

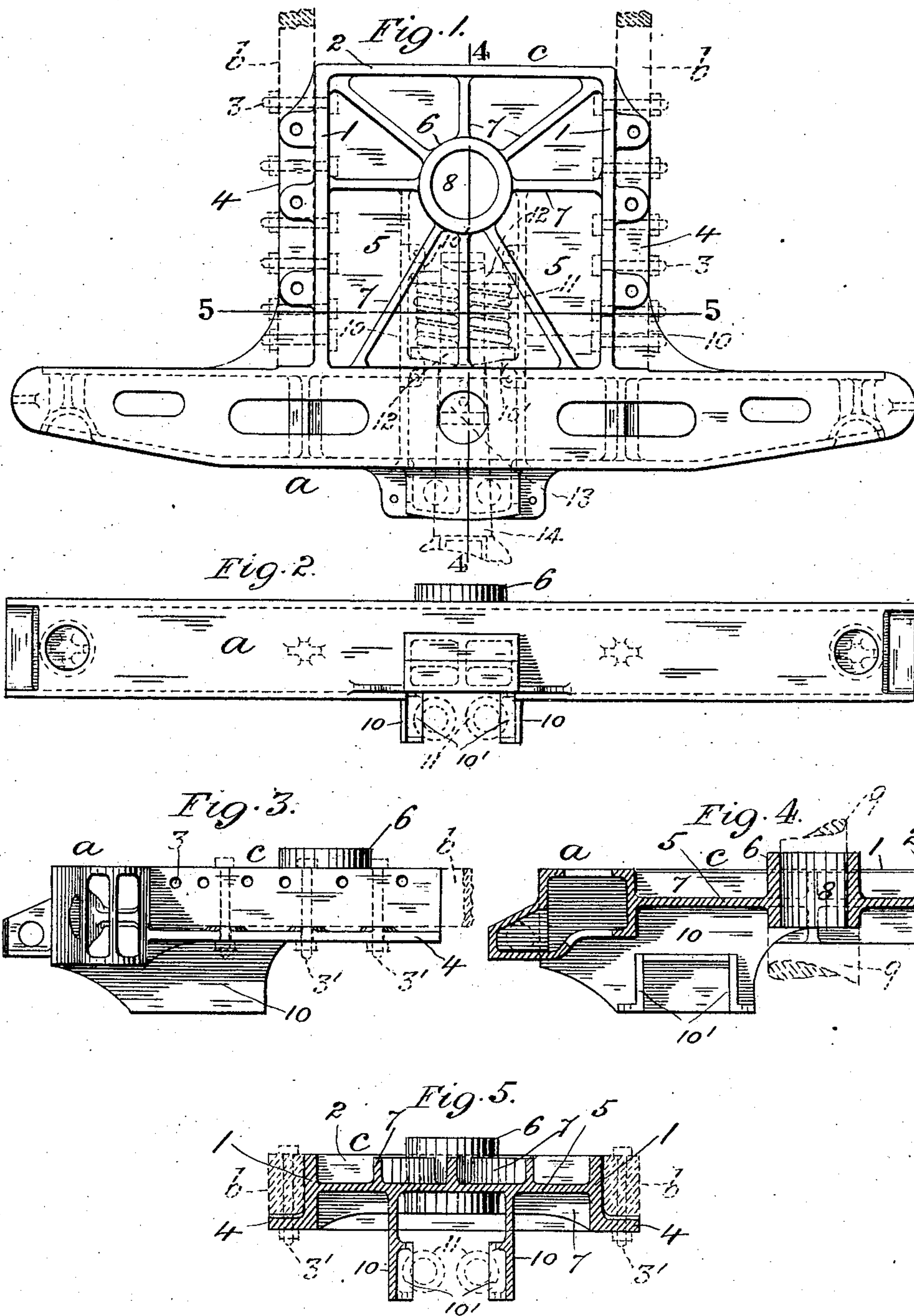
No. 844,765.

PATENTED FEB. 19, 1907.

C. T. WESTLAKE & A. R. THOMAS.

LOCOMOTIVE ENGINE FRAME.

APPLICATION FILED NOV. 26, 1906.



WITNESSES

M. P. Flager
Morley B. Wilkes

INVENTORS

Charles T. Westlake
Albert R. Thomas
By *Edward W. Furrell*
their Atty

UNITED STATES PATENT OFFICE.

CHARLES T. WESTLAKE AND ALBERT R. THOMAS, OF ST. LOUIS, MISSOURI,
ASSIGNORS TO DAVIS LOCOMOTIVE WHEEL COMPANY, OF ST. LOUIS,
MISSOURI, A CORPORATION OF DELAWARE.

LOCOMOTIVE-ENGINE FRAME.

No. 844,765.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed November 26, 1906. Serial No. 345,213.

To all whom it may concern:

Be it known that we, CHARLES T. WESTLAKE and ALBERT R. THOMAS, citizens of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Locomotive-Engine Frames, of which the following is a specification.

