

No. 827,749.

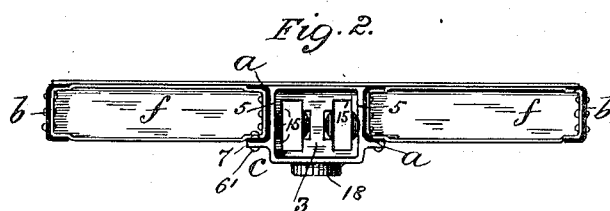
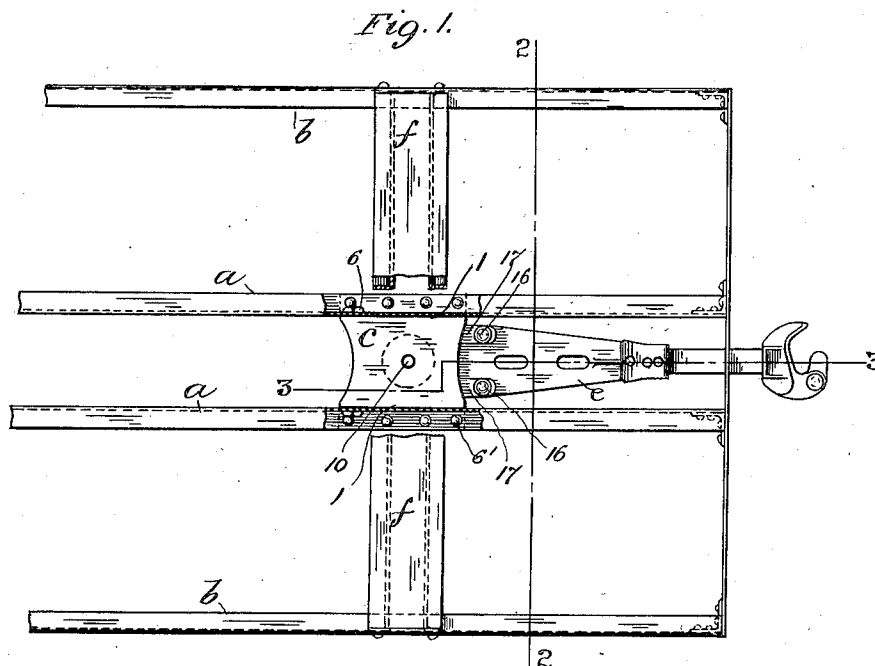
PATENTED AUG. 7, 1906.

H. M. PFLAGER.

DRAW BAR SPRING POCKET ATTACHMENT FOR METAL CAR UNDERFRAMES.

APPLICATION FILED DEC. 4, 1905.

2 SHEETS—SHEET 1.



WITNESSES

J. M. Rainbow
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INVENTOR

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His Atty

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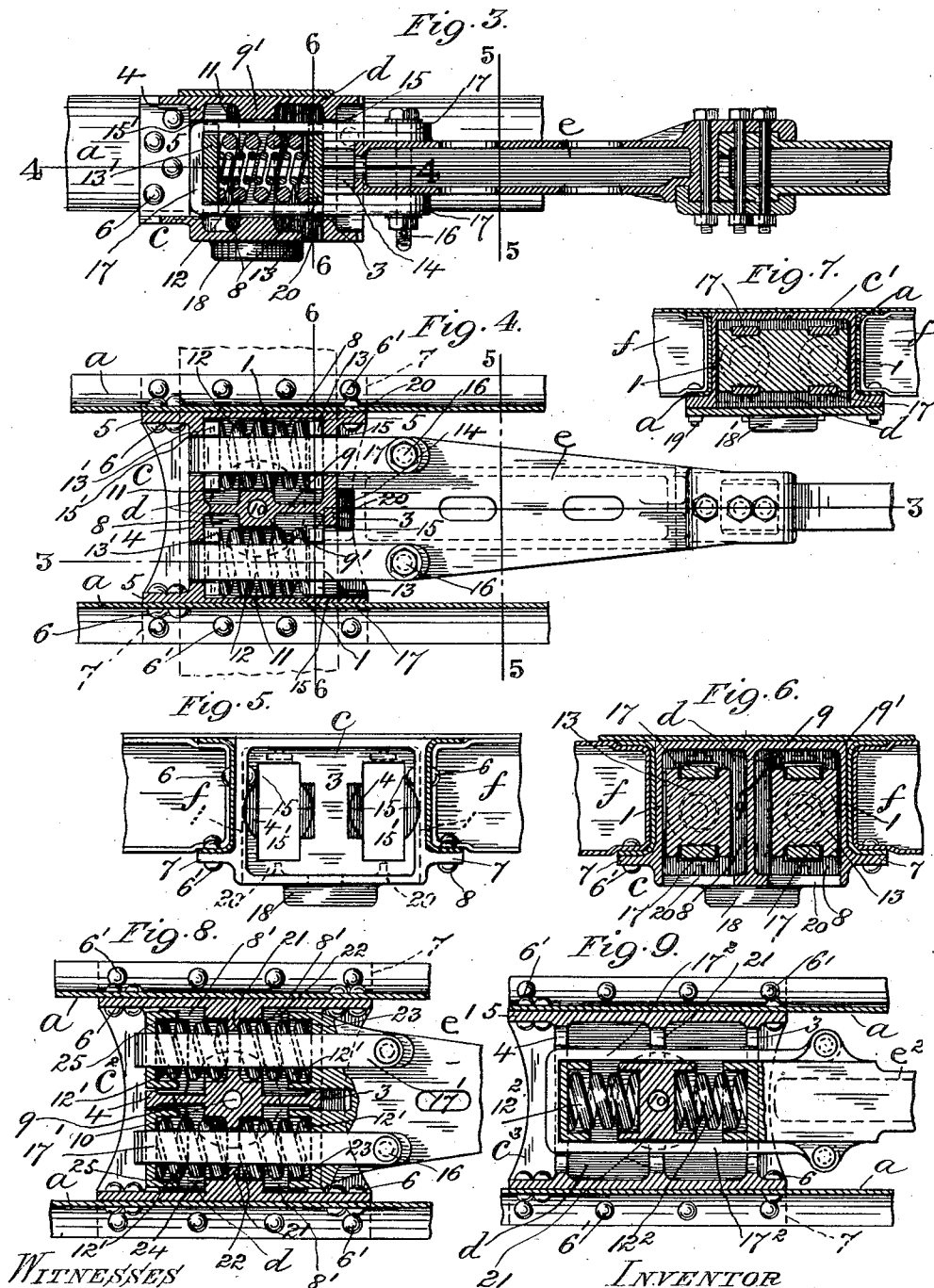
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UNITED STATES PATENT OFFICE.

HARRY M. PFLAGER, OF ST. LOUIS, MISSOURI.

DRAW-BAR SPRING-POCKET ATTACHMENT FOR METAL CAR-UNDERFRAMES.

No. 827,749.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed December 4, 1905. Serial No. 290,157.

To all whom it may concern:

Be it known that I, HARRY M. PFLAGER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Draw-Bar Spring-Pocket Attachment for Metal Car-Underframes, of which the following is a specification.

My invention relates to a block or filler interposed between the middle longitudinal metal sills of a car-underframe and adapted to form a draw-bar spring-pocket in combination or not with the body center plate and as a separate but composite part of a body-bolster extending therefrom to the outer longitudinal metal sills of the car, and has for its object to simplify construction and to enable this separate part of the bolster, with its combined draft-pocket, to be applied to abnormally deep sills, where the usual cast-steel bolster integral for the entire width of the car would be inapplicable.

The invention consists in 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 the longitudinal metal sills of a car-underframe (broken away) with my combined draw-bar spring-pocket and body center plate attached thereto and showing the separately-constructed end portions of the composite body-bolster of which the pocket forms the middle part; Fig. 2, a vertical transverse section through the sills on line 2 2 in Fig. 1, showing the pocket and separate end portions of the bolster in front and side elevation, respectively, omitting the draft-gear; Fig. 3, a vertical longitudinal section to enlarged scale through the pocket and draft-gear on line 3 3 in Figs. 1 and 4; Fig. 4, a horizontal section through the pocket on line 4 4 in Fig. 3, showing the draft-gear in top plan view; Fig. 5, a vertical transverse section through the middle longitudinal sills of the car on line 5 5 in Figs. 3 and 4 and corresponding to Fig. 2, showing the pocket in front elevation, omitting the draft-gear; Fig. 6, a vertical transverse section through the pocket and draft-gear on line 6 6 in Figs. 3 and 4; Fig. 7, a view corresponding to Fig. 6, showing a modification of the body center plate; and Figs. 8 and 9

views corresponding to Fig. 4, showing modifications of the draft-gear.

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

a represents the middle longitudinal metal sills, and *b* the outer longitudinal sills of a car-underframe, which in the present case are preferably channel-shaped in cross-section, as shown, but may be T, I, or other suitable section. Between the middle sills *a*, at a suitable distance from each end of the car, is arranged a hollow block or filler *c*, composed, preferably, of cast-steel integral throughout and having its internal space or chamber *d* box-shaped, its two opposite sides 1 bearing externally respectively against the inner side or upright web 2 of the corresponding sill *a*. Each side 1 extends beyond the front and rear walls 3 and 4, respectively, of the block *c* and forms flanges 5 thereto, whereby the block *c* is rigidly secured to the sills *a* by rivets 6, (or bolts.) Each side 1 is preferably formed at its lower part with an outwardly-projecting flange 7, which is adapted to underlap and bear against the bottom flange or under side of the corresponding sill *a*, to which it is rigidly fixed by rivets 6', (or bolts.)

The interior space or chamber *d* of the block *c* is preferably divided at the middle longitudinally and parallel to the sills *a* into two compartments 8 by an upright wall 9, having a central vertical opening 10, which extends entirely through the block *c* for the king-bolt. (Not shown.) Across the middle of each compartment 8, at right angles to the wall 9, is formed an upright wall 9', having a central transverse tubular opening 11, which is parallel longitudinally to the sills *a* for the passage and play therethrough of the draft-spring 12, having the usual follower-plates 13 13', which normally bear against the inside face of the front and rear walls 3 and 4, respectively, of the block *c*, the two springs 12, with their respective follower-plates 13 13', being arranged side by side in the same horizontal plane at a suitable distance apart, as shown.

e is the draw-bar having its forked inner end 14 adapted to pass through openings 15, formed through the front wall 3 of the block *c*, and to butt against the front follower-

plates 13. To the top and bottom of the draw-bar *e* at each side of its longitudinal center corresponding to the position of each spring 12 with its follower-plates 13 13', is pivoted by a bolt (or pin) 16 the forked ends of a yoke-strap 17, which passes through the opening 15 and space or chamber *d* of the block *c* and through a corresponding opening 15' therefor in the rear wall 4 of the block *c* and straddles the follower-plates 13 13' and spring 12 in the usual well-known manner, all the said parts of the draft-gear being arranged to produce a self-centering draw-bar and operating substantially as described in the United States Letters Patent granted to me January 10, 1905, No. 779,559, for an improvement in draft-gear for railroad-cars, and as particularly referred to in the modification described and shown by Figs. 6 and 7 in the said patent.

The block *c* is preferably provided on its under side with the body center plate 18, which is integral with the block *c*; but, if desired, the center plate 18' may be of separate construction and removably fixed to the under side of the block *c* by bolts, as shown in Fig. 7, or, if desired, in cases where the block *c* is used as an auxiliary brace or filler between the sills *a* apart from the usual body-bolster the center plate 18 is omitted. When the center plate 18 is integral with or omitted from the block *c* an opening 20 from each compartment 8 is formed through the bottom of the block *c*, as seen particularly in Figs. 3, 4, and 6, for enabling the follower-plate 13 13' to be removed therefrom when required, the springs 12 being removable through the front openings 15, which are suitably shaped for this purpose, as seen particularly in Fig. 5.

Extending between each sill *a* and the corresponding outer sill *b*, opposite to each side 1 of the block *c* and separated therefrom by the web or body of the sill *a*, is a beam *f*, which is composed of pressed, as shown, or cast steel of any desired cross-section and configuration and fixed at its ends to the sills *a* and *b* by rivets or otherwise, the beams *f*, which are alined to each other longitudinally, forming the end portions and the block *c* the middle portion of a composite body-bolster extending the entire width of the car.

Fig. 8 shows the block *c*², adapted to my improved draft-gear, in which the follower-plates are dispensed with, as described in my application for Letters Patent filed November 9, 1905, Serial No. 286,576, for an improvement in draft-gear for railroad-cars. In this case each compartment (corresponding to the compartment 8, before described) of the space or chamber *d* is divided transversely into two compartments 8' 8' by a central upright wall 21, having in its front side a pocket 22, which is opposite to a similar pocket 23,

formed in the inner forked end of the draw-bar *e*, and on its rear side with a pocket 24, which is opposite to a similar pocket 25, formed in or attached to the closed end of the yoke-strap 17'. Within and between the pockets 22 23 and 24 25, respectively, is placed a spring 12', whereby in the pulling and "buffing" movements of the draw-bar *e* the springs 12' are operated without the use of follower-plates, as fully described in my said application.

In Fig. 9, which shows a modification of the draft-gear seen in Fig. 8, two springs 12² are arranged in longitudinal alinement to the draw-bar *e*² in lieu of two springs 12' at each side thereof, as in Fig. 8, thereby enabling the draft-gear to be applied to a narrow block *c*³ in cases where the distance between the middle sills *a* of the car-frame is limited, in which case the yoke-strap 17² is pivoted to the sides of the draw-bar *e*² and the openings through the walls 3, 4, and 21, corresponding to the openings 15 and 15', before described, enlarged accordingly for enabling the laterally-overhanging pivoted ends of the yoke-strap 17² when the latter is removed from the block *c*³ to pass therethrough.

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

1. In a car-underframe, the combination with the middle longitudinal metal sills, and beams connecting the said sills to the outer longitudinal sills, of a hollow block intermediate to and bearing against the middle sills, and adapted internally to form a housing for the springs and follower-plates of the draft-gear, the said block having suitable openings through its walls for the play of the draw-bar and its yoke-strap therethrough, and for inserting and removing the springs and follower-plates into, and from the said housing, a body center plate integral with the block on its under side, and means for fixing the block to the middle sills, substantially as described.

2. In a car-underframe, the combination with the middle longitudinal metal sills, and beams connecting the said sills to the outer longitudinal sills, of a hollow block intermediate to and bearing against the middle sills, and adapted internally to form a housing for the springs of the draft-gear, the said block having suitable openings through its walls for the play of the draw-bar and its yoke-strap therethrough, a body center plate integral with the block, and means for fixing the block to the middle sills, substantially as described.

3. In a car-underframe, the combination with the longitudinal metal sills, of a hollow block intermediate to and bearing against the said sills, the said block containing two parallel longitudinal compartments, one on each side of the longitudinal center line of the car, adapted respectively, to form a housing

for the springs of a self-centering draft-gear,
and having an opening through the front and
rear walls respectively of the said block, a
draw-bar having bifurcated ends, a yoke-
5 strap pivoted to each of the said ends and
adapted to play through the said openings,
and means for fixing the block to the said sills,
substantially as described.

In testimony whereof I have signed my
name to this specification in the presence of 10
two subscribing witnesses.

HARRY M. PFLAGER.

Witnesses:

ELIZABETH C. TOUHEY,
EDWARD W. FURRELL.