

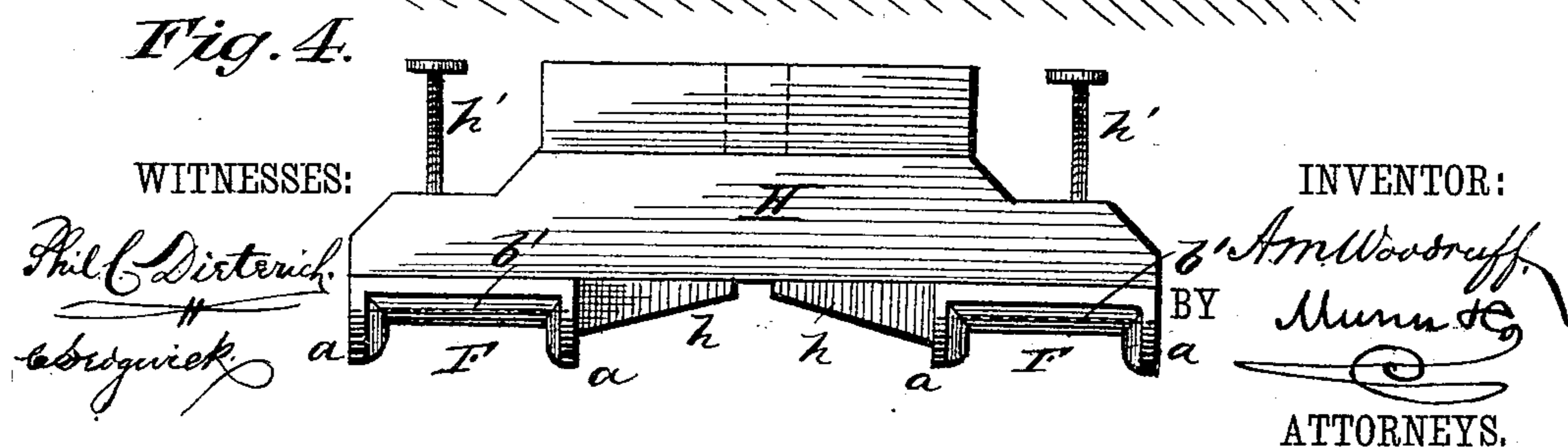
