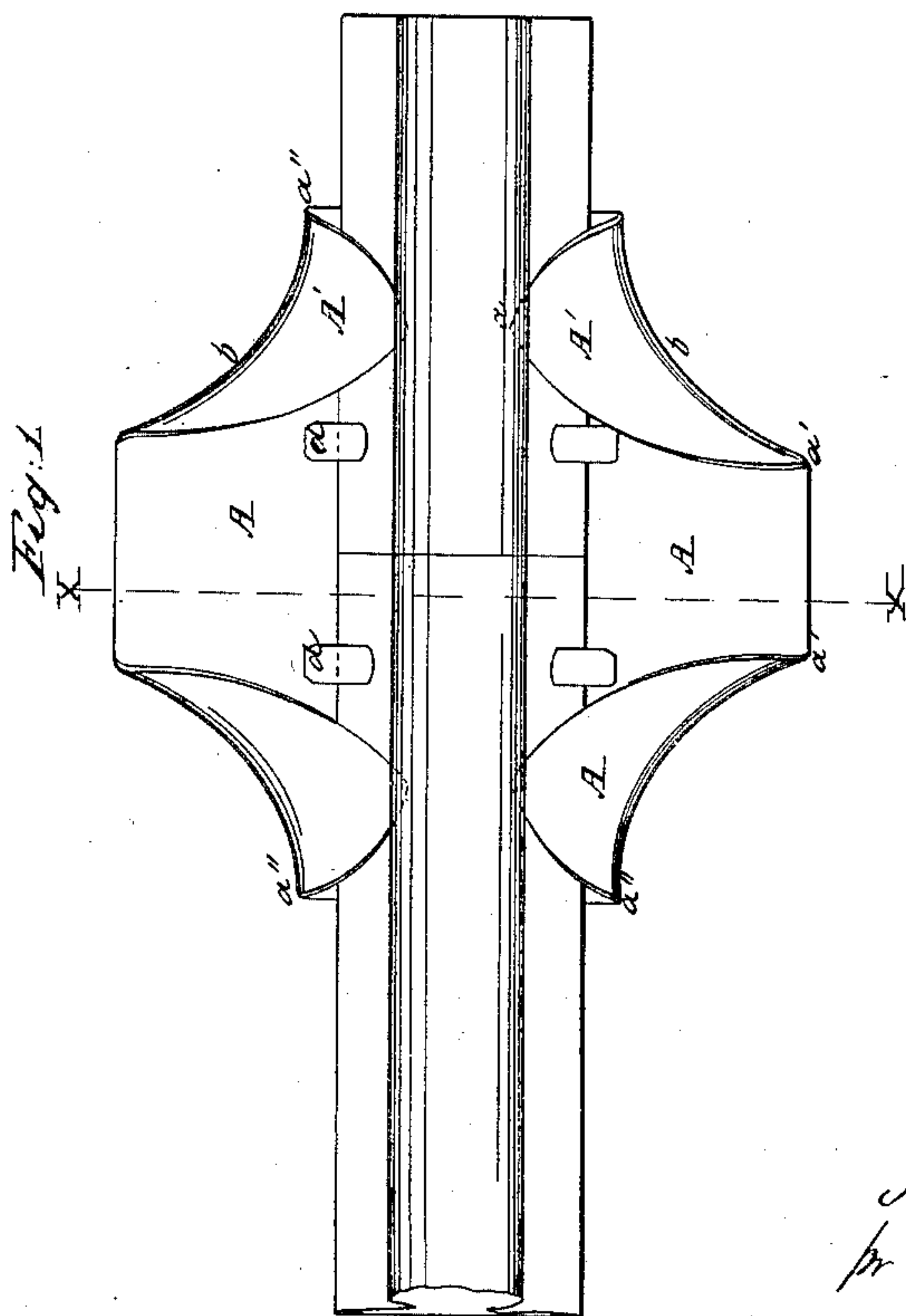
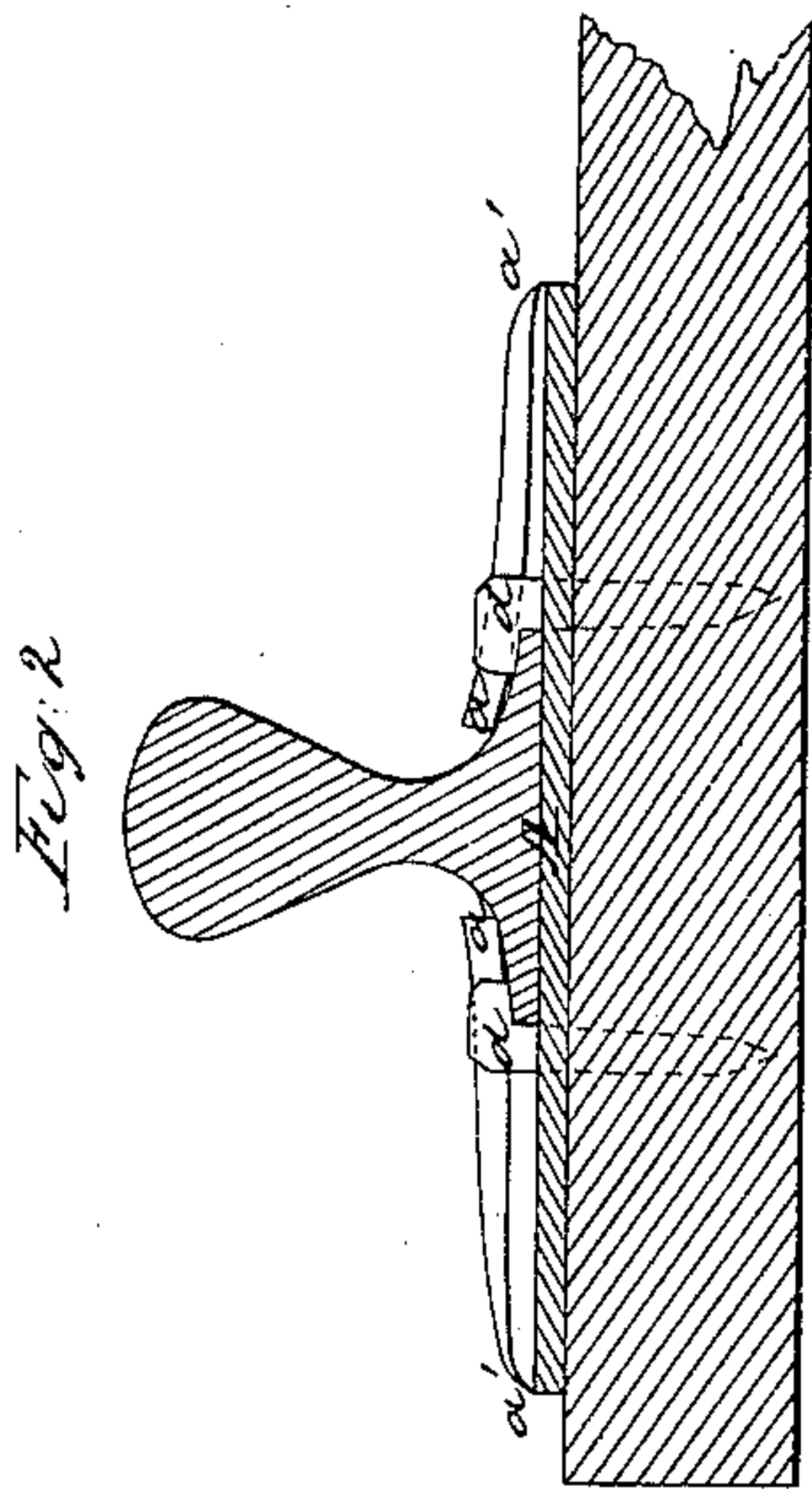


