(No Model.)

3 Sheets—Sheet 1.

L. S. ZACHARIASEN.

RAILWAY TRUCK.

No. 296,904. Patented Apr. 15, 1884.

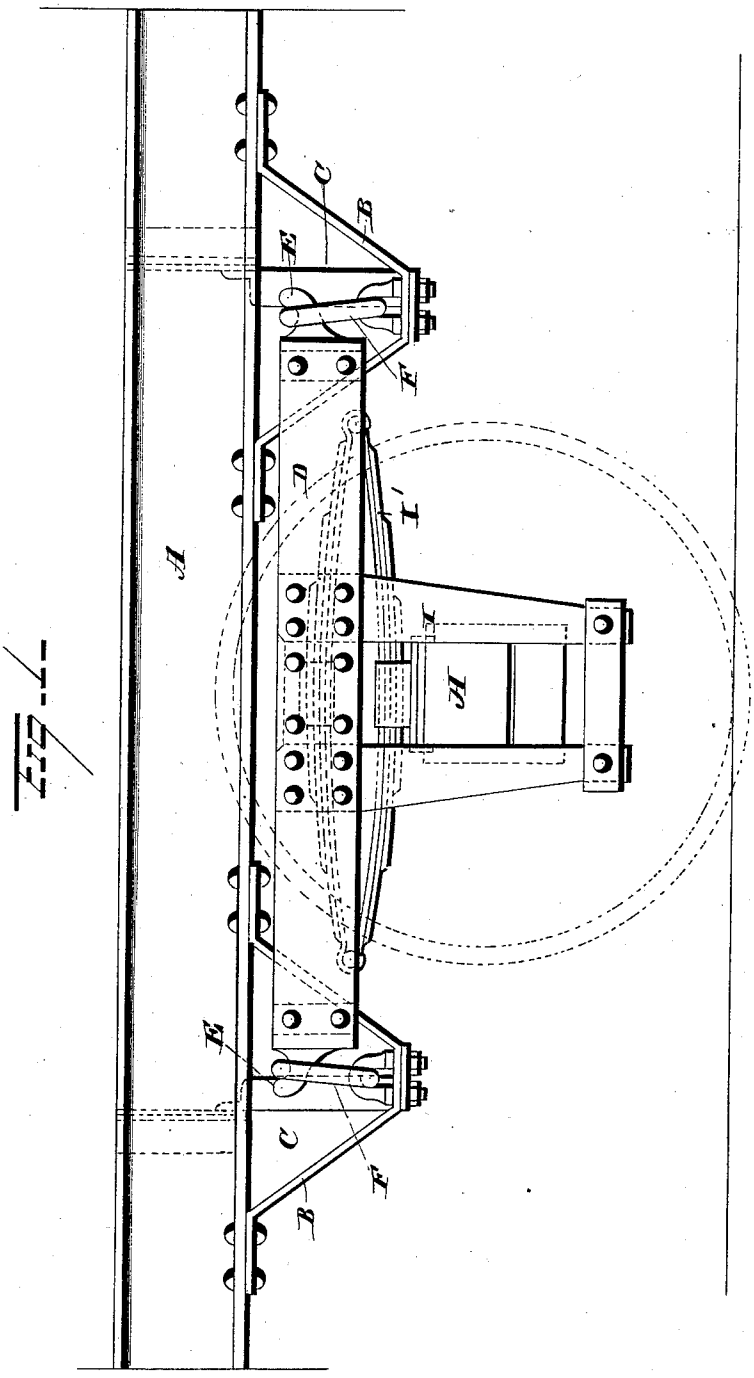


Fig. 1.

WITNESSES

E. C. Nottingham

George Cook

INVENTOR

L. S. Zachariasen

By Lyon & Lyon

Attorneys

N. PETERS. Photo-Lithographer. Washington, D. C.

(No Model.) 3 Sheets—Sheet 2.

