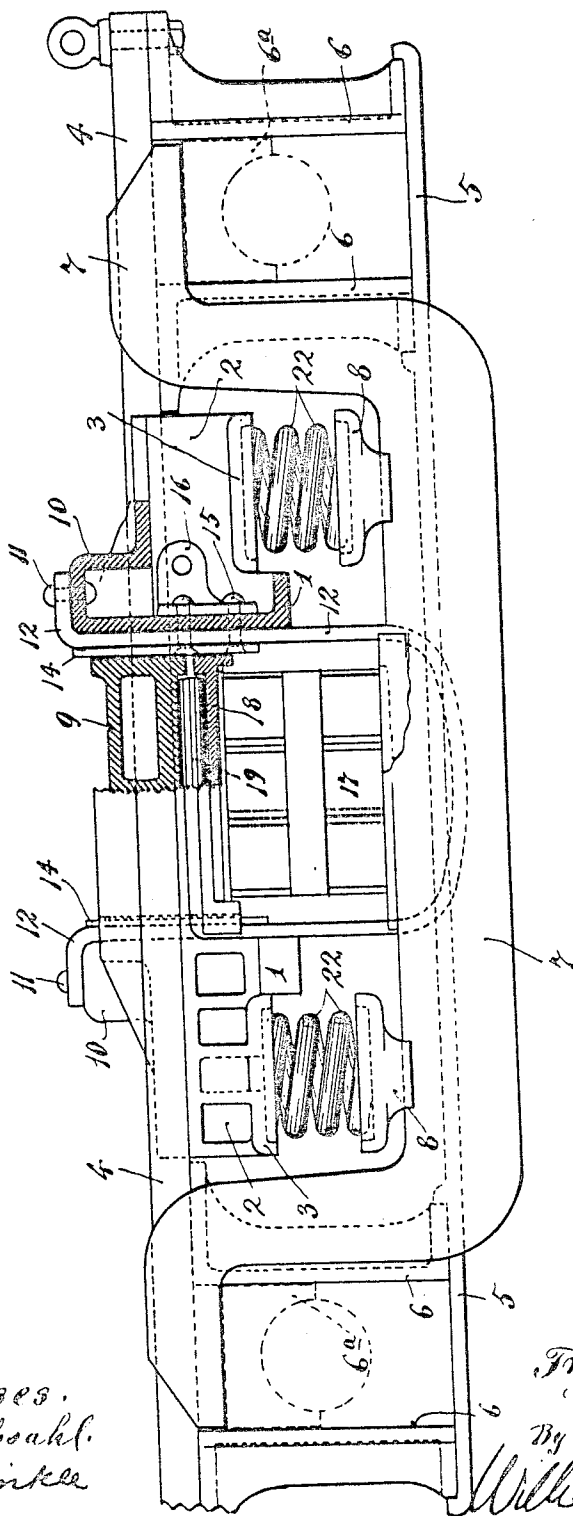


F. L. BARBER & E. W. WEBB.
LOCOMOTIVE TENDER TRUCK.
APPLICATION FILED FEB. 20, 1914.

Patented Sept. 8, 1914.
3 SHEETS-SHEET 1.

1,109,656.

