

(No Model.)

2 Sheets—Sheet 1.

E. W. MACKENZIE-HUGHES.

LOCOMOTIVE TENDER TRUCK.

No. 461,436.

Patented Oct. 20, 1891.

Fig. 1.

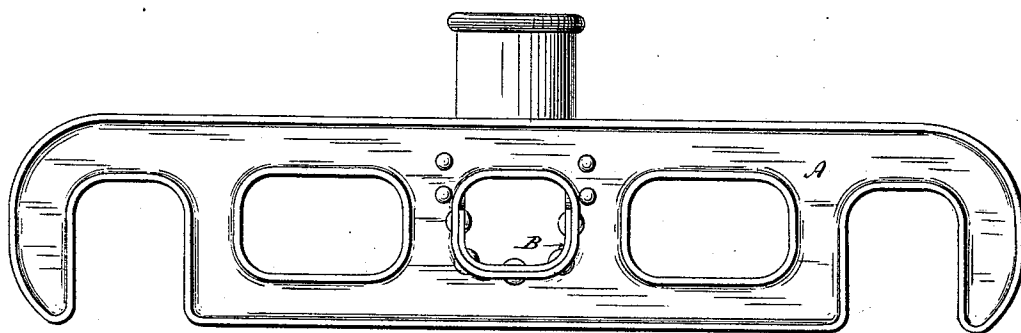
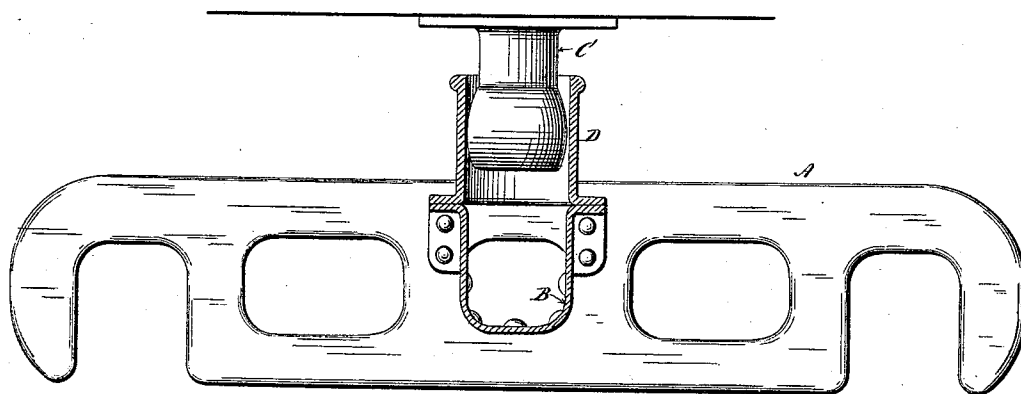


Fig. 2.



Witnesses:

Geo. W. Miatto

D. W. Gardner

Inventor
Edward William Mackenzie Hughes
By his Attorney,
C. N. Dickinson

(No Model.)