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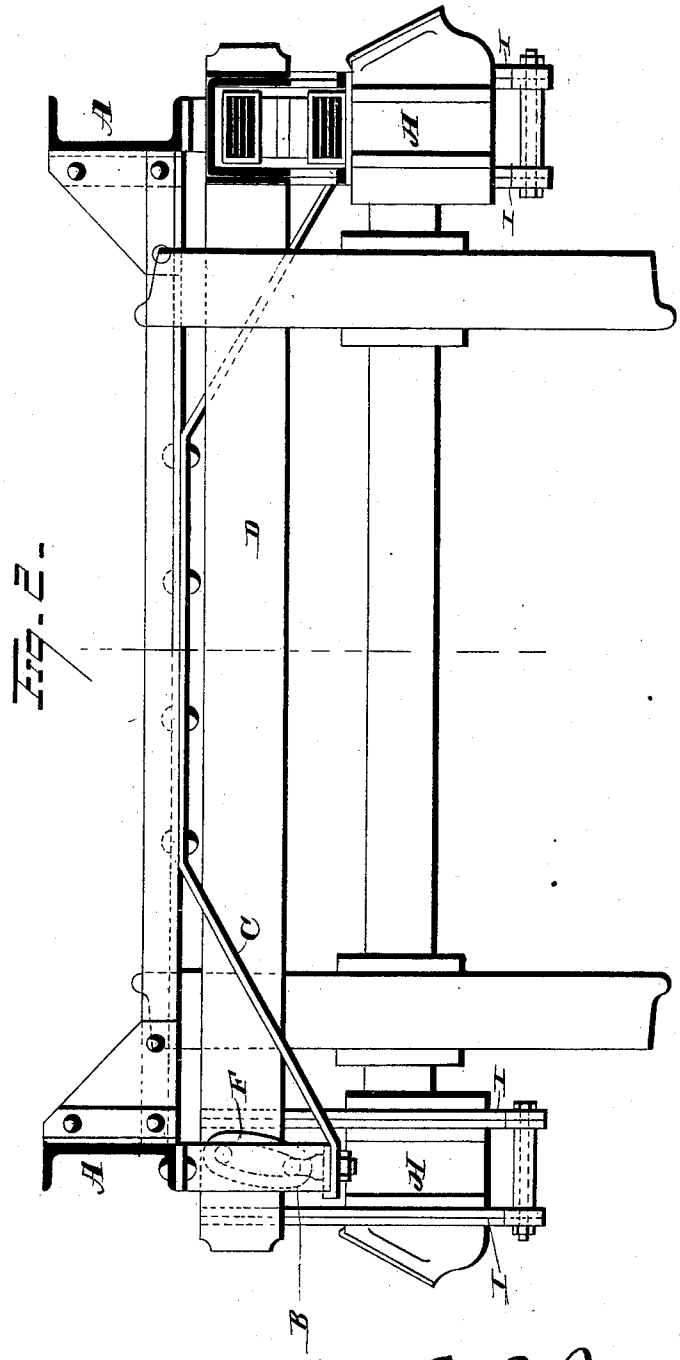


Fig. 2.

WITNESSES

E. D. Nottingham

George Cook.

L. S. Zachariasen. INVENTOR

By Duggett & Duggett.

Attorneys

N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.) 3 Sheets—Sheet 3.

L. S. ZACHARIASEN.

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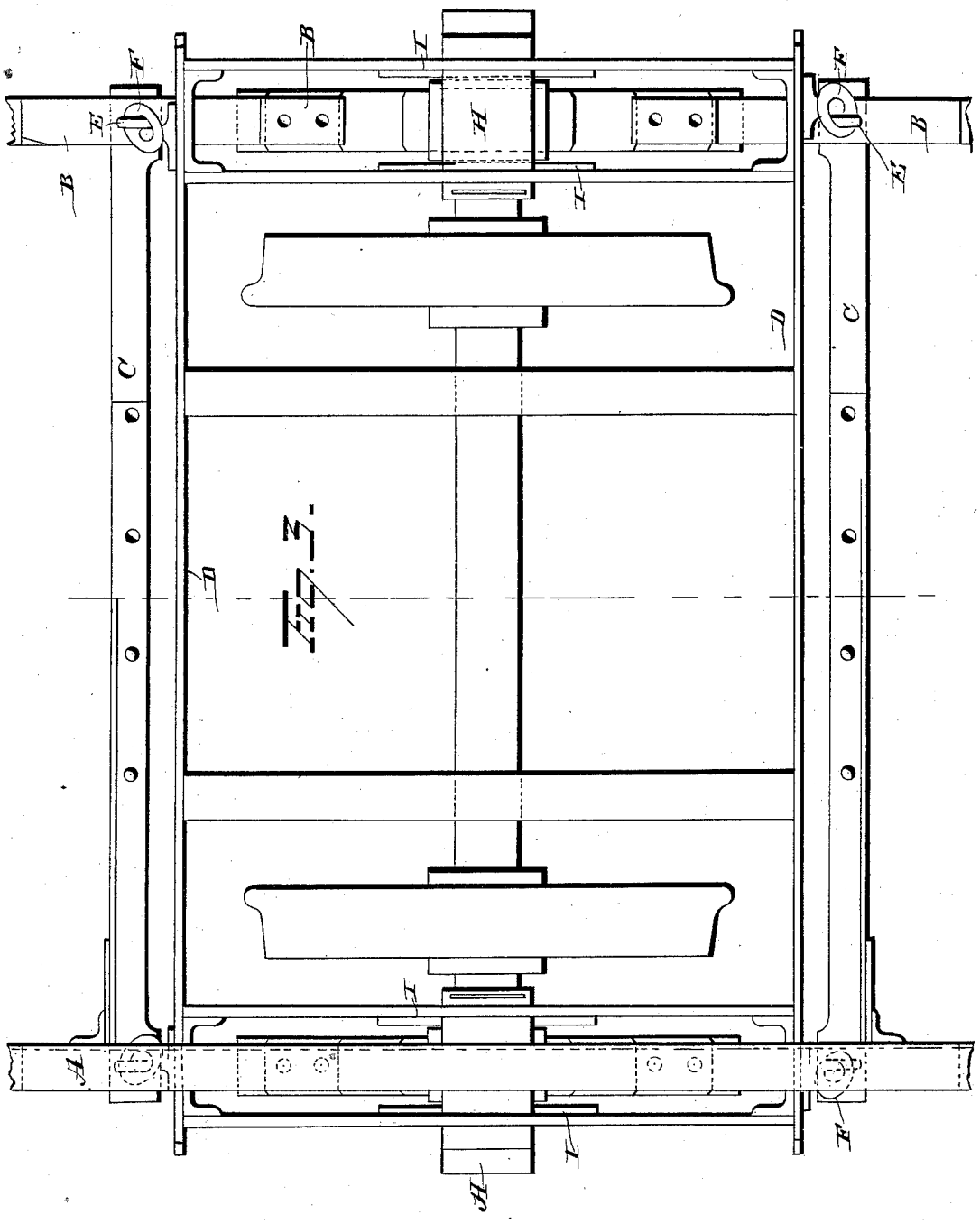


