

G. A. STURGES.
 Railway Rail-Joint Fastenings.

No. 143,790.

Patented Oct. 21, 1873.

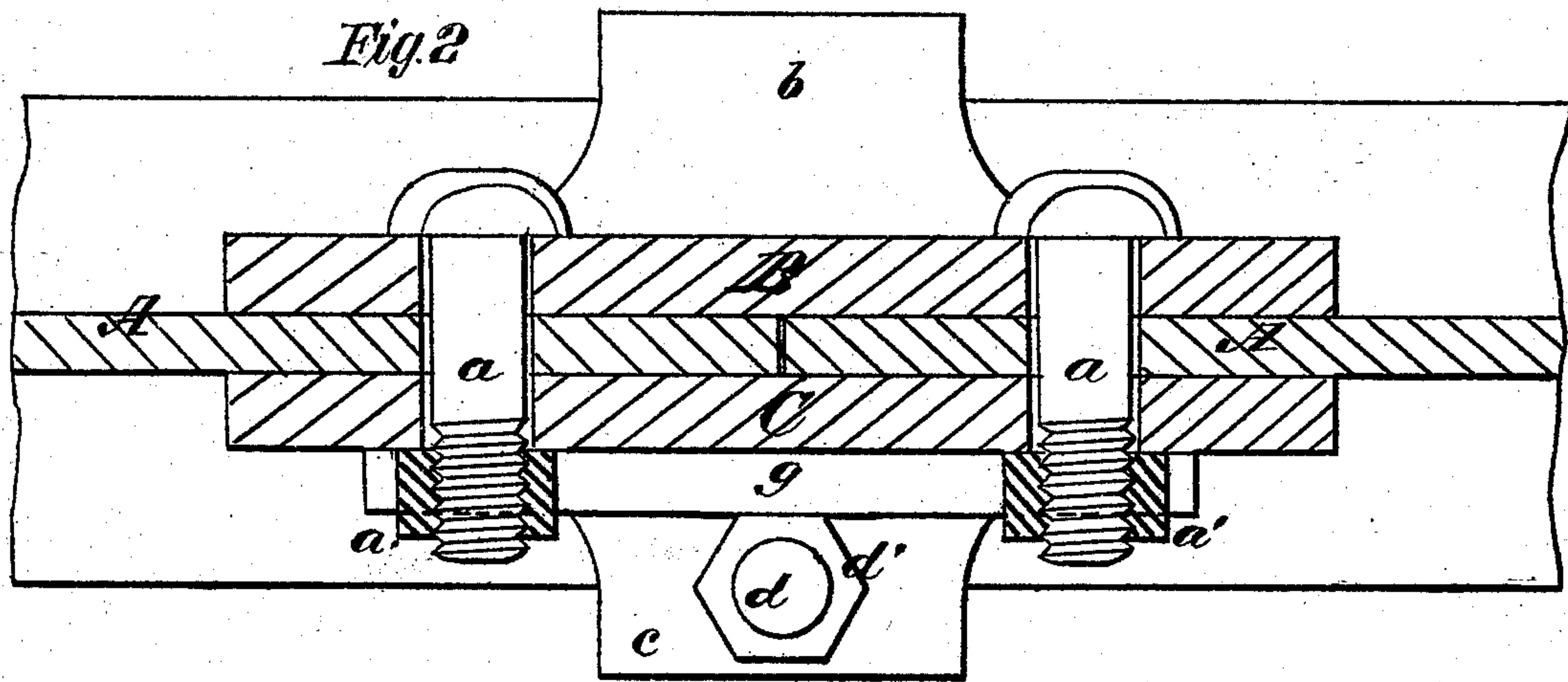
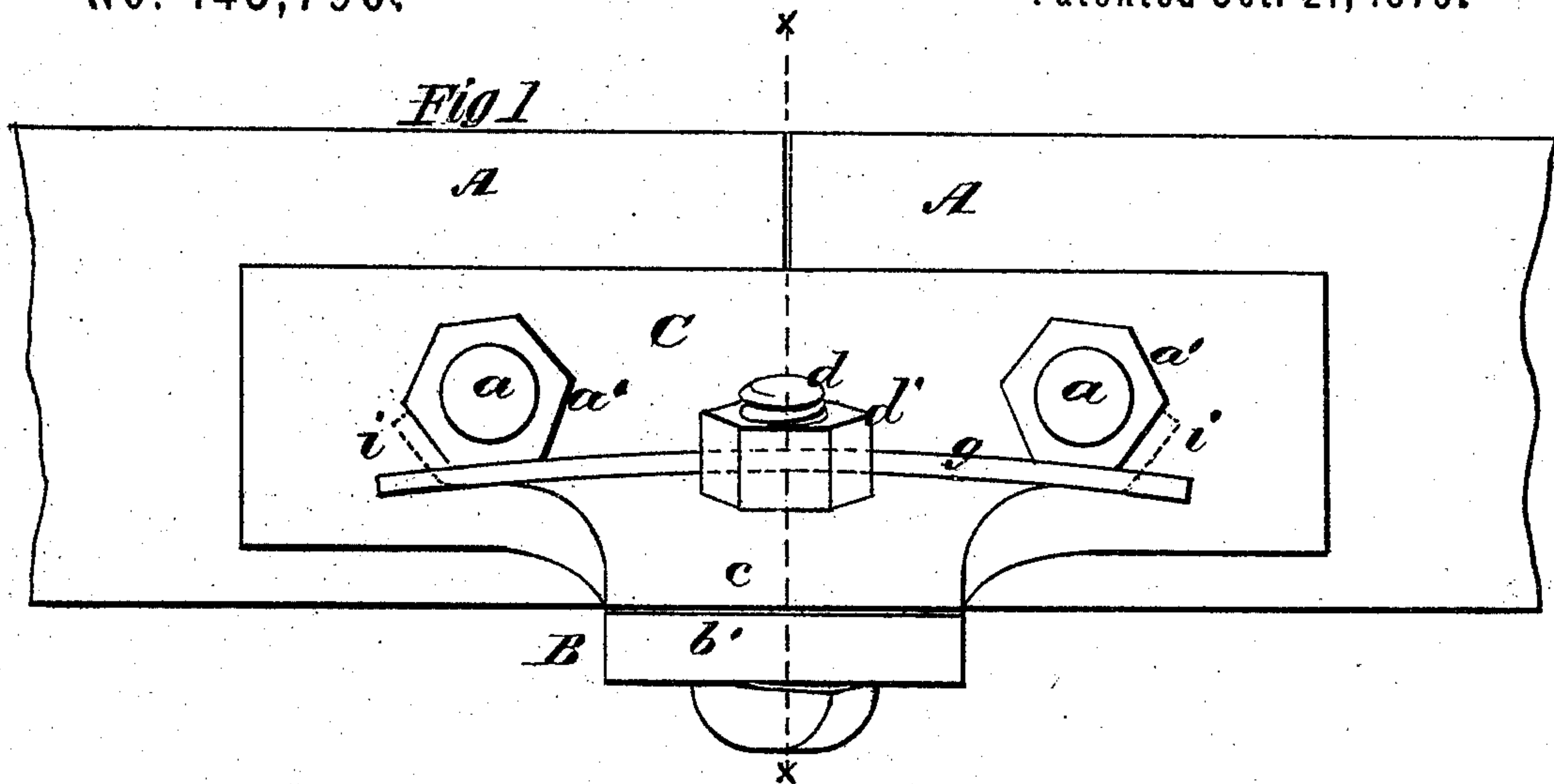
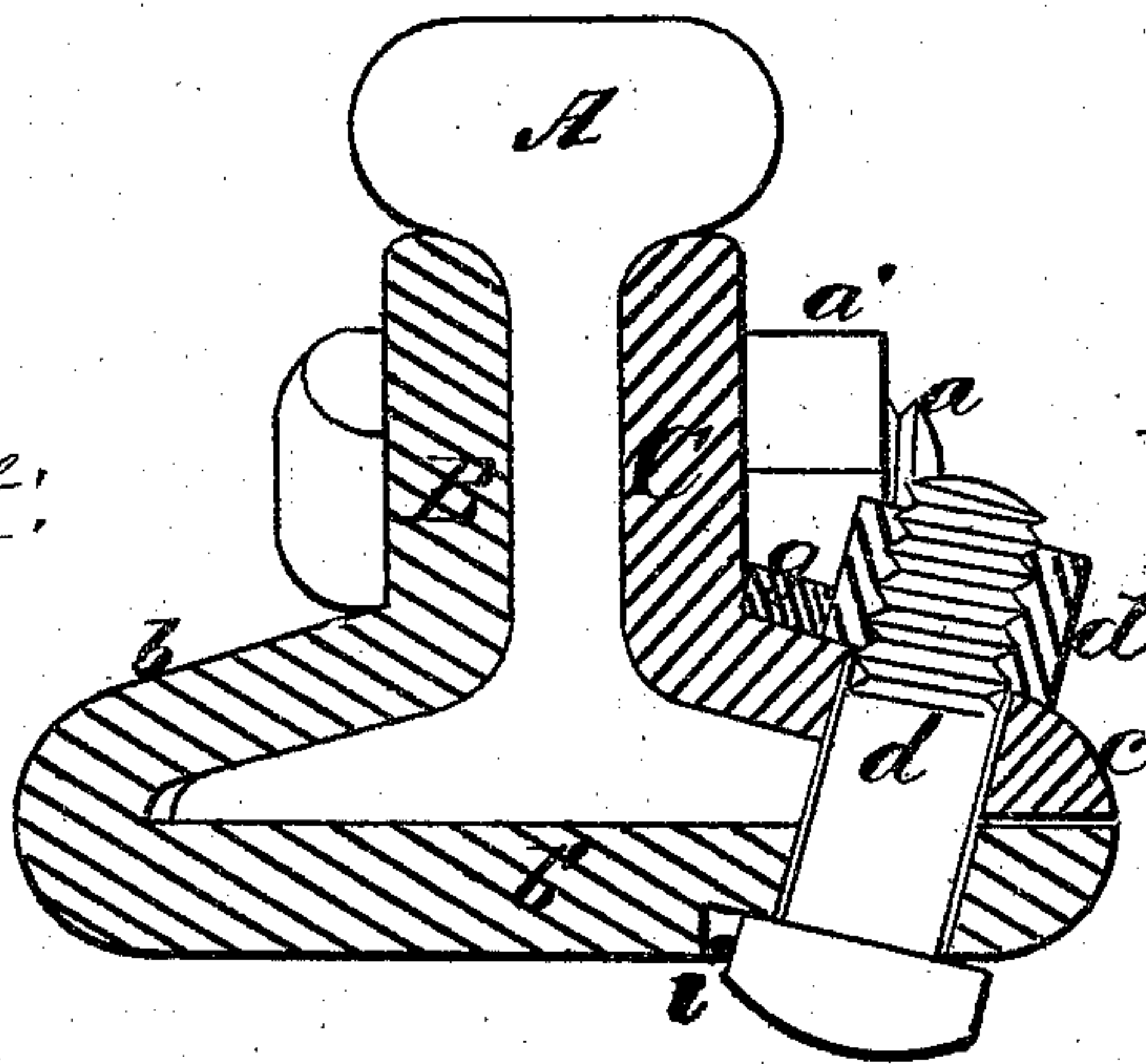


