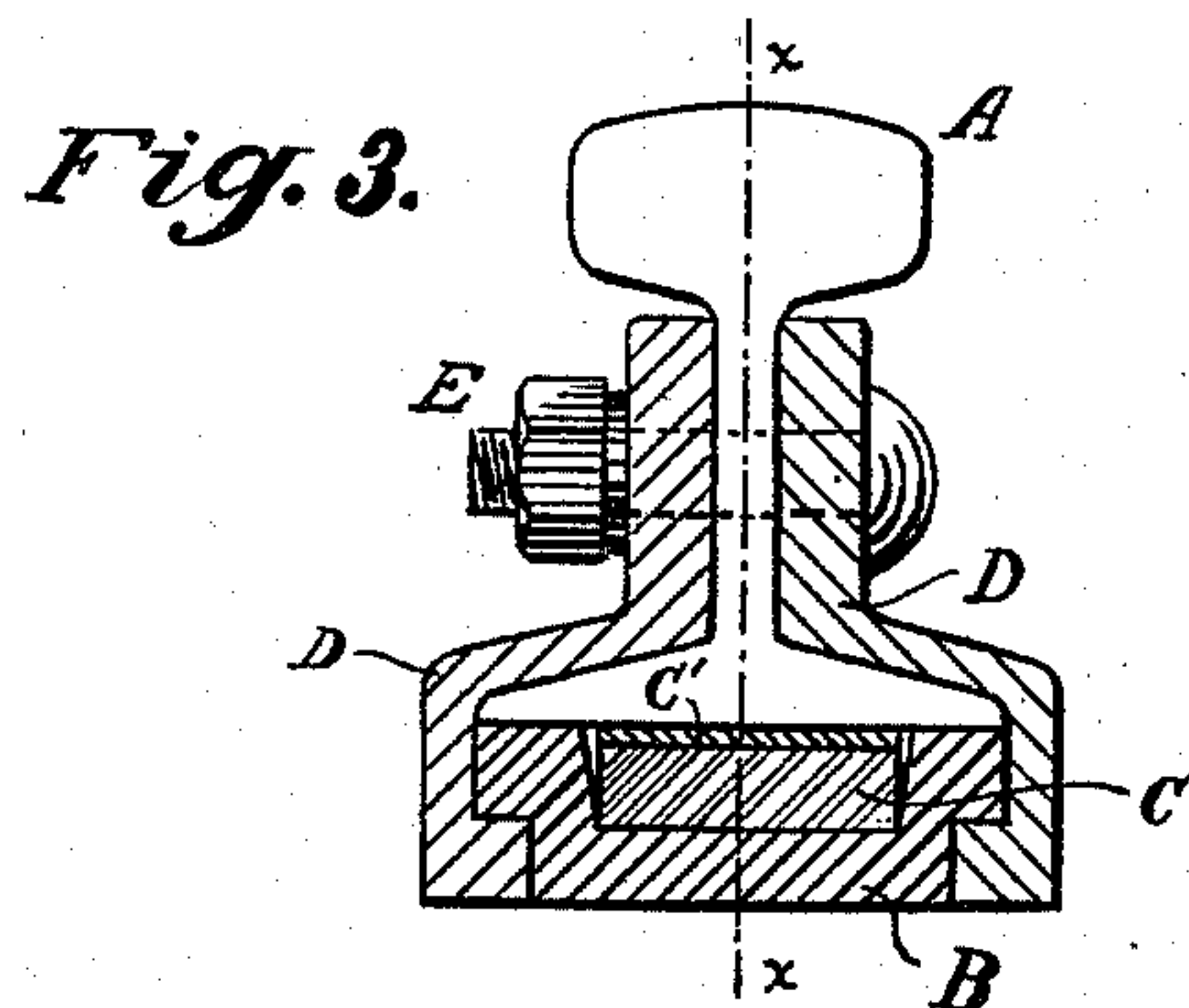
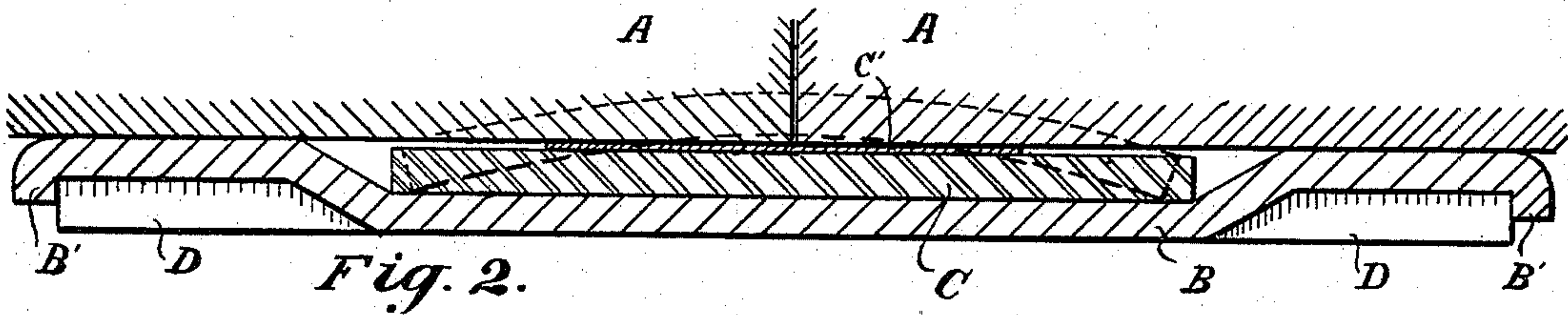