Fig. 2.

WITNESSES

E. S. Nottingham.

George Cook.

INVENTOR

L. S. Zachariasen

By Duggett & Duggett.

Attorneys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

LARS SEVERIN ZACHARIASEN, OF CHRISTIANIA, NORWAY.

RAILWAY-TRUCK.

SPECIFICATION forming part of Letters Patent No. 296,904, dated April 15, 1884.

Application filed August 23, 1883. (No model.) Patented in England July 30, 1883, No. 3,713, and in France October 18, 1883, No. 156,522.

To all whom it may concern:

Be it known that I, LARS SEVERIN ZACHARIASEN, a citizen of Norway, and residing in the town of Christiania, Norway, have invented certain new and useful Improvements in Radiating Axles for Railway and other Carriages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in car-trucks, the object being to so construct the truck that it will turn independent of the car-body, and thereby lessen the jar and strain on the same when turning a curve; and with this end in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a view of my improvement in side elevation. Fig. 2 is a view thereof partly in elevation and partly in section. Fig. 3 is a top plan view with the car-frame removed.

A represents the car-frame, provided with the brackets B, the latter being braced or strengthened by the standards C.

D represents the axle-frame, of ordinary construction, to which is secured a guide for the axle-box H, the latter traveling between the jaws or guides I of said guide. A suitable spring, I′, is interposed between each axle box and the axle-frame for the purpose of yieldingly connecting the axle thereto. The frame D is provided at each corner with a hook or catch, E, from each of which is suspended a link, F, the latter being also secured to the brackets B on the car-frame A. These movable links form the sole connection between the car-frame A and the axle-frame D, and allow an independent movement in each. In traveling around a curve the frame D will take a radial position, while the frame A still retains its normal position, a movement thus occurring between the two frames, causing the links F to change their position and also the frame A. The natural tendency of this to recover itself will cause the frame D to return to its normal position as soon as the strain which caused it to leave it is released—that is, as soon as it again enters upon a straight line. The weight of the car will tend to keep the axles parallel when traveling in a straight line and prevent overriding when turning curves.

The links F may be hung vertically or inclined, as desired, and may be made of any length and form and of any desired material.

It is evident that many slight changes might be resorted to without departing from the spirit and scope of my invention—as, for instance, a ball-and-socket joint might be substituted for the link, and, again, a universal joint or any connection giving free movements to the frames; and therefore I would have it understood that I do not limit myself to the exact construction shown and described, but consider myself at liberty to make such changes as fairly fall within the spirit and scope of my invention.

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

1. The combination, with the car-frame, provided with depending unyielding brackets, of the axle-frame, the axle yieldingly supported within said frame, and the unyielding swinging links forming the sole connection between rigid parts of the axle-frame and the brackets, substantially as set forth.

2. The combination, with the car-frame A and brackets B, of the axle-frame D, guides I, axle-boxes H, springs I′, hooks E, and links F, all of the above parts combined as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LARS SEVERIN ZACHARIASEN.

Witnesses:
T. BLEHR,
O. SCHÖNHÖYDER.