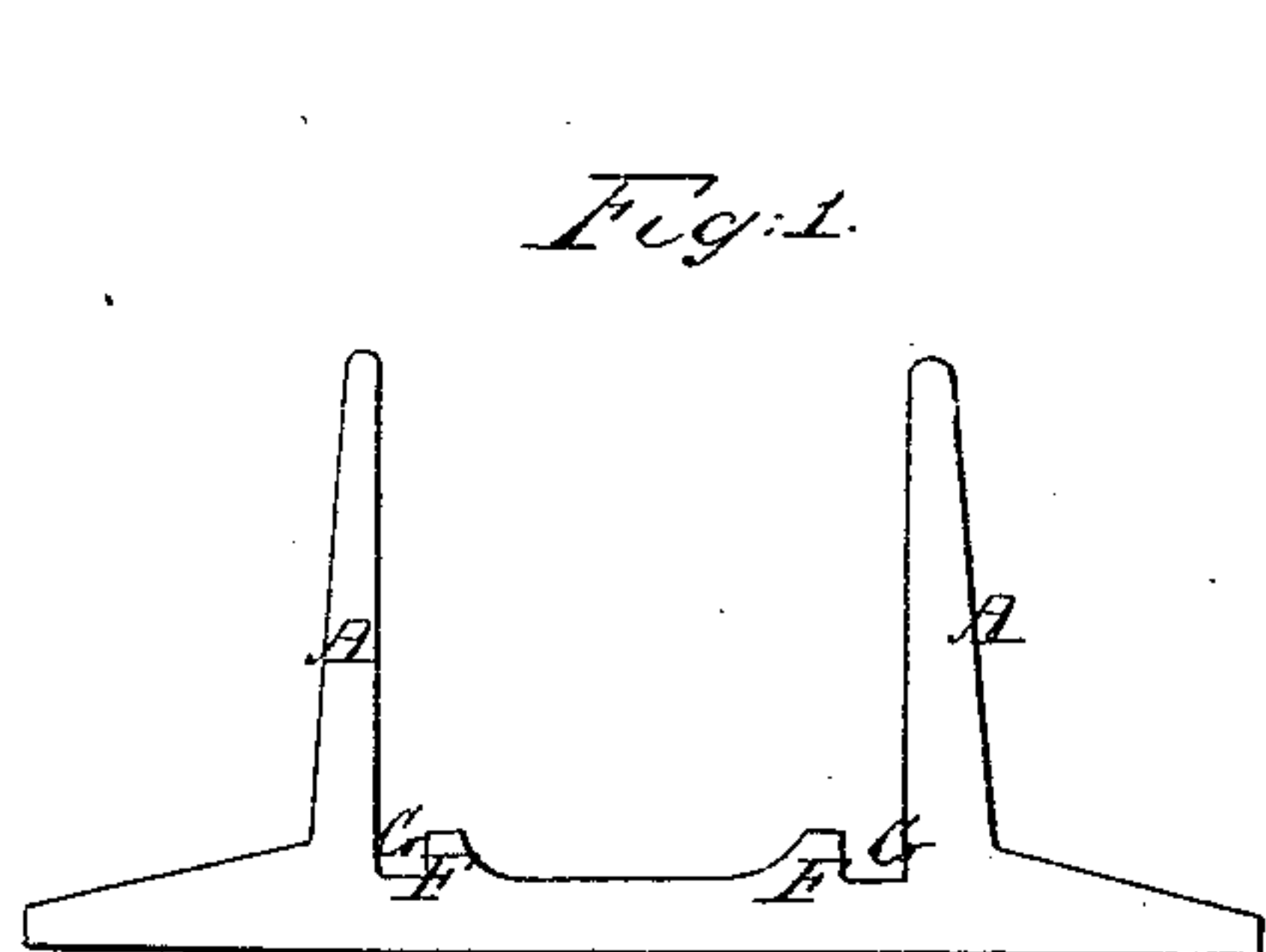


O. G. Warren,
Railroad Rail,
 No. 51,635, Patented Dec. 19, 1865.



Witnesses.
J. D. Sturtevant
J. W. Jones

Inventor.
Owen G. Warren

UNITED STATES PATENT OFFICE.

OWEN G. WARREN, OF NEW YORK, N. Y.

IMPROVED RAILROAD BOX-RAIL.

Specification forming part of Letters Patent No. **51,635**, dated December 19, 1865; antedated December 14, 1865.

To all whom it may concern:

Be it known that I, OWEN G. WARREN, of the city, county, and State of New York, have invented a new and useful Improvement in the Box-Rail; and I hereby declare that the following is a full and exact description thereof.

This invention is called "Warren's box-rail," and this title I make and establish in perpetuity as a trade-mark, as the lawful and indefeasible property of me and my representatives forever.

To enable others to make and use my invention, I proceed to explain it in detail.

Figure 1 is the bed-rail, constituting the lower part of the box-rail; Fig. 2, the cap, constituting the upper part of the box-rail; Figs. 3 and 4, the two conjoined, making the box-rail complete.

The same letters refer to the same things in all the designs.


A is the bed-rail at the sides, raised as a box; B, the cap or the track; C, the bolt; D, the base; E, the upper box; F, the ridges; G, channel.

My purpose in this invention is to construct a rail in two parts that shall be safer from breakage and from wear at the joints than a single rail of the same weight, and to have a cavity for the conveyance of signal-lines or telegraph-wires.

I make the bed-rail with the flat base D, as usual, and two sides, A, made solid with it and of the proper strength. These may have all their sides perpendicular, as shown in Fig. 1, or reduced in thickness at the top, as in Fig. 3. Between the two sides A, I make two ridges, F, to constitute channels.

The track or upper part of the box is shown at Fig. 2. This is also a box with two sides, E, which may have all perpendicular sides or be reduced toward the lower edges, as shown, Figs. 2 and 3. The lower edges fit into the two channels made by F, with the sides A to hold them firm. The top edges of the sides A may also lock under the outer sides of the track, as shown, Fig. 3.

The track-rail should break joints with the bed-rail, and the joints of the track or cap part should be set over the space between two ties, as the position in which it is least liable to be worn. I would also have all the rails short—say nine feet—to have less shrinkage, and consequently less opening at the joints.

To obviate the usual wear the ends of the track-rail may be beveled, so as to pass each other a few inches. They may be closer set in this way, as extraordinary expansion need not be provided for, there being facility to crowd past a little. I would lay upon every tie a piece of deafening, covered by the rails, to ease the concussion. The joints, instead of passing, may meet in a chevron or semicircle,  thus, and either plan would obviate wearing at the joint.

Having thus fully described my invention, so that it is comprehensible by all persons, and having affixed names to the processes and things produced, I assert that I own and am possessed of a lawful and indefeasible right and title in perpetuity, in law and in equity, independent of any grant, to the names and designations within stated, which I have affixed to my inventions, and that they are trade-marks belonging exclusively to me and my representatives and successors forever.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of the bed-rail with the track-rail to form the box-rail, substantially as described.

2. The use of the channels G and those formed by F with A, for locking the two parts of the box-rail firmly together, substantially as described.

OWEN G. WARREN.

Witnesses:

J. D. STURTEVANT,
J. W. JONES.