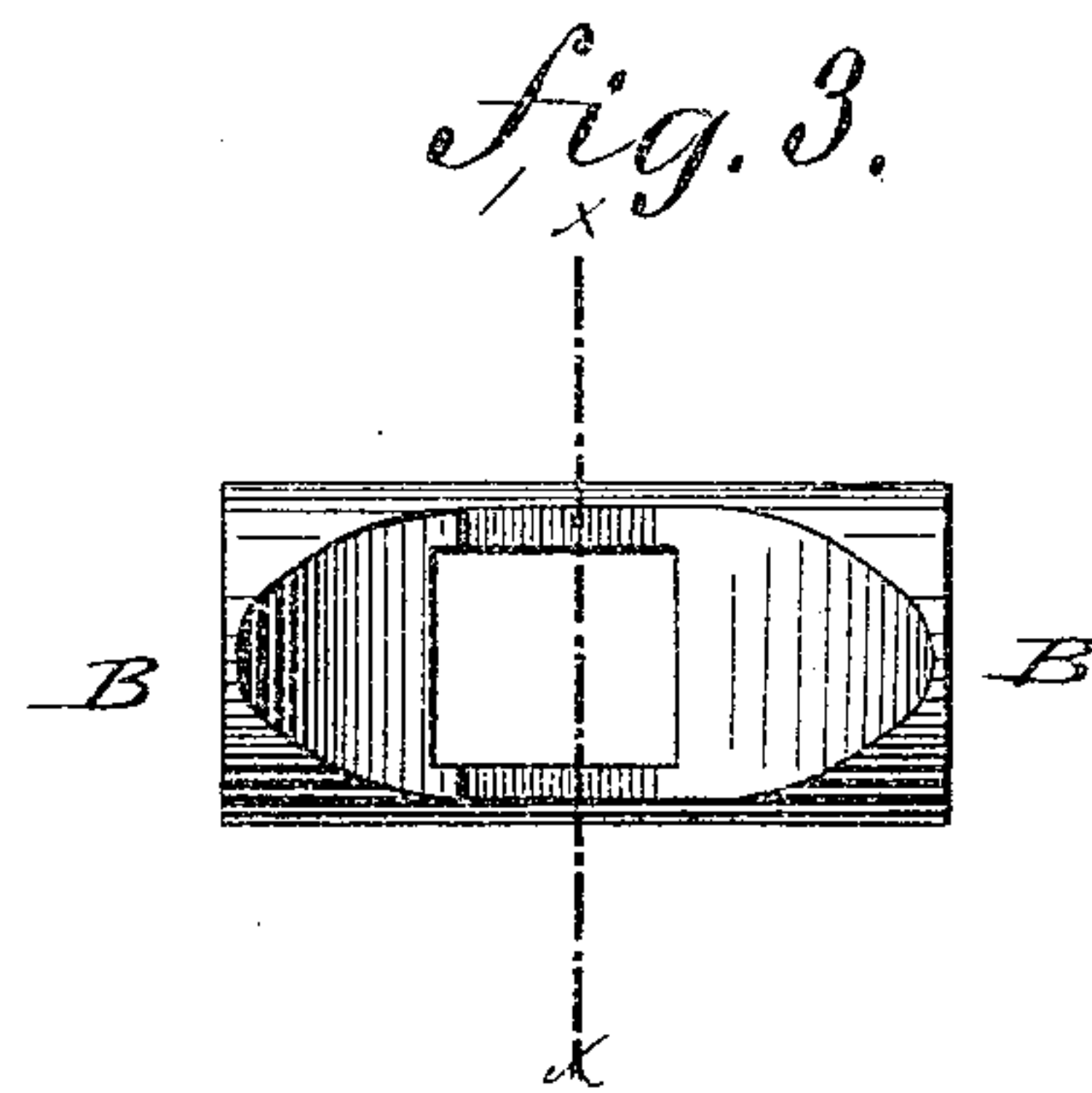