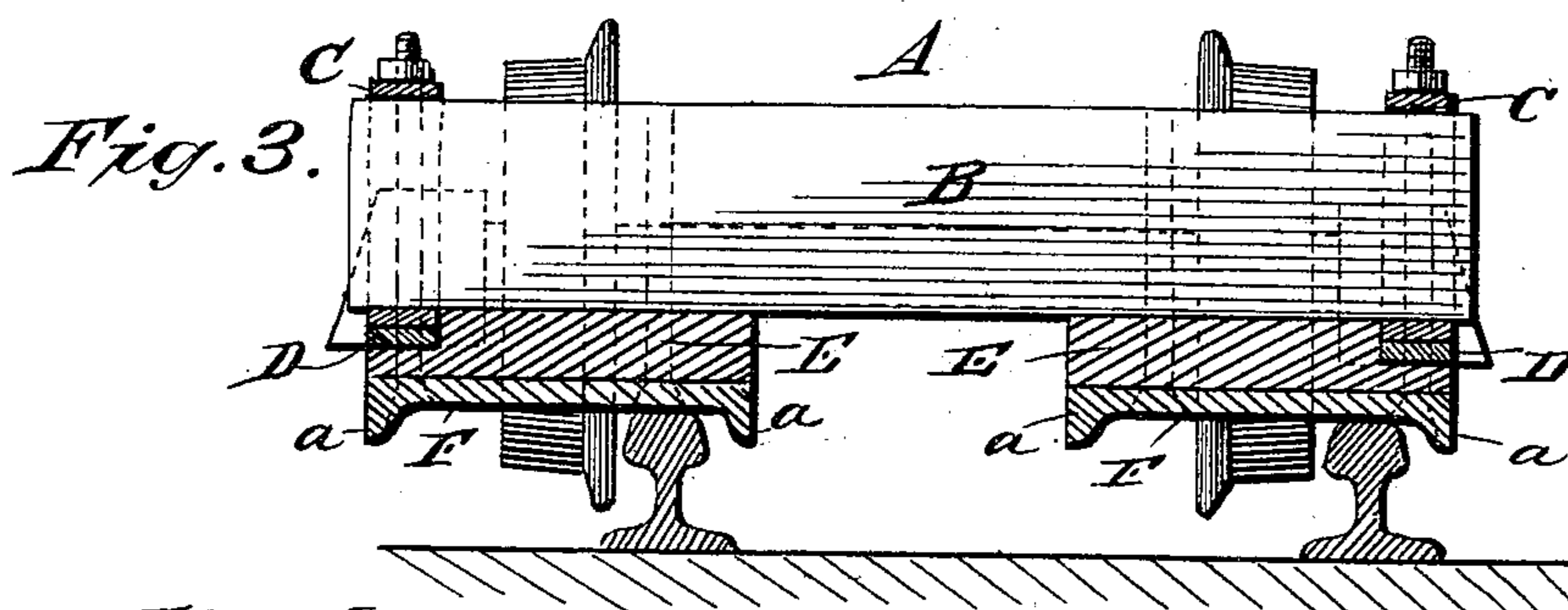
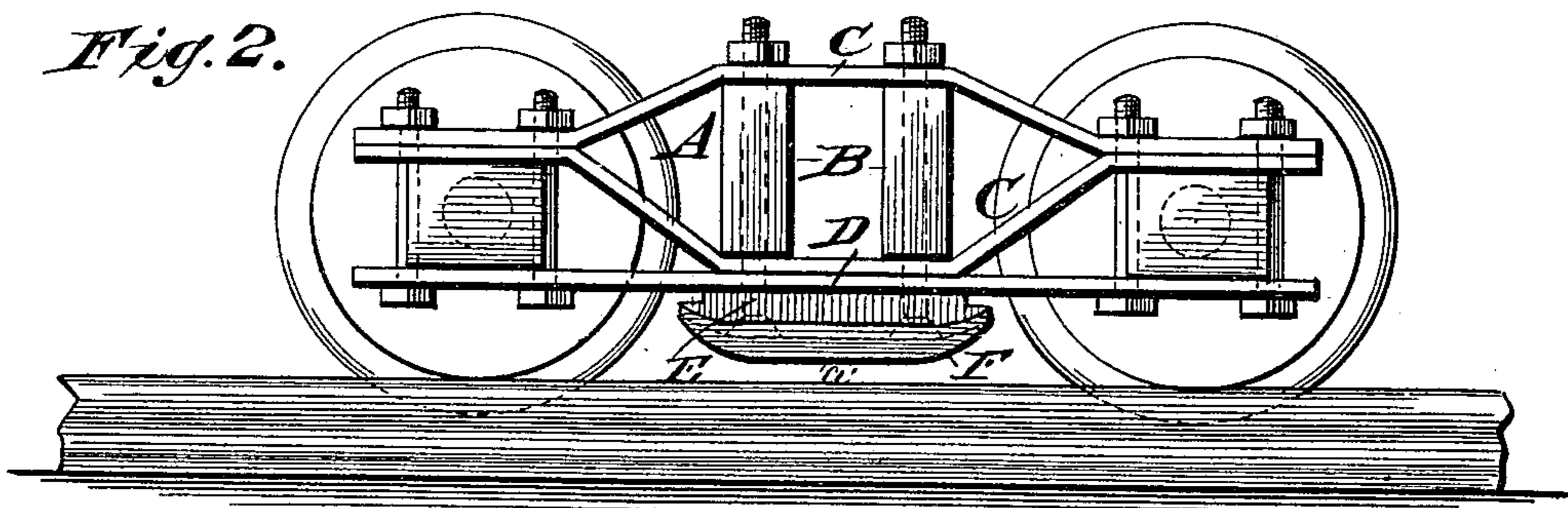