Fig 3



Witnesses.
R. E. Campbell,
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Inventor
Geo. A. Sturges
by
Wm. T. Russell & Son

UNITED STATES PATENT OFFICE.

GEORGE A. STURGES, OF DELHI, NEW YORK, ASSIGNOR TO HIMSELF AND
DEXTER PETTENGILL, OF SAME PLACE.

IMPROVEMENT IN RAILWAY-RAIL-JOINT FASTENINGS.

Specification forming part of Letters Patent No. **143,790**, dated October 21, 1873; application filed
May 2, 1873.

CASE A.

To all whom it may concern:

Be it known that I, GEORGE A. STURGES, of Delhi, in the county of Delaware and State of New York, have invented a new and useful Improvement in Railroad-Rail Joints; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is an outside view of the ends of two rail-sections connected together by my improvement. Fig. 2 is a horizontal section through the same. Fig. 3 is a cross-section taken in the vertical plane indicated by dotted line *x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement on railroad-rail joints wherein clamping-plates are employed which embrace the sides and bottom of the rail-sections and break joints with the joints thereof, and wherein the nuts of all the bolts which are used to secure the clamps to the rails are arranged and locked by means of a single key, as will be hereinafter explained.

The following description of my improvement will enable others skilled in the art to understand it.

In the accompanying drawings, A A represent the ends of two rail-sections of the well-known T shape, and B C represent two clamping-plates, which are confined by nuts and bolts securely to the sections at the joint. The plate B is constructed with a vertical portion, which fits simply against the necks of the sections A, between the heads and bases thereof, and also with two portions, *b b'*, which extend over and beneath the bases of the sections, as shown in Fig. 3. The plate C has a vertical portion like the plate B, and for the same purpose, and also a lateral portion, *c*, which extends out over the bases of the sections and beyond the edges thereof, so as to overlap the outer edge of the underlying portion *b'* of the plate B, as shown in Fig. 3. The

vertical portions of the plates B C and the webs of the sections A are perforated to receive horizontal bolts *a a*, on which are nuts *a' a'*, and the lips or portions *b' c* are perforated and the outer edges of the rail-bases notched to receive an inclined bolt, *d*, on the upper end of which is a nut, *d'*. The nuts *a' a'* are prevented from turning by the angles of their flattened sides abutting against the portion *b* of B, and the head of the bolt *d* is prevented from turning by contact with an abutting surface on the base portion *b'* of B. The nut *d'* on bolt *d* is located between the two nuts *a' a'*, and on the lateral portion *c* of the plate C. With this arrangement of nuts I employ a locking-key, *g*, which is a straight strip of wrought metal of greater length than the distance between the nuts *a' a'*. When the nuts are all set up tight, the key *g* is driven beneath the nuts *a' a'*, and between the nut *d'* and the vertical portion of the plate C. In this position the key cannot become displaced, either laterally or vertically, and, by turning up its ends, as indicated by dotted lines at *i i*, Fig. 1, it cannot move endwise. The three nuts are thus safely locked by a single key.

By these means the rail ends are rigidly secured together, and the plates B C are caused to firmly embrace all those portions of the rail-sections below the heads thereof, and, while this is the case, the nuts are safely locked against turning loose.

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

The combination of the plates B C, constructed as described, and rail A, screws *a a* and *d*, and nuts *a' a' d'*, and the single bent spring-key *g* holding the several nuts, all substantially as and for the purpose described.

GEORGE ANSON STURGES.

Witnesses:

CHARLES MCPHAIL,
B. F. GEROWE.