I. W. Bowers.
Railroad Chair.

N^o 27,424.

Patented Mar. 13, 1860.



Witnesses.
Ehra & Gale
A. Tysowski

Inventor
J. W. Bowers
per C. & G. Gale
Attorneys

UNITED STATES PATENT OFFICE.

I. W. BOWERS, OF CINCINNATI, OHIO.

RAILROAD-CHAIR.

Specification of Letters Patent No. 27,424, dated March 13, 1860.

To all whom it may concern:

Be it known that I, I. W. BOWERS, of Cincinnati, county of Hamilton, and State of Ohio, have invented a new and Improved Rail-Chair; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, which make a part of this specification.

10 The object of my invention is the construction of wrought iron, railway chairs, whose lips or flanges may have greater strength than those of any similar device now in use, and at the same time to increase
15 the base bearing of the chair upon the cross ties; thereby rendering its operation more secure. And the nature of my invention relates to the construction of curved lips or flanges of wrought iron railway chairs, by
20 means of which greater strength is secured to said lips or flanges in proportion to the weight of metal used, a greater surface allowed to bear upon the cross ties, and a better position afforded to the securing
25 spikes than can be attained by means of any similar device now in common use for like purposes.

I am aware that wrought iron chairs for railways have been made, having continuous
30 lips or flanges, bent or turned up at their sides, in such manner as to receive and secure the rails, and also that sections of the sides of chairs have been turned or bent so as to form such lips or flanges, the base of
35 the chair being first cut, to allow of such construction; in all these devices the line at which the said lips or flanges are bent or turned from the base of the chair is parallel with the rail it is intended to secure, and the
40 strength of the chair consequently depends entirely upon thickness and strength of the iron at the angle when it leaves the base of the chair to form the lips, hence the objections to wrought iron chairs so constructed,
45 inasmuch as they are liable to be broken at the point of bending, and any slight imperfection in the iron at said point (which often occurs) renders such chairs wholly inefficient, and is often the cause of serious
50 accidents. These difficulties are entirely

obviated by means of my invention, as hereinafter described and represented.

In reference to the accompanying drawings, Figure 1, is a plan or top view of my improved chair, and Fig. 2 is a vertical sectional view of the same, taken through the red line (*x x*).

(A) represents the base of the chair, having lips or flanges (*A'*) bent up at its corners in the curved form shown clearly in Fig. 1, by means of which any upward or lateral pressure upon the inner point (*a*) of the lip is met and resisted by the combined strength of the iron, from said point (*a*) to the heel (*a'*) of the lip and also from the corner (*a''*) of the lip, thus releasing the chair from great strain at any one point; the lips (*A'*) being turned from the corners of the base (A) without cutting the iron, affords a greater bearing upon the sleepers or cross ties thereby rendering the position of the chair more firm and secure and at the same time, allowing the securing spikes (*d*) to be driven through the chair, near its center, where they always find firm hold in the wood of the cross ties; and by means of their heads projecting upon the flange of the rail, additional security is attained.

The peculiar construction of chair shown in Fig. 1, is attained most readily from a rectangular piece of wrought iron, of the proper thickness for railway chairs, then by bending the corners so as to form the lips (*A'*) and securing the curve (*b*), and making the perforations for the spikes, the chair will be complete and ready for use.

I do not claim constructing railway chairs of wrought iron, as I am aware the same has been done before, but

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

Providing wrought iron railway chairs, with the curved lips or flanges (*A'*, *b*) substantially as and for the purposes set forth.

I. W. BOWERS.

Witnesses:

N. G. THOM,
W. A. BEARD.