

1,023,109.

Fig. 1.

1, 020, 100

INVENTOR
H. J. Krakau

WITNESSES

R. A. Balderson.
Walter Farniss.

 INVENTOR
H. J. Krakau.
by Bahrer, Byrner Carmichael,
his Attys.

1,023,109.

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2 SHEETS—SHEET 2.

