

(No Model.)

J. W. EVANS.
STREET CAR.

No. 428,081.

Patented May 20, 1890.

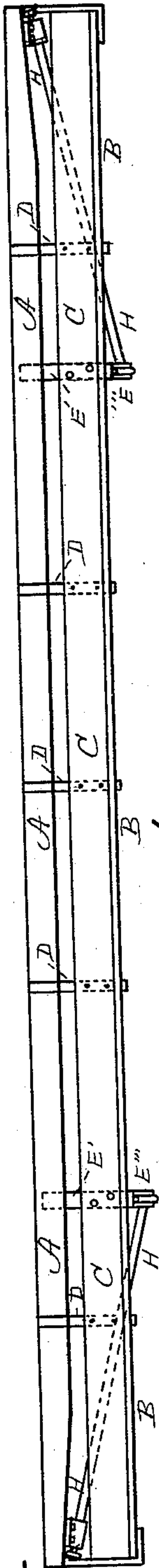


FIG. 1.

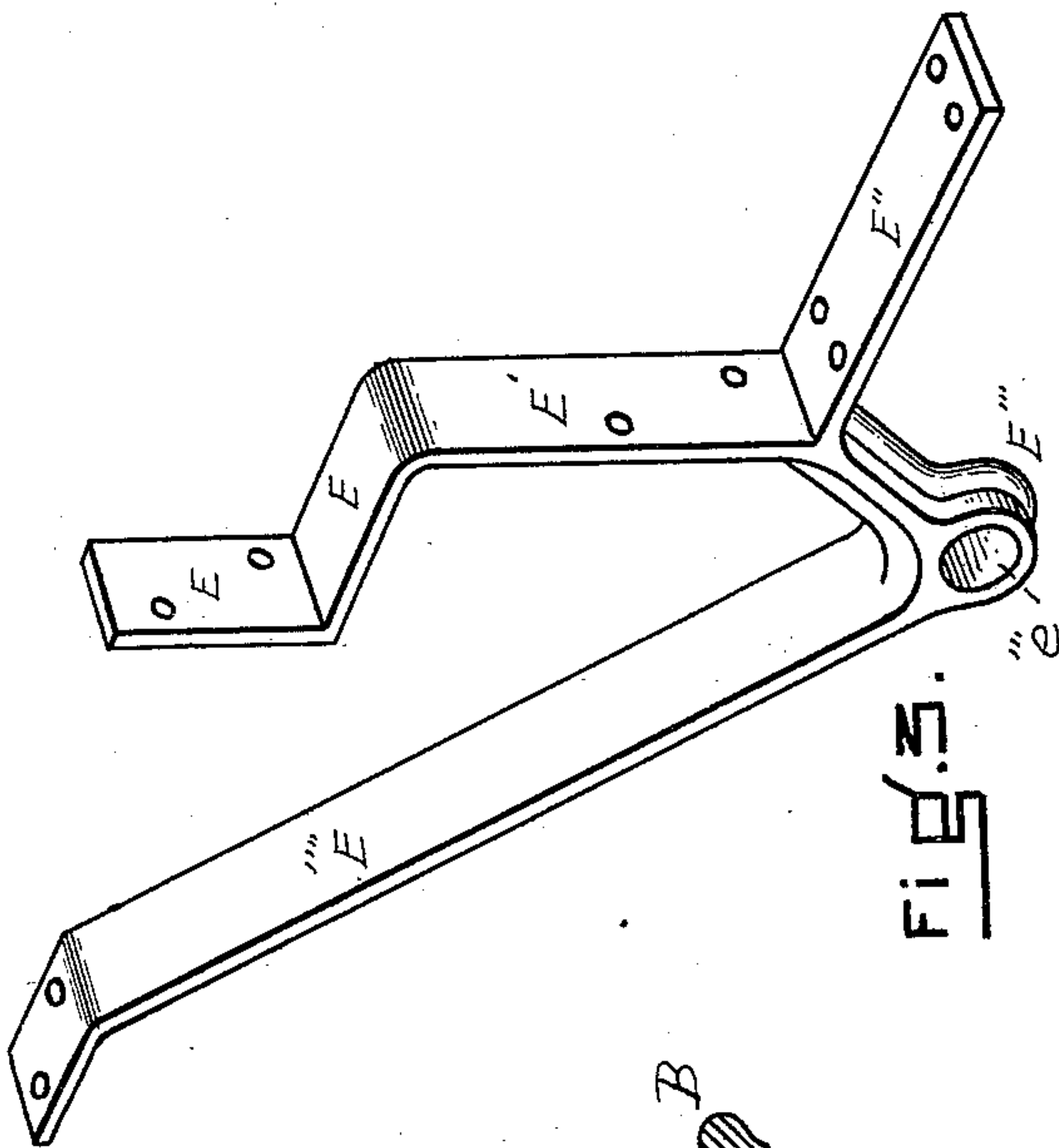


FIG. 3.