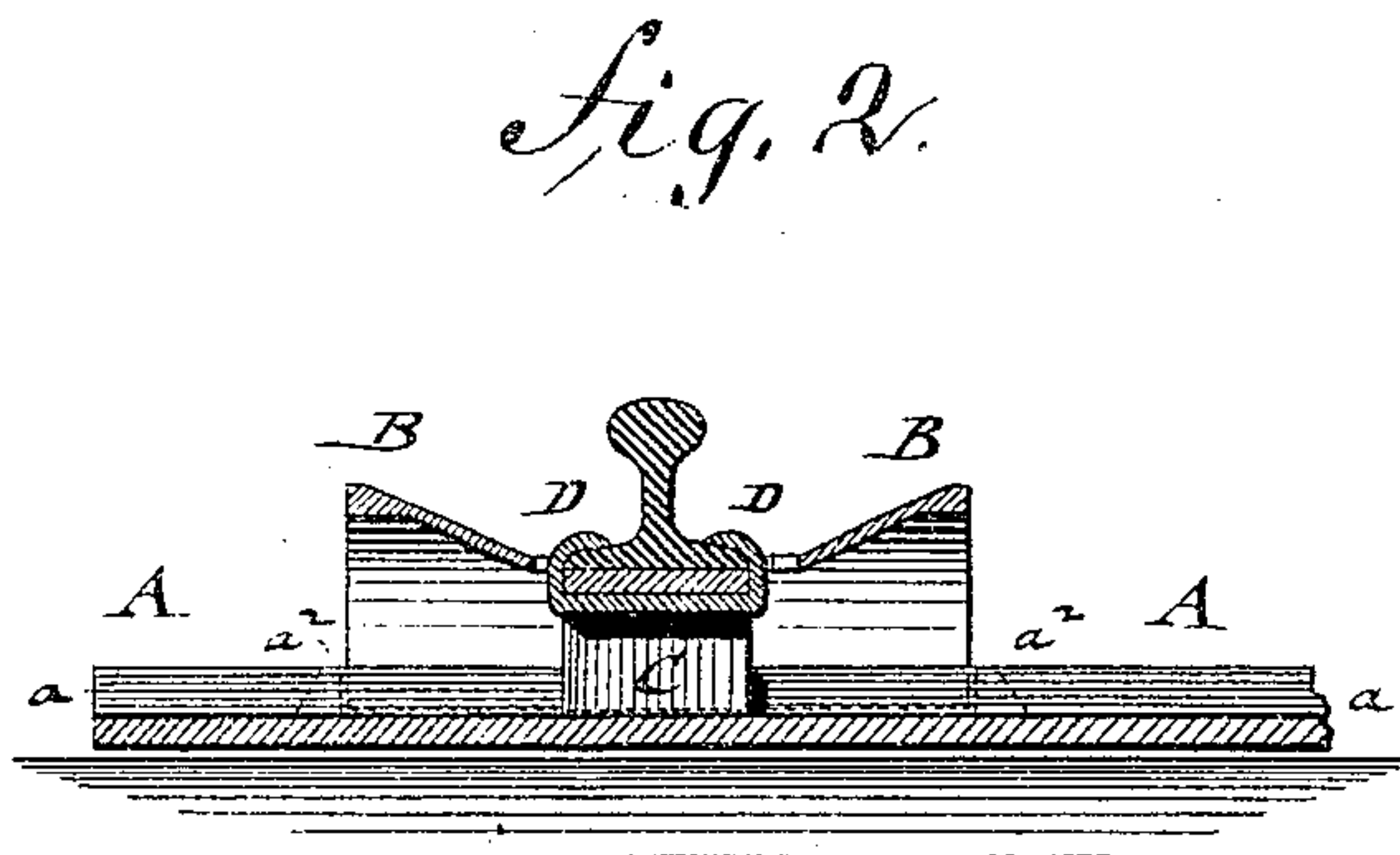