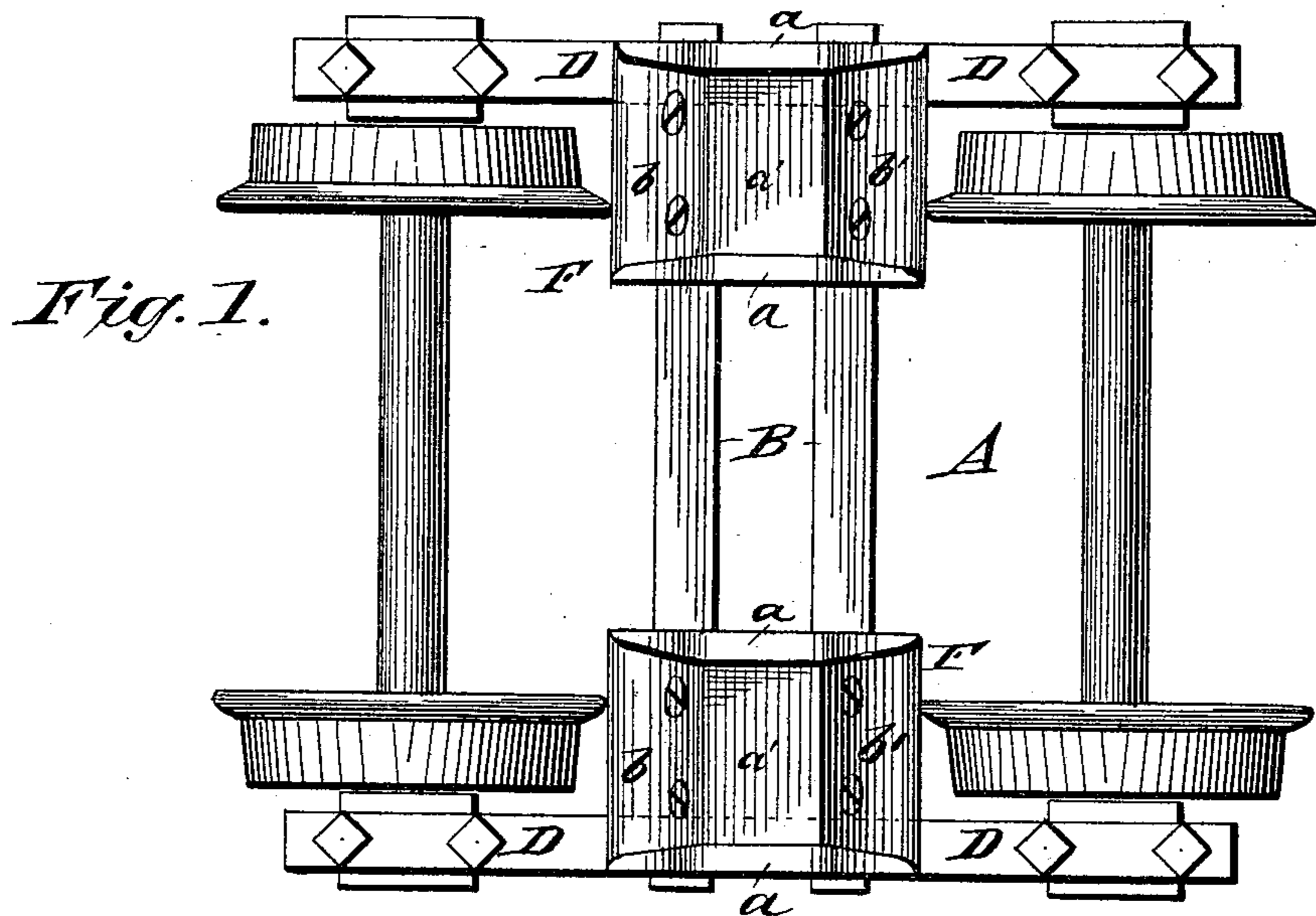
(No Model.)

