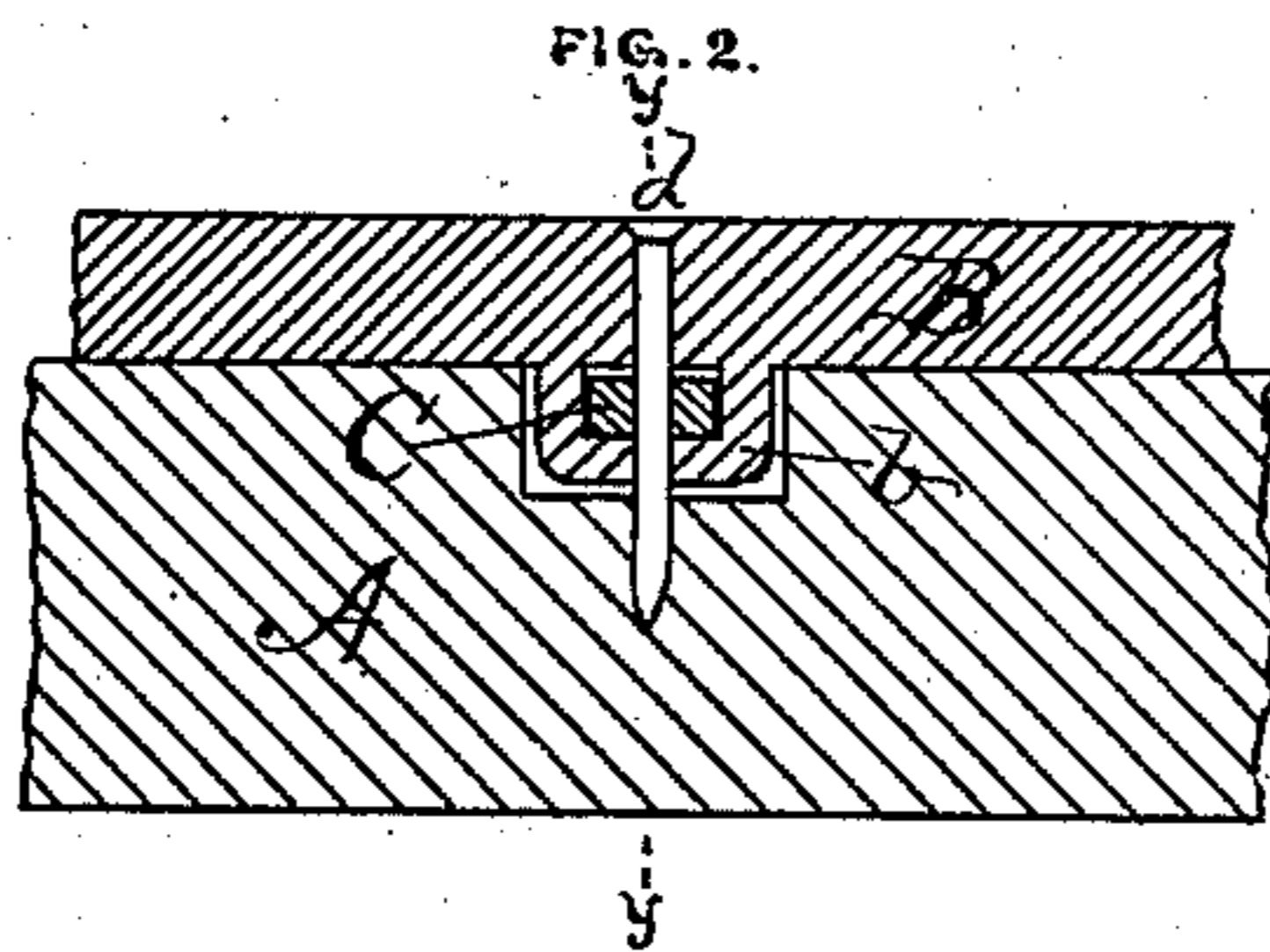
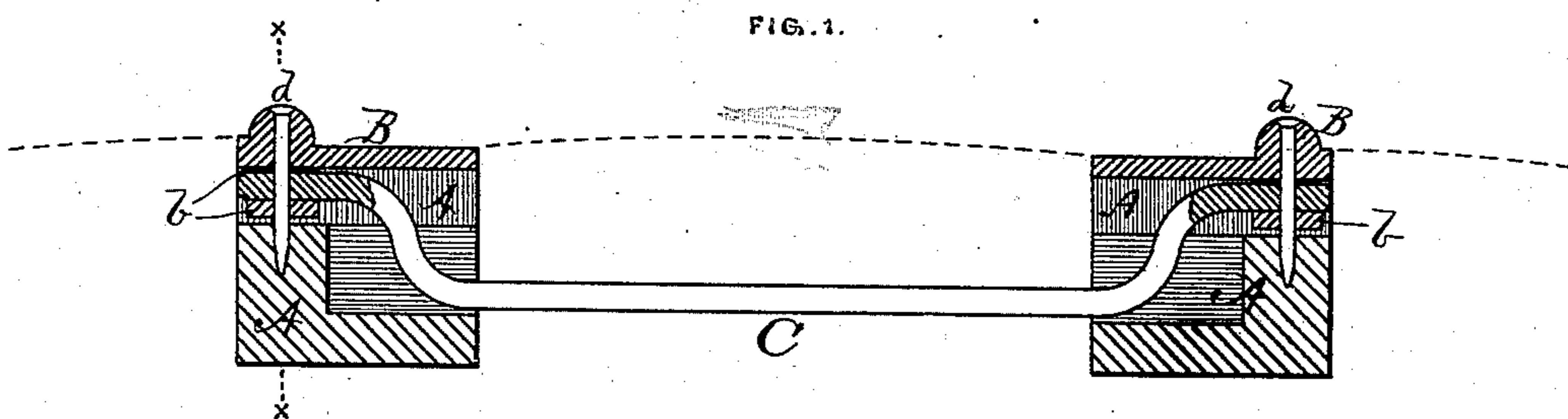


J. A. KIRBY.
Street-Railway Track.

No. 203,463.

Patented May 7, 1878.



WITNESSES:

Ford R. Smith
D. H. Donovan

INVENTOR:

James A. Kirby
by Munday T. Evans
his attys

UNITED STATES PATENT OFFICE.

JAMES A. KIRBY, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS HIS
RIGHT TO WILLIAM B. KEEP, OF SAME PLACE.

IMPROVEMENT IN STREET-RAILWAY TRACKS.

Specification forming part of Letters Patent No. **203,463**, dated May 7, 1878; application filed
March 23, 1878.

To all whom it may concern:

Be it known that I, JAMES A. KIRBY, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Street-Railways, of which the following is a specification:

This invention relates to the tracks of street-railways; and it consists in certain devices designed to prevent the spreading of the tracks, the nature of which devices will be fully understood from the following description when considered in conjunction with the accompanying drawing, wherein—

Figure 1 is a cross-section of railway to which the rails have not yet been applied, and which embodies my invention, upon line *y y* of Fig. 2; and Fig. 2 is a longitudinal section of one of the tracks upon line *x x* of Fig. 1.

Like letters indicate like parts in both figures.

In said drawing, A A represent the ordinary stringers of a street-railway. B B are the chairs, whereon the tracks are laid in the usual manner. These chairs do not differ from those in use, except in respects herein specified.

Depending from the bottom of the chairs, and cast in one piece therewith, are loops *b b*, the openings whereof are at right angles to the length of the chair, and which are designed to receive each an end of the tie rod or bar C, as clearly shown by the drawing. This tie-rod is locked to the chairs at either end by spikes *d* driven through corresponding holes in both chairs and rod, and from thence into the material of the stringer.

This feature is also clearly shown in the

drawing. It forms a very practical and secure lock, and unites the three parts together, as well as the two—the chair and rod—for which it is mainly intended. The spike is so located that the rail above will prevent any tendency it may have to work upward.

The tie-rod is bent downward at each side, so that the portion thereof between the tracks is depressed, and may be embedded in the pavement, and where the wheels of the cars and other vehicles passing over the road cannot come in contact therewith. This downward bend is gradual, as shown, as thereby the strength of the rod is less impaired than it would be were the bend at right angles.

Of course, it will be understood that the stringers are cut away under the chairs sufficiently to admit the rod and loop without minute description.

I claim—

1. The combination of the chairs B, having the box-loops *b* below, and the bent tie-rod C, inserted in the loops and locked therein by the spikes *d*, substantially as shown.

2. The tie-rods having the central portion thereof depressed by gradual bends, as shown, in combination with the chairs of a street-railway track.

3. The tie-rods C, having the gradual bends shown, in combination with the chairs, to which they are secured, the bent portions being wholly under the cover of the chairs, as shown.

JAMES A. KIRBY.

Witnesses:

EDW. S. EVARTS,
FORDE R. SMITH.