Fig. 1



Witnesses.
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E. C. Sprinkle

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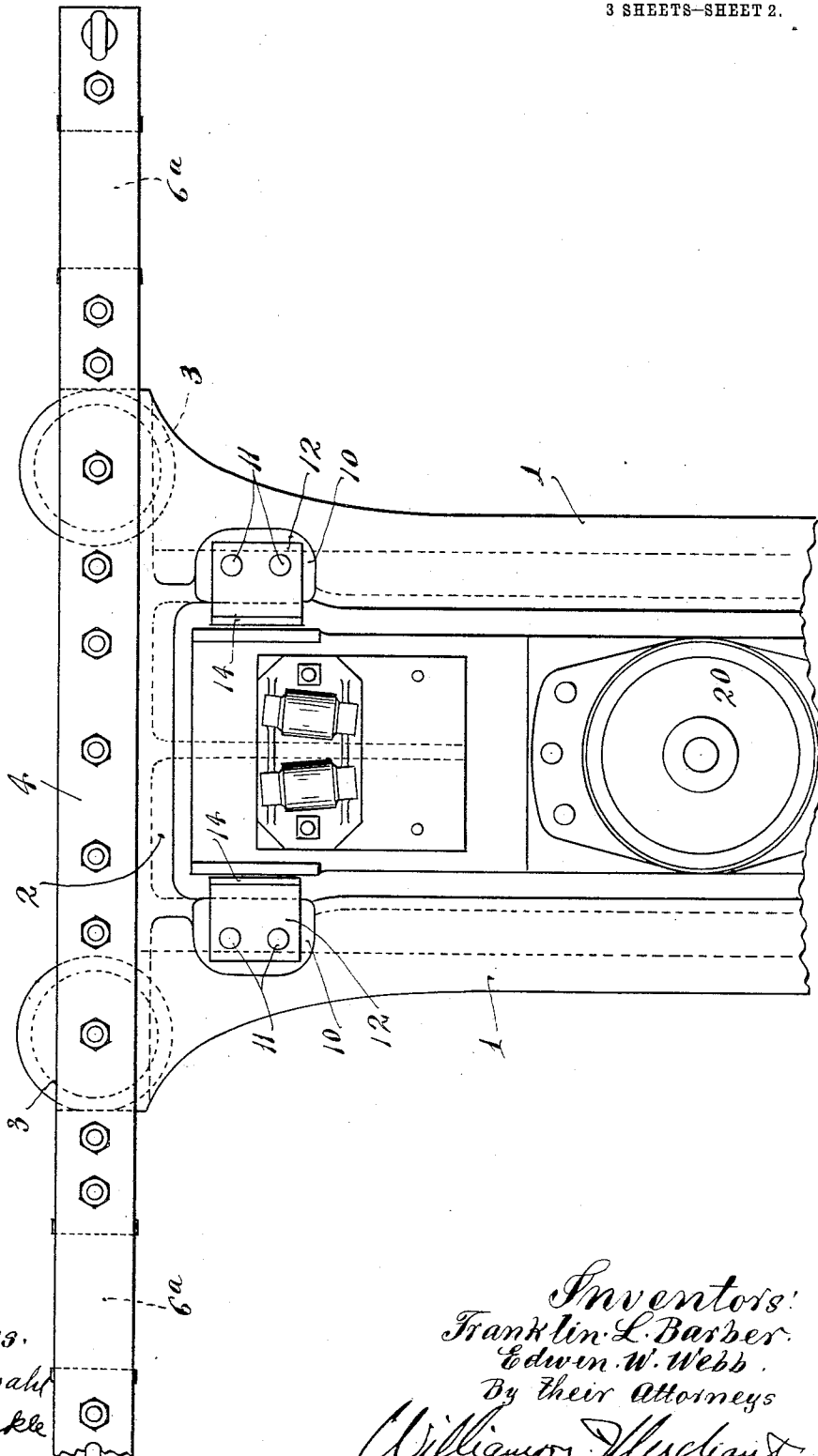
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3 SHEETS—SHEET 2.

Fig. 2



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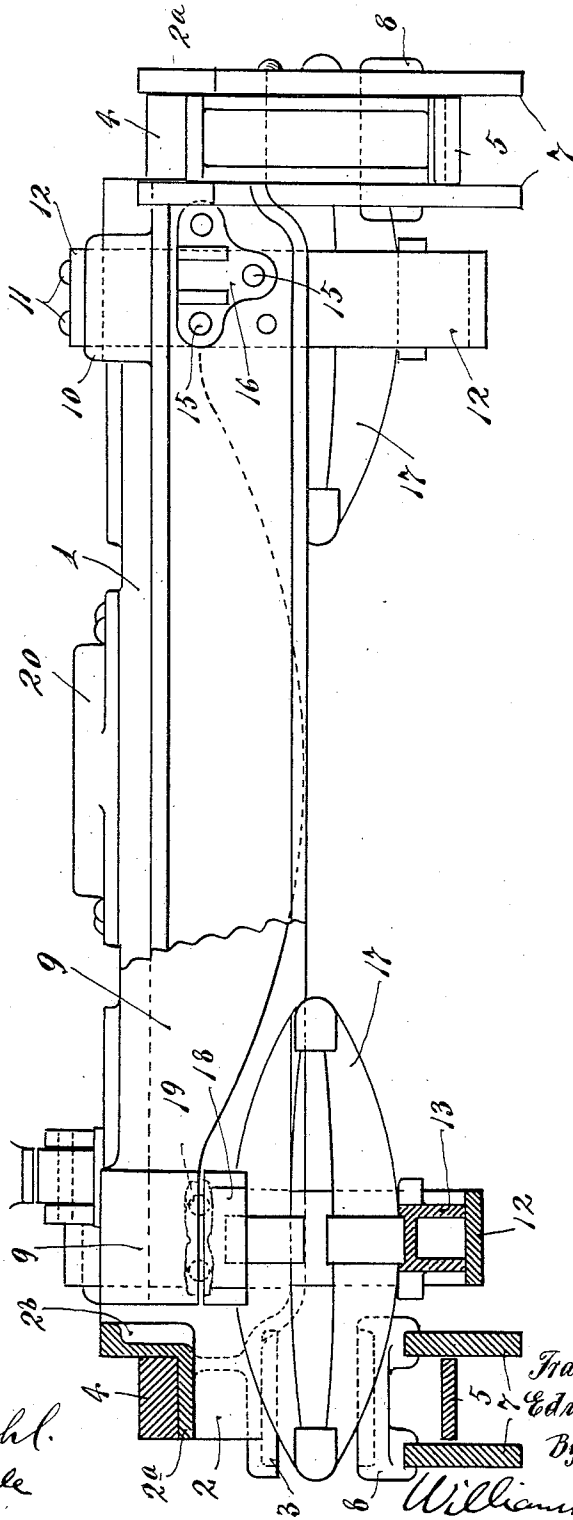
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3 SHEETS—SHEET 3.

Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

FRANKLIN L. BARBER AND EDWIN W. WEBB, OF CHICAGO, ILLINOIS, ASSIGNORS TO
STANDARD CAR TRUCK COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF
NEW JERSEY.

LOCOMOTIVE-TENDER TRUCK.

1,109,656.

Specification of Letters Patent.

Patented Sept. 8, 1914.

Application filed February 20, 1914. Serial No. 819,865.

To all whom it may concern:

Be it known that we, FRANKLIN L. BARBER and EDWIN W. WEBB, citizens of the United States, residing at Chicago, in the
5 county of Cook and State of Illinois, have invented certain new and useful Improvements in Locomotive-Tender Trucks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in
10 the art to which it appertains to make and use the same.

Our invention relates to car trucks and is particularly directed to the improvement
15 of that type of truck known as an equalized locomotive tender truck, wherein lateral motion roller bearing devices are incorporated.

Generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in
20 the claims.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several
25 views.

Referring to the drawings: Figure 1 is a side elevation with some parts sectioned, some parts broken away, and with some parts removed, showing a locomotive truck of the type above indicated; Fig. 2 is a plan
30 view showing approximately one-half of the improved car truck; and Fig. 3 shows the improved car truck partly in front elevation and partly in transverse vertical section, some parts being removed.

In this improved truck, the transoms 1, the truck end castings 2, and spring caps 3 are all cast integral and this, we believe to be a new feature. The top bars 4 and bottom bars 5 are straight and the box pedestals 6 are secured thereto in the usual or
40 any suitable way. The equalizers 7 are supported on the journal box 6^a, preferably in the usual way, and they support suitable
45 spring seats 8.

The truck end castings 2 have depressed horizontal flanges 2^a that underlie the intermediate portions of the top bars 4 and on the inner sides of the said bars, rising
50 vertically above the same to afford reinforcing flanges 2^b, the inner surfaces of which afford striking faces for the outer ends of the truck bolsters 9, presently to be described. The said horizontal and vertical
55 flanges 2^a and 2^b form angle portions

which make the end castings 2 strong, and which permit the use of low top bars 4 that are straight and in line with the tops of the pedestals 6, and also give the required strength to the said end castings. If still
60 greater strength were required, the flange 2^a might be provided with a vertical flange outside of the top bar 4, thereby giving the end casting a channel form cross section. In either instance, the low and straight top
65 bar located below the top of the bolster striking surface, will be afforded.

The truck transoms 1, inward of the truck side frames, are formed with raised bosses or portions 10 alined with the inner faces
70 thereof, and on top of which are secured by rivets 11 the horizontally bent upper ends of heavy steel or wrought iron stirrups 12. These stirrups 12 extend below the transoms and support saddles 13 in approxi-
75 mately horizontal alinement with the upper arches of the equalizers 7. The inner faces of the stirrups 12 are provided with wearing plates 14 and rivets 15 that are passed through these wearing plates, through the
80 said stirrups and through the vertical flanges of the transoms, and preferably, also through flanges of brake hanger brackets 16, thereby rigidly securing all of the said parts together. The laterally bent upper
85 ends of the stirrups and the vertical rivets 11 almost entirely relieve the rivets 15 from shear from the weight of the load. The saddles 13 support springs 17 preferably of the double elliptical type, and the said
90 springs, in turn, support combined spring caps and roller bases 18, the ends of which are notched so that they slide vertically on the legs of the stirrups 12.

The truck bolster 9, which, as shown and
95 preferred, is a cast structure, is made shorter than the distance between the striking faces of the vertical flanges 2^b of the opposed truck end castings 2, sufficient clearance between the said parts being left to
100 provide for the desired endwise movement of said truck bolster transversely of the truck. Lateral motion rollers 19 are interposed between suitable roller engaging surfaces formed on the tops of the combined
105 spring caps and roller bases 18 and on the overlying end surfaces of the said truck bolster. The lower engaging surfaces of said parts 18 and 9 are preferably formed with reverse inclines or concaves so that the
110