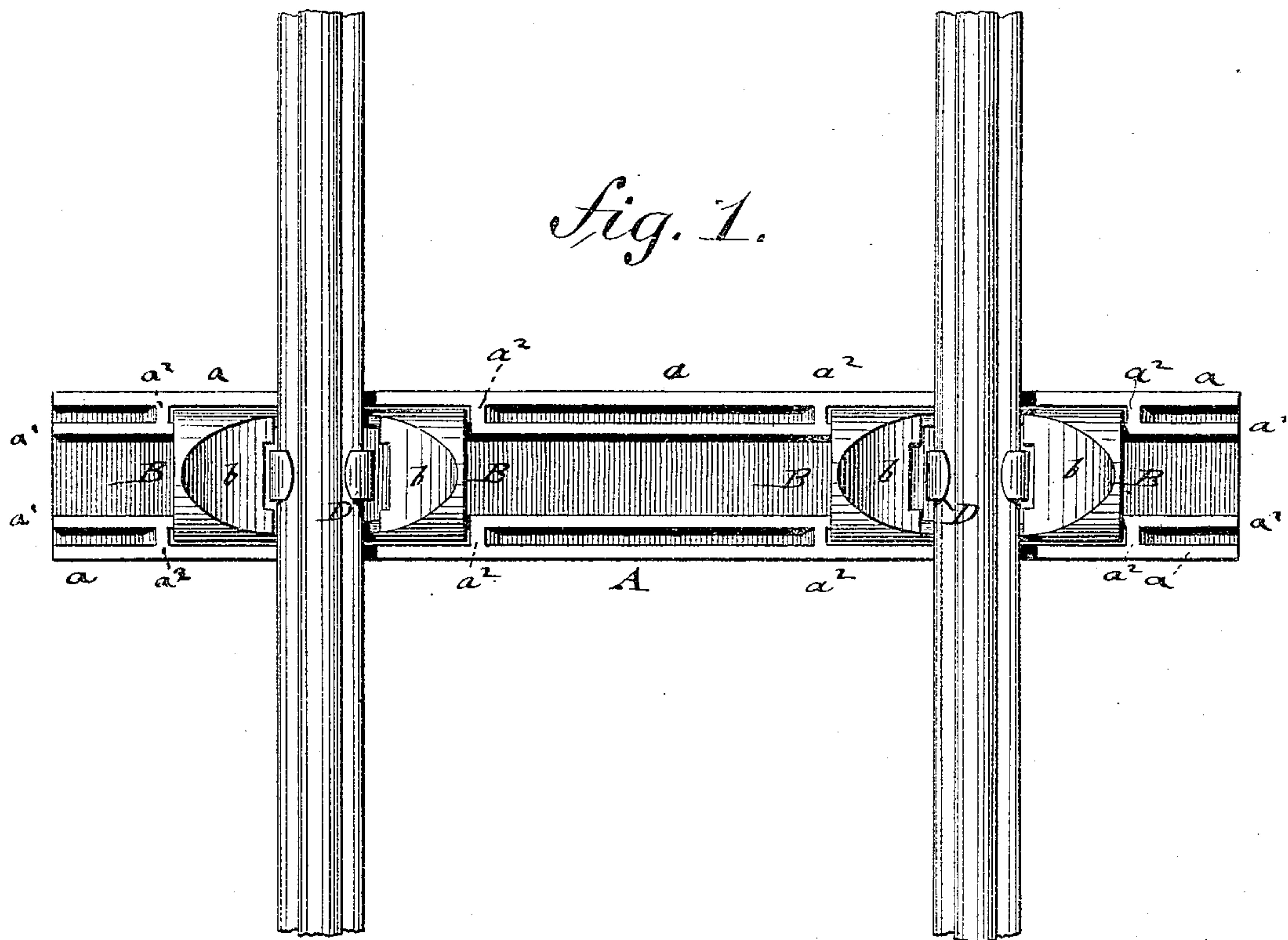