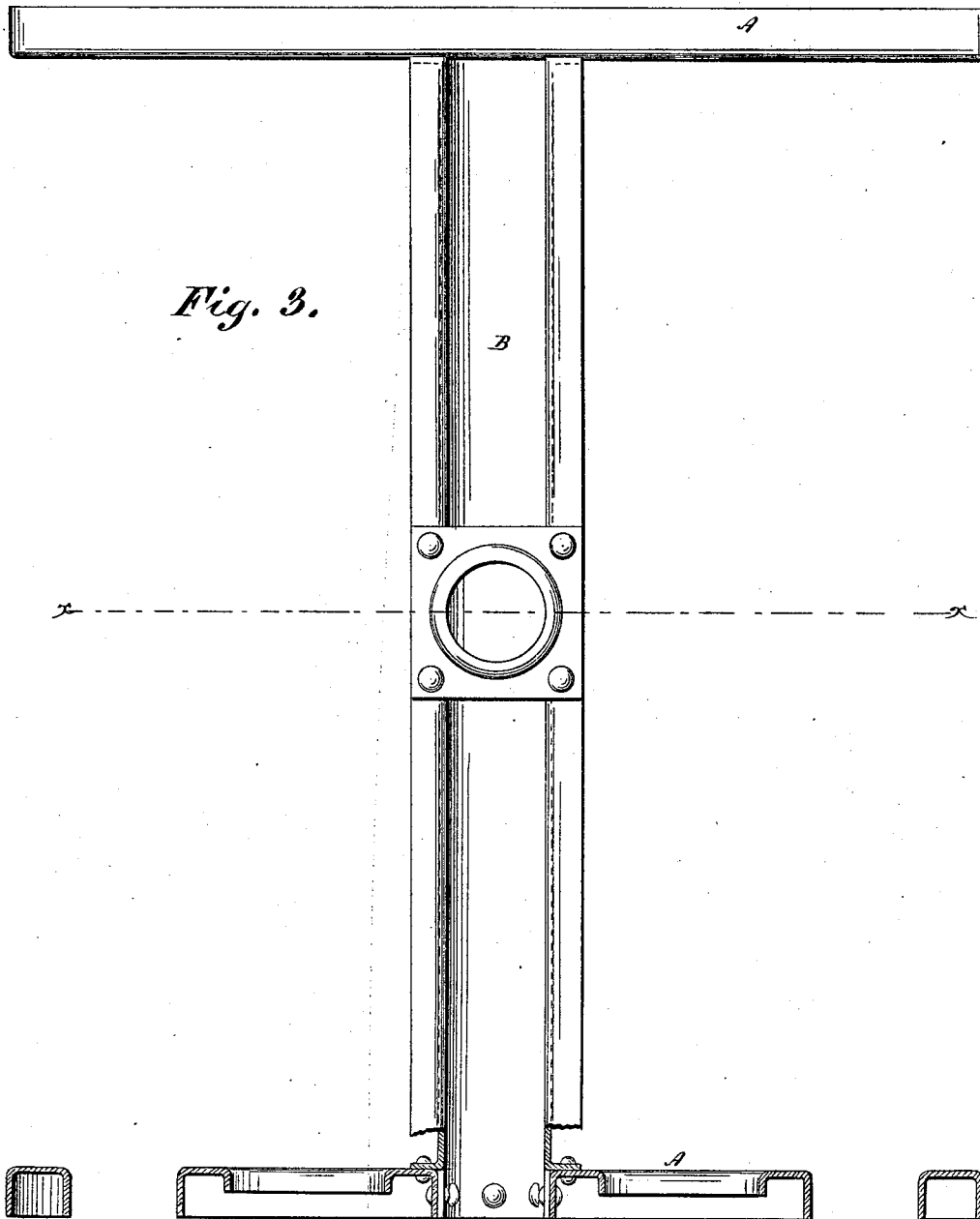
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Witnesses:

Geo. H. Mott
D. W. Gardner

Inventor:
Edward William Mackenzie Hughes
By his Attorney
E. N. Dickerson

UNITED STATES PATENT OFFICE.

EDWARD WILLIAM MACKENZIE-HUGHES, OF CHICAGO, ILLINOIS, ASSIGNOR
TO THE FOX SOLID PRESSED STEEL COMPANY, OF SAME PLACE.

LOCOMOTIVE-TENDER TRUCK.

SPECIFICATION forming part of Letters Patent No. 461,436, dated October 20, 1891.

Application filed June 11, 1889. Serial No. 313,914. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WILLIAM MACKENZIE-HUGHES, of Chicago, Cook county, Illinois, have invented a new and useful Improvement in Locomotive-Tender Trucks, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

This invention relates to an improvement in metallic locomotive-trucks, in which the support is carried directly by springs upon the side frames themselves; and it consists in making the part corresponding to the king-pin of pressed steel and of providing the same with a cylindrical bearing, also of pressed steel, through which the same may operate.

My invention will be readily understood from the accompanying drawings, in which—

Figure 1 represents an elevation, Fig. 2 a longitudinal section, and Fig. 3 a plan view, of my improvement.

The side frames of the truck may be of any desired arrangement; but I prefer to make them of pressed steel, as shown at A. I prefer, likewise, to make the transom B of pressed steel. My improvement relates to the center pin and surrounding cylindrical bearing, as clearly shown in Fig. 2. This center pin C is made of a cylindrical body of pressed steel having the shape indicated and working in the bearing or surrounding cylinder D, likewise made of pressed steel. The shape of the lower part of the center pin C allows of the

rocking of this center pin within the bearing D, while the same can move freely up and down through the bearing D as the side springs yield. These parts are attached in any suitable way to the truck and the part to be supported.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A center pin for trucks, formed of a cylinder of pressed steel and having an enlarged lower end approximately spherical in section, substantially as described.

2. The combination of the pressed-steel center pin C, having approximately a spherical lower end, with the pressed-steel cylindrical socket D, substantially as described.

3. A center pin for trucks, formed of a cylindrical body of pressed steel, the neck or upper portion of which is smaller than the lower portion, substantially as described.

4. The combination of the pressed-steel center pin C, the neck or upper portion of which is smaller than the lower portion, with the pressed-steel cylindrical socket D, substantially as described.

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

EDWARD WILLIAM MACKENZIE-HUGHES.

Witnesses:

W. S. HARTWELL,
WM. VOSS.