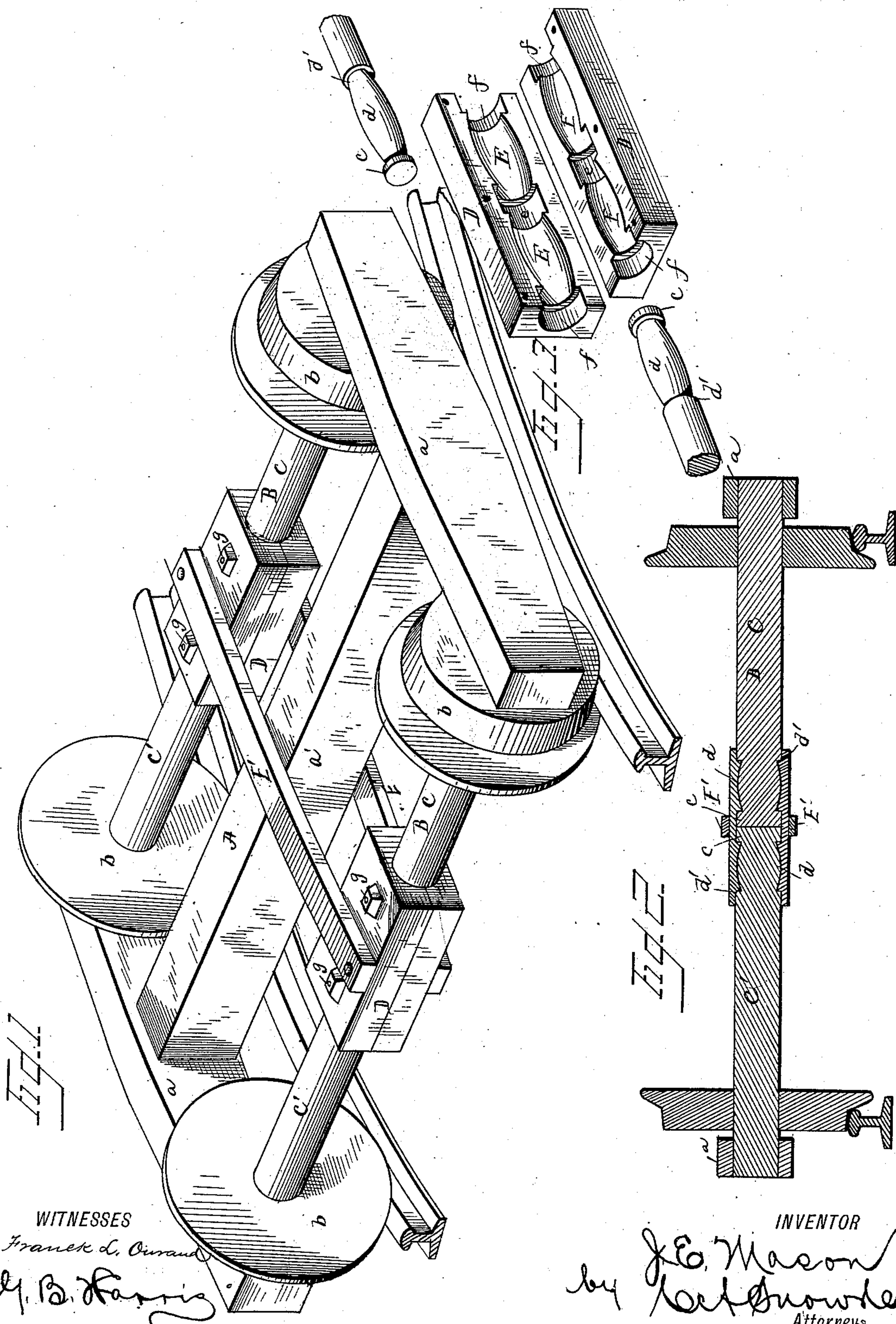


(No Model.)

J. E. MASON.
CAR TRUCK.

No. 294,140.

Patented Feb. 26, 1884.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES E. MASON, OF BLANCHARD, PENNSYLVANIA.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 294,140, dated February 26, 1884.

Application filed December 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. MASON, a citizen of the United States, residing at Blanchard, in the county of Centre and State of Pennsylvania, have invented a new and useful Improvement in Car-Trucks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to car-trucks, and more particularly to a divided or compound axle for the same, the objects being to provide an axle of this character which shall readily adapt itself to the curvature of the track of a railroad, thus preventing all strain to the axle and the accidental breakage of the same, and, further, to so construct an axle as to reduce the friction on the bearing parts to the minimum.

With these ends in view the invention consists in the improved construction of the axle and box for the same, hereinafter fully described, and pointed out in the claim.

In the drawings, Figure 1 is a perspective view of a car-truck having my improved axle and box for the same applied thereto. Fig. 2 is a longitudinal vertical section of my improved axle and box. Fig. 3 is a detail view of the parts detached.

A represents a car-truck consisting of the side beams, *a*, and tie or connecting-beam *a'*.

B represents the axle, having wheels *b* mounted thereon, and having bearing in the side beams, *a*. These axles consist of the spindles *C C'*, having at their inner ends collars or flanges *c*, formed integral therewith. The axles are cut away to form oval bearing portions *d*, forming a flanged portion, *d'*, at the outer end of said oval portions.

D represents the axle-box, which consists of two sections, and having the central circumferential groove or recess, *e*, for the reception of the collars or flanges *c*. The box is also formed with oval recesses *E*, for the reception of the oval portions *d*, and are also provided at their ends with annular grooves *f*. By this arrangement the flanged portions *d'* bear against the side of the annular groove *f*, and the collar *c* resting in the groove *e*, all lateral movement of the axles is prevented. The

two sections forming the axle-box D are bolted together, inclosing the axle, and are provided with oil chambers or reservoirs *g*, connecting with the inside of the box. The box may be lined with a suitable anti-friction metal, and a strip or disk of the same may be interposed between the ends of the spindles forming the axle.

E' represents a tie or bracing-beam secured to the upper and under sides of the beam *a'* and to the upper and under sides of the axle-box, thus preventing the revolution of the boxes, and serving to greatly support and strengthen the same.

It will be apparent that by the construction and arrangement of parts above described, in running upon curves, the strain upon the axle is greatly reduced by the axle describing the larger or outer arc of the circle, revolving at a greater rate of speed than the other. Thus all strain to the axle is avoided, and by the use of the bracing-beam the axles are strengthened and the liability of the boxes to snap or break is obviated.

I do not claim, broadly, the construction of car-truck herein described and shown, nor do I seek to claim anything shown in patent of J. M. Brosius, No. 159,385, and dated February 2, 1875; but,

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

In a car-truck, the combination, with divided axles having collars or flanges *c* and oval bearing portions *d*, of axle-boxes D, consisting of two sections, each having grooves *e*, for the reception of the flanges *c*, said sections being also provided with oval recesses *E*, for the reception of the oval bearing portions *d* of the axles, and beams E', connecting the said axle-boxes, whereby the boxes are held stationary, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES E. MASON.

Witnesses:

R. H. BOAL,
DANIEL WOODRING.