(No Model.)

J. CLARK.
METALLIC RAILROAD TIE.

No. 270,637.

Patented Jan. 16, 1883.



WITNESSES:

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JOSEPH CLARK, OF BROOKLYN, NEW YORK.

METALLIC RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 270,637, dated January 16, 1883.

Application filed August 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH CLARK, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Metallic Railroad-Ties, of which the following is a specification.

This invention has reference to certain improvements in the metallic railroad-ties for which Letters Patent have been granted to me heretofore under date of June 6, 1882, and numbered 259,095, said improvements being designed with a view to adapt the tie in a higher degree to practical requirements and of preventing accidents in case of derailment of the cars; and the invention consists of a base-plate having seats or sockets for the arched bearing-plates and chairs for the rails cast integral therewith, and of arched bearing-plates having top recesses for the rails and clamps for attaching the rails to the chairs, the top recesses for the base of the rails being arranged somewhat to one side of the center line of the arched plate, so that by reversing the position of the same small inequalities or inaccuracies in the shape of the rails may be compensated. The bearing-plates are provided with beveled or inclined portions that extend at both sides of the central recess toward the ends of the plates, the inclined portions serving to keep derailed cars close to the rails.

In the accompanying drawings, Figure 1 represents a plan view of my improved metallic railroad-tie. Fig. 2 is a vertical longitudinal section through a part of the tie on line $x x$, Fig. 1; and Fig. 3 is a detail top view of the arched bearing-plate of the rail.

Similar letters of reference indicate corresponding parts.

A in the drawings represents the base-plate of my improved metallic railroad-tie, which is cast with longitudinal side flange, a , intermediate ribs, a' , and transverse pieces a^2 , which form seats for the arched bearing-plates B, as shown clearly in Fig. 1. The bearing-plates B are transversely recessed at their top, so as to provide the proper space for the rails, which are supported on chairs C, that are cast integral with the base-plate A. The base of the rails is secured to the chairs C by means of

clamps D, the ends of which are lapped over the base, as shown clearly in Fig. 2. The recess of the bearing-plate B, instead of being at the center of the same, is located about a quarter of an inch to one side of the center line of the bearing-plates, as shown clearly in Fig. 3, which has the advantage that by changing the position of one or both bearing-plates in their seats of the base-plate A a difference of from one-quarter to one inch may be provided for in the distance of the rails from each other. By this simple means small inaccuracies of the rails and base-plates may be overcome, and thereby the exact width of track obtained, without any adjusting devices between the bearing-plates and the base-plate. The arched bearing-plates B are provided at both sides of their central recess with inclined or flaring portions $b b$, which extend from the sides of the recess up to and near to the ends of the bearing-plates, so as to form thereby at both sides of the rails inclined planes by which the wheels of the cars, if they be thrown out of the track, are returned toward the rails, so as to prevent the cars from leaving the ties and being thrown off the embankment or bridge. The inclined or flaring portions of the bearing-plates serve thus as safety guards or devices by which the cars are retained close to the rails in case of derailment until the train comes to a stop, so that the upsetting of the cars and other accidents are avoided.

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

1. The combination of the base-plate A, having seats or sockets formed of the ribs $a a'$ and chairs C, both cast integral with the base-plate, arched bearing-plates B, and clamps D, connecting rails and chairs, the bearing-plates having a top recess arranged slightly to one side of the center line of the arched plate, substantially as and for the purpose set forth.

2. The combination of the base-plate having seats or sockets for the bearing-plates and chairs for the rails, both cast integral with the base-plate, with arched bearing-plates, having top recesses for the rails and inclined safety-plates at both sides of the rail, and with

clamps for attaching the base of the rails to the chairs, substantially as set forth.

3. In a metallic railroad-tie, an arched bearing-plate having transverse top recess for the
5 base of the rail, and beveled or inclined portions extending at both sides of the recess toward the ends of the arched bearing-plate, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses. 10

JOSEPH CLARK.

Witnesses:

PAUL GOEPEL,
CARL KARP.