bolster will be yieldingly centered under the weight of the load. Heavy coiled truck springs 22 are interposed between the spring caps 3 and the spring bases 8. A suitable center bearing 20 is shown as applied to the top of the central portion of the bolster 9, so that the weight of the load will be transmitted first to the said truck bolster, from thence, through the springs 17 to the stirrups 12 and to the combined castings 1, 2 and 3, and from thence, through the springs 22, the equalizer 7, onto the journal box and through the journal boxes onto the axles of the truck wheel. The horizontal flanges 2^a of the combined casting 1, 2 and 3, are bolted, riveted, or otherwise rigidly secured to the top bars 4 of the truck side frames, so that the truck side frames move vertically with the said combined casting. There is, of course, sufficient clearance left between the tops of the journal boxes and the top bars 4 to permit of the above noted movements on the truck springs 22. The top bars 4 of the truck side frames are relieved from the weight of the tender or main load. The additional height given to the transoms 1 by the raised portions 10, gives ample wearing and buffing face for the bolster and allows for that low center construction which is necessary in modern locomotives on account of the deep sills on the tender frame; and it also forms an extended riveting face for the stirrups 12 and affords rests and anchorage for the laterally bent upper ends of the said stirrups.

What we claim is:

1. In a car truck, the combination with truck side frames and equalizers, said truck frames having top bars, of rigidly connected transoms and truck end castings spring supported on said equalizers, said truck end castings having horizontal flanges that underlie and vertical flanges that engage the inner edges of top bars of said truck side frames.

2. In a car truck, the combination with truck side frames and equalizers, said truck frames having top bars, of rigidly connected transoms and truck end castings spring supported on said equalizers, said truck end castings having horizontal flanges that underlie and vertical flanges that engage the inner edges of top bars of said truck side frames, stirrups located inward of said truck end castings and supported from said transoms, and a truck bolster spring supported on said stirrups.

3. In an equalized truck of the kind described, transoms, truck end castings and spring caps, all rigidly connected, spring bases on the equalizer, and springs interposed between said spring bases and spring caps, the truck side frames having top bars located below the tops of said truck end castings, the latter having horizontal flanges

that underlie said top bars, and having vertical flanges engaging the inner edges of said top bars.

4. In an equalized truck of the kind described, transoms, truck end castings and spring caps, all rigidly connected, spring bases on the equalizer, and springs interposed between said spring bases and spring caps, the truck side frames having top bars located below the tops of said truck end castings, the latter having horizontal flanges that underlie said top bars, and having vertical flanges engaging the inner edges of said top bars, in combination with stirrups located inward of said truck end castings and supported by said transoms, and a truck bolster spring supported on said stirrups.

5. In an equalized truck of the kind described, transoms, truck end castings and spring caps, all rigidly connected, spring bases on the equalizer, and springs interposed between said spring bases and spring caps, the truck side frames having top bars located below the top of said truck end castings, the latter having horizontal flanges that underlie said top bars and having vertical flanges engaging the inner edges of said top bars, in combination with stirrups located inward of said truck side frames and supported from said transoms, springs carried by said stirrups combined spring caps and roller bases supported by said springs and guided for vertical movements by said stirrups, lateral motion rollers on said combined spring caps and roller bases, said truck bolster being shorter than the distance between the vertical flanges of said truck end castings, and the said vertical flanges affording striking surfaces for the ends of the bolster.

6. In an equalized truck of the kind described, the combination with truck side frames having journal box pedestals and a top bar rigidly connecting the same, of an integral casting affording combined transoms and truck end castings formed independently of, but rigidly secured to the top bars of said side frames, equalizing bars, and springs interposed between said equalizing bars and truck end castings.

7. In an equalized truck of the kind described, an integral casting affording combined transoms, truck end castings and spring caps, springs supported on the equalizers, stirrups located inward of the truck end frames and equalizers and rigidly secured to and depending from said transoms, and a truck bolster, shorter than the distance between said truck end frames, spring supported on said stirrups.

8. In an equalized truck of the kind described, the combination with truck side frames comprising journal box pedestals and top and bottom bars rigidly connecting the same, of equalizing bars, and an integral

casting affording combined transoms and truck end castings, the latter having portions that underlie the top bars of said truck side frame, and springs interposed between
3 said equalized bars and truck end castings.

9. In an equalized truck of the kind described, an integral casting affording combined transoms, truck end castings and spring caps, spring supported on the equal-
10 izers, stirrups located inward of the truck end frames and equalizers and supported from said transoms, a truck bolster that is shorter than the distance between said truck end frames, and suitable springs and lateral

motion devices supporting said bolster from 15
said stirrups, said truck end casting having horizontal and vertical flanges, the former of which underlie the top bars of the truck side frames, and the latter of which afford striking surfaces for the ends of said bolster. 20

In testimony whereof we affix our signatures in presence of two witnesses.

FRANKLIN L. BARBER.
EDWIN W. WEBB.

Witnesses:

LEE W. BARBER,
JAMES T. MILNER.