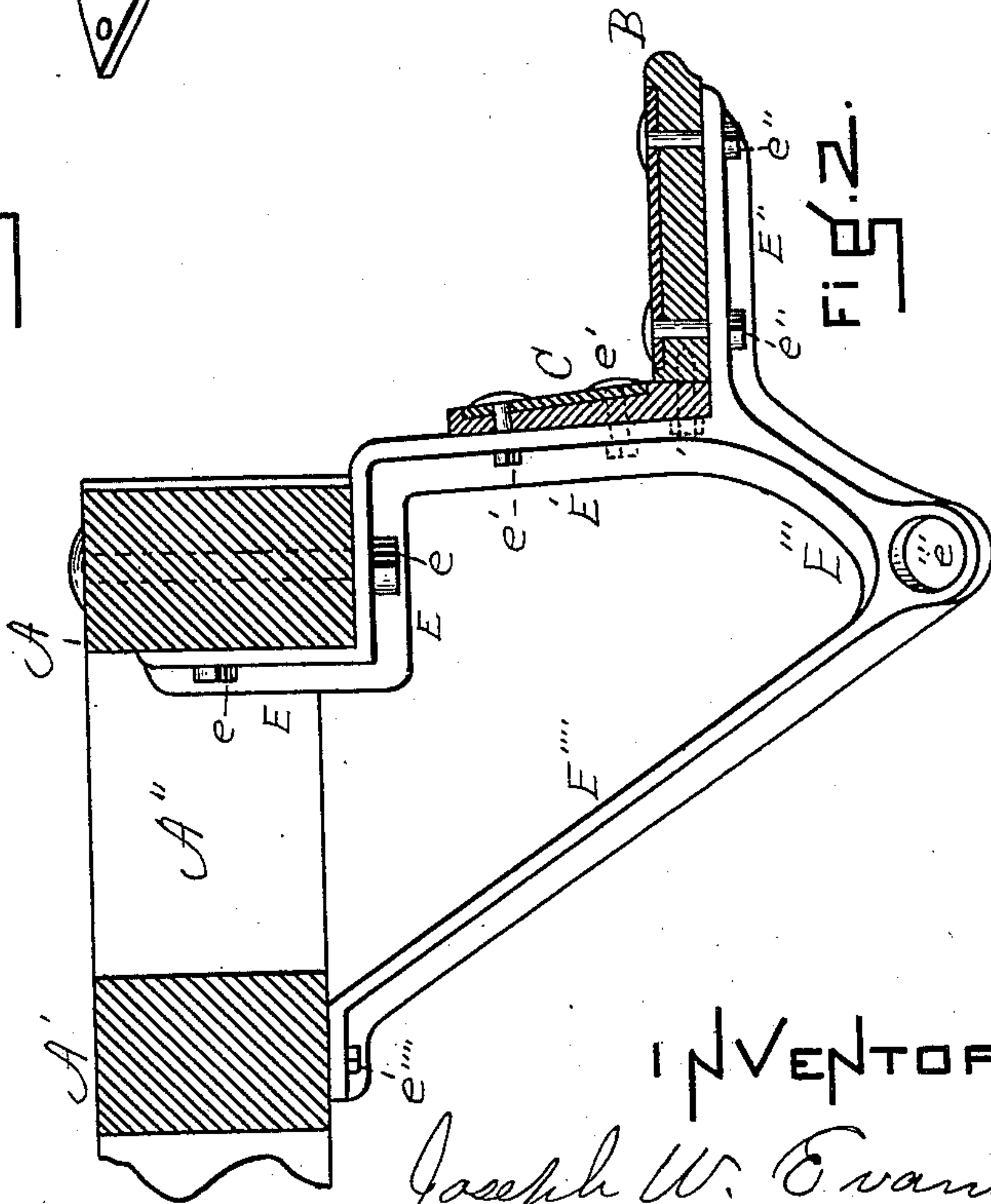


FIG. 2.

WITNESSES
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JOSEPH W. EVANS, OF NEWBURYPORT, MASSACHUSETTS.

STREET-CAR.

SPECIFICATION forming part of Letters Patent No. 428,081, dated May 20, 1890.

Application filed March 28, 1890. Serial No. 345,685. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. EVANS, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Open Street-Cars, of which the following is a specification.

This invention relates to that class of street-cars known as "open" cars, in distinction from the closed or "box" cars. The tendency at the present time is to add to the length of street-cars, and as the wheel-base cannot be increased there is need of extra support for the ends of the car. At present street-cars are provided with trusses or braces which extend from the running-gear or trucks to the car-body near its ends; but this is poorly adapted for use when the cars are materially lengthened, and where radial trucks are used braces or trusses cannot be attached to them, as radial trucks are of course movable with relation to the car-body. In my invention I connect my braces or trusses with the steps instead of the running-gear, as below described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation showing sufficient of the frame of an open street-car to illustrate my invention. Fig. 2 is an enlarged cross-vertical section of the same. Fig. 3 is a perspective view of one of the castings below described.

Similar letters of reference indicate like parts.

A represents the sill of one side of the car, and A' A'' are floor-timbers.

B is the step on one side of the car, running lengthwise with it, as usual.

C is the backboard.

D D are the ordinary braces or supports for the step placed at intervals, as usual.

Placed at suitable distances from the ends

of the car on each side are two castings of the shape shown in Figs. 2 and 3. Each of these castings consists of the angle portion E, which supports the sill A, and is bolted thereto at *e*; the vertical portion E', to which the backboard C is bolted at *e'*; the horizontal portion E'', which is bolted to the under side of the step B at *e''*; the dropped portion or extension E''', provided with the hole *e'''*, and the back-piece E''', which is secured at *e''''* to the floor-timber A'.

My braces or trusses H, instead of extending from the running-gear to the car-body, extend from the car-step to the car-body, as shown, by means of the openings *e'''* in the portions E''' of the castings described. By this means the car may be braced from its ends to points at any desired distance therefrom, and running-gear or trucks of a radial or other nature may be employed, the bracing being entirely independent thereof.

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

1. In an open street-car, the combination of the car-body, the step B, a bracket or casting secured to said step at a distance from the end of the car-body, and a brace or truss, as H, connecting said bracket or casting and the car-body near the end of the latter, substantially as described.

2. The combination of the floor-timbers A' A'', sill A, backboard C, and step B, the casting or bracket E E' E'' E''' E''', provided with the opening *e'''*, brace H, and car-body, all constructed and arranged substantially as set forth.

JOSEPH W. EVANS.

Witnesses:

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