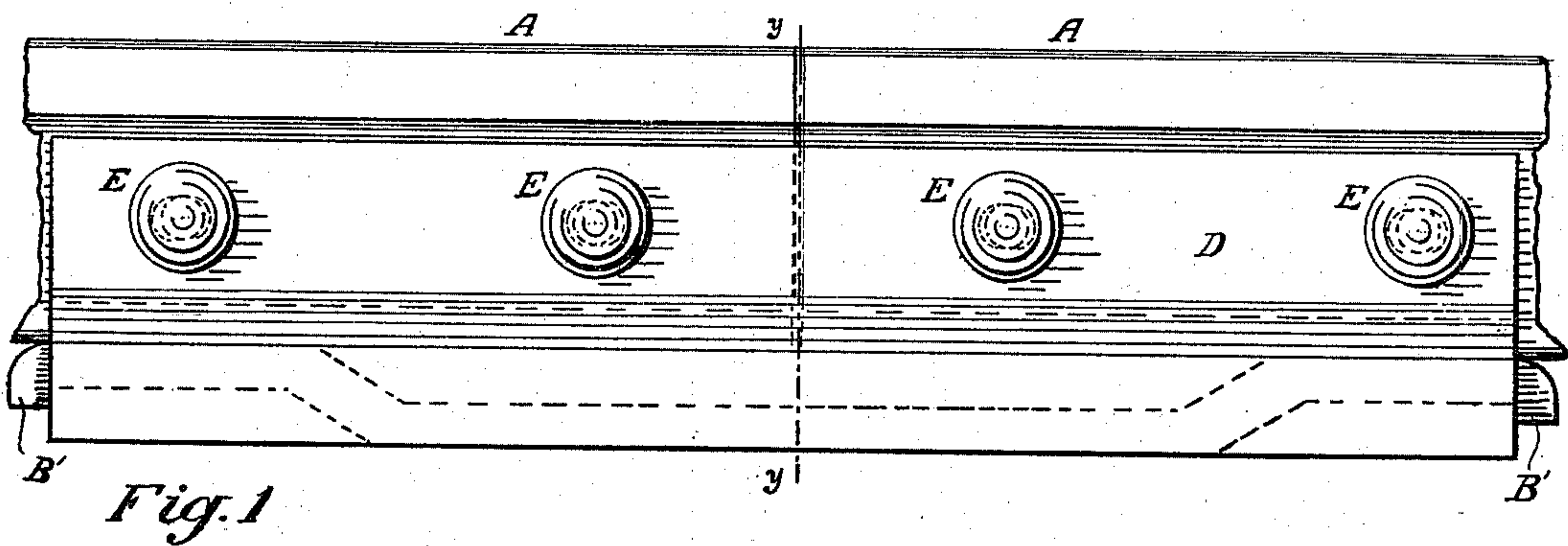


(No Model.)

B. JENNINGS.
RAILWAY RAIL BOND.

No. 573,980.

Patented Dec. 29, 1896.



Witnesses,
J. H. Jones
C. S. Slade

Inventor,
Byron Jennings
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attys

UNITED STATES PATENT OFFICE.

BYRON JENNINGS, OF SAN JOSÉ, CALIFORNIA.

RAILWAY-RAIL BOND.

SPECIFICATION forming part of Letters Patent No. 573,980, dated December 29, 1896.

Application filed April 17, 1896. Serial No. 587,905. (No model.)

To all whom it may concern:

Be it known that I, BYRON JENNINGS, a citizen of the United States, residing at San José, county of Santa Clara, State of California, have invented an Improvement in Railway-Rail Bonds; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a device for connecting the meeting ends of railway-rails and making a bond and joint by which these ends are prevented from being depressed by the constant passage of heavily-loaded trains, and the level and register of the rails is more accurately maintained than heretofore.

It consists in certain details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation showing the meeting ends of two rails with my attachment. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section.

A A are rails, which in the present case are the usual T-rails used for steam and other railways, and B is a base-plate having a width approximately equal to the width of the base of the rail. This plate is stamped, forged, or otherwise formed with a depression extending longitudinally a short distance in each direction from the meeting ends of the rails. This depressed portion will lie beneath the meeting ends of the rails, and within it is fitted a powerful steel spring C, which in its normal condition is curved, so that when laid in the depressed channel of the plate B the convex portion of the spring C is presented upwardly toward the point where the meeting ends of the rails will lie.

D D are side plates, which are rolled so as to fit the web and flange of the rail, diverging thence outwardly over the lower flanges of the rail, thence bending downwardly and being bent inwardly to fit the channels formed in the lower edges of the plate B. These plates D are secured upon each side of the meeting ends of the rails by bolts E, passing through the plates and through the web of the rail, a sufficient space being left for the expansion and contraction of the rail without undue tension upon the bolts.

In putting the device together the spring

C is first placed in the depression of the plate B. The plate is then placed beneath the ends of the rails, extending about equal distances each side of the joint and by a clamp operated by a screw brought up into contact with the bottom of the rails, thus flattening the spring so that the ends of the rails for a short distance rest upon it. The side plates D are then placed upon each side and secured by the bolts and nuts E, so as to clamp them firmly in place. The pressure upon the spring is then released by removing the clamp by which it was compressed, and its natural elasticity causes it to press upward with great force against the meeting ends of the rails, so that while the spring itself practically fills the depressed portion of the plate D and forms a solid bed for the meeting ends of the rails its tendency is always to press these ends upward and thus resist the downward pressure of wheels passing over them, consequently making a much smoother joint for the passage of the wheels.

The plates D, by reason of their inwardly-turned flanges at the bottom engaging the edges of the plate B, will hold the whole structure firmly together and form an exceedingly-durable joint, preventing vertical and side motion as well.

When the rails are to be used for electric cars or transportation in which it may be desired to transmit a current of electricity through the rails, I form a more perfect connection of the rails at the meeting ends by inserting a copper plate C' above the spring C, this plate extending across the joint of the rails, and this will form a perfect electrical conductor across this joint. Any little movement which may take place by the passage of cars or trains is sufficient to keep the meeting surfaces bright and in good conducting condition.

In order to prevent the plate B from slipping out of its place, I have shown the ends B' as turned outwardly to a slight degree, so as to engage the edges of the plates D, and thus prevent its moving endwise in either direction to get out of place.

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

1. In a railway-rail joint, a base-plate upon

which the meeting ends of the rails are adapted to rest, said plate having a depressed section beneath the joint, a curved flat spring having a thickness equal to the depth of the depression and forming, when straightened, a continuous support with the ends of the plate, for the rail, and means whereby the base-plate is retained in place and the spring-plate held in its depressed condition.

10 2. In a railway-rail joint, a bond for the meeting ends of the rails consisting of a base-plate having a depressed section beneath the meeting ends of the rails and end lugs, a curved spring having a thickness equal to the
15 depth of the depression and forming, when straightened, a continuous support with the ends of the plate, for the rail, side plates fitting and bolted to the webs of the rails having flanges bent with relation to the base-
20 plate, whereby the latter is retained in place and the spring maintained in its depressed condition in the chamber.

3. A railway-rail bond consisting of side plates bolted to the webs of the meeting rails having flanges extending around and beneath the rail-flanges, a base-plate channeled to be engaged by the flanges of the side plates, whereby it is held in close contact with the bottom of the rails, said plate having a depressed chamber beneath the meeting ends of the rails, a curved spring fitting the chamber and which when straightened forms with the plate a solid support for the rail ends, and a copper surface-plate fitted upon it extending across the joint so as to make a continuous electrical connection through the rails.

In witness whereof I have hereunto set my hand.

BYRON JENNINGS.

Witnesses:

S. H. NOURSE,

JESSIE C. BRODIE.