Our invention relates particularly to the front end sill or pilot-beam and pony-truck of a locomotive-engine frame and is in the nature of an improvement on the United States Letters Patent granted to Clarence H. Howard April 24, 1906, No. 818,448, for an improvement in locomotive-engine frames.

Our invention has for its object to provide a strong and firm guide-bearing for the center or pivot post of the pony-truck used for supporting and steadying the forward overhanging end portion of a locomotive-engine frame, and consists in supplementing the construction of the front end sill and its combined parts, as described in the said patent, with a suitable guide-bearing for the said post, combined with other features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a top plan view of our improved end sill and combined parts as applied to a locomotive-engine frame having a forward pony-truck; Figs. 2 and 3, a front and end elevation, respectively, thereof; and Figs. 4 and 5, a vertical, longitudinal, and transverse section through the same on lines 4-4 and 5-5, respectively, in Fig. 1.

Like letters and numerals of reference denote like parts in all the figures.

a represents our improved end sill or pilot-beam, which in the present case is box-shaped in cross-section with its top and bottom walls parallel to each other and the whole with its adjuncts composed, preferably, of cast-steel integral throughout; but the end sill *a* may be of any other suitable shape in cross-section, such as channel, **I**, or **T** shaped, and either straight longitudinally at the top and bottom, as shown, or otherwise, as desired.

The end sill *a* is adapted to bear at its rear side against the ends of the longitudinal metallic beams *b* of the engine-frame, as indicated by dotted lines, and from the rear side of the end sill *a* between the beams *b* projects a bracket or brace *c*, preferably rectangular in top plan, which is in the plane of and integral with the end sill *a*, the bracket *c* in the present case consisting of two opposite side pieces 1, united to each other at the inner free end of the bracket *c* by a cross-piece 2 and adapted to bear along their outer faces against the inner faces of the frame-beams *b*, to which they are firmly fixed by bolts (or rivets) 3, as indicated by dotted lines in Fig. 1. Furthermore, the side pieces 1 are preferably formed at the bottom with outwardly-projecting flanges 4, which are adapted to bear against the under side of the frame-beams *b* and are fixed thereto by bolts 3', (or rivets,) as indicated by dotted lines in Figs. 3 and 5.

The side and end pieces 1 and 2 are united to each other at the middle of their depth, or thereabout, and to the corresponding part of the end sill *a* by a horizontal web 5, having at a suitable distance from the end sill *a*, in central alinement with the longitudinal center of the engine-frame and bracket *c*, a circular (or other suitably shaped) hub or boss 6, which projects, preferably, above and below the web 5 and is further united to the end sill *a* and pieces 1 2 by ribs 7. Vertically through the hub 6 at the said center is formed a preferably circular opening 8, which is adapted to form a guide-bearing for the upright center or pivot-post 9 (indicated by dotted lines in Fig. 4) of the pony-truck of the engine-frame.

From the under side of the end sill *a* and web 5 of the bracket *c* depend two opposite and parallel upright webs 10, (one on each side of the said center,) having upright lugs or stops 10' and otherwise adapted on their inside faces to form a pocket or housing for the springs 11, follower-plates 12, and yoke 13 of a suitable draft-gear, such as that indicated by dotted lines in Figs. 1 and 2, whereby the draw-bar 14 is enabled to pass from the said housing beneath the end sill *a* in

lieu of through an opening formed therefor through the end sill, as described and claimed in the said patent, and so maintains the maximum strength of the end sill *a* at its middle portion. It is to be here noted that the end sill *a*, bracket *c*, having the guide-bearing 6 and bottom flanges 4, and the depending webs 10 with their appurtenances forming the draw-bar pocket or housing are integral throughout, whereby the engine-frame is rendered more rigid and a solid support provided for its forward overhanging portion, which is desirable when rounding curves at high speed for guiding and steadying the boiler and engine between the rails of the track.

By the use of the bottom flanges 4 on the side pieces 1 of the bracket *c* any vertical strain transmitted to the pony-truck passes initially from the engine-frame to the flanges 4 and thence through the bracket *c*, thereby relieving the horizontal bolts 3 through the side pieces 1 from shearing strain.

We do not limit ourselves to the particular cross-section and configuration of the bracket *c* and its appurtenances as described, as these may be varied for embodying a suitable guide-bearing for the center post of the pony-truck in combination with the end sill and its attachment to the longitudinal beams of the

engine-frame without departure from the principle and object of our invention.

What we claim as our invention, and desire to secure by Letters Patent, is—

In a locomotive-engine frame having a pony-truck at one end, the combination with the longitudinal beams of the said frame, of a metallic end sill adapted to bear against the ends of the said beams, a bracket projecting rearwardly from, and integral with the end sill, and adapted to bear laterally against the said beams, the said bracket having an opening therethrough adapted to form a guide-bearing for the center post of the said truck, webs dependent from and integral with the said sill and bracket, and adapted to form a housing for suitable draft-gear having its draw-bar projecting from the said housing beneath the end sill, and means for fixing the bracket to the said beams, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CHARLES T. WESTLAKE.
ALBERT R. THOMAS.

Witnesses:

EDWARD W. FARRELL,
J. M. PFLAGER.