A. M. WOODRUFF.

SAFETY SHOE FOR CAR TRUCKS.

No. 388,168.

Patented Aug. 21, 1888.



UNITED STATES PATENT OFFICE.

ABRAM M. WOODRUFF, OF SUPERIOR, NEBRASKA.

SAFETY-SHOE FOR CAR-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 338,168, dated August 21, 1888.

Application filed January 25, 1888. Serial No. 261,886. (No model.)

To all whom it may concern:

Be it known that I, ABRAM M. WOODRUFF, of Superior, in the county of Nuckolls and State of Nebraska, have invented a new and Improved Railway Safety-Shoe for Car-Trucks, of which the following is a full, clear, and exact description.

My invention relates to a safety-shoe for car-trucks, and has for its object to provide a means whereby should the wheels of a coach or locomotive jump the track the said coach or locomotive will not be derailed, but be guided upon the track until the brakes may be applied and the wheels returned to their proper position.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a bottom plan view of the applied shoe. Fig. 2 is a side elevation thereof. Fig. 3 is a central transverse section through Fig. 1; and Fig. 4 is a side elevation of a beam with shoes attached, applicable to an engine.

In carrying out the invention, A represents a truck; B, the central transverse timbers; C, the brace or tie beams of the frame; and D, a longitudinal brace, forming a portion of the frame and serving to unite the tie-beams at their under side and the axle-boxes.

To the central transverse timbers and to the brace D a head-block, E, is secured at each end, which head-block is consequently positioned between the wheels. Upon the head-block a shoe, F, is secured in any approved or well-known manner, being preferably bolted through the said head-block into or through the transverse timbers B and brace D, as illustrated in Fig. 2.

The shoes F are provided with downwardly-extending longitudinal or side flanges, *a*, which are widest at their central portions and taper toward each end, and the upper face thereof is adapted to the contour of the lower face of the head block, whereby a tight joint is effected.

The under face of the shoe between the flanges is provided with a central horizontal

and flat bearing-surface, *a'*, and from the outer edges of which flat surface the said under face is inclined upward and outward, the flanges conforming thereto, whereby two inclined end surfaces, *b* and *b'*, are obtained. These inclined surface ends and correspondingly-inclined flanges impart to the bearing-surface of the shoes the equivalent functions of a sleigh-runner. Thus should the wheels jump the track the incline plane, coming in contact first with the rail, serves to break the shock, which would otherwise be sustained by the flat surface coming in sudden engagement with the rail-head, and the said inclined surfaces also detract from the shock which would necessarily be sustained by the truck and car-body were the said flat central surface of the shoe to come in sudden contact with the rail. Thus the inclined outer end surfaces, *b* and *b'*, impart to the shoe in its action a rocker-like motion.

In Fig. 3 the position of the shoes with relation to the rails is illustrated. When the wheels have jumped the track, ordinarily, however, the shoes are carried a sufficient distance above the track to avoid any obstruction thereon and to prevent engagement with the rail when rounding a curve.

The width of the shoe is considerably greater than the width of the rail, as illustrated also in Fig. 3, the purpose of this increased width being to assure a contact with the rail of the shoes, even should the wheels be thrown a considerable distance from the rails.

In Fig. 4 I illustrate a construction adapted for attachment to the frame of a locomotive. To the main timbers H recessed head-blocks *h* are secured, within the recess of which the metal shoes are fastened. The approaching inner ends of the block upon their under face are beveled, as an economy in material, while the blocks bearing against the inner sides of the shoes serve to sustain and strengthen the same. The headed bolts *h'* are adapted as a means of securing the attachment to the engine-frame.

The shoes are in all cases made of metal. The head-blocks may be constructed from any suitable material, such as hard wood or metal.

It is evident that in connection with elevated roads the shoe may be very advantageously employed.

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

5 The combination, with the central transverse timbers, B, and the longitudinal brace D of a truck, of the head-blocks E, secured to said timbers and brace, and the shoe F, bolted to the said head-block, timbers, and brace, the said shoe being provided with downwardly-

extending longitudinal flanges *a*, and having 10 a central horizontal and flat bearing-surface and inclined and flaring end surfaces, *b b'*, between the said flanges, substantially as herein shown and described.

ABRAM M. WOODRUFF.

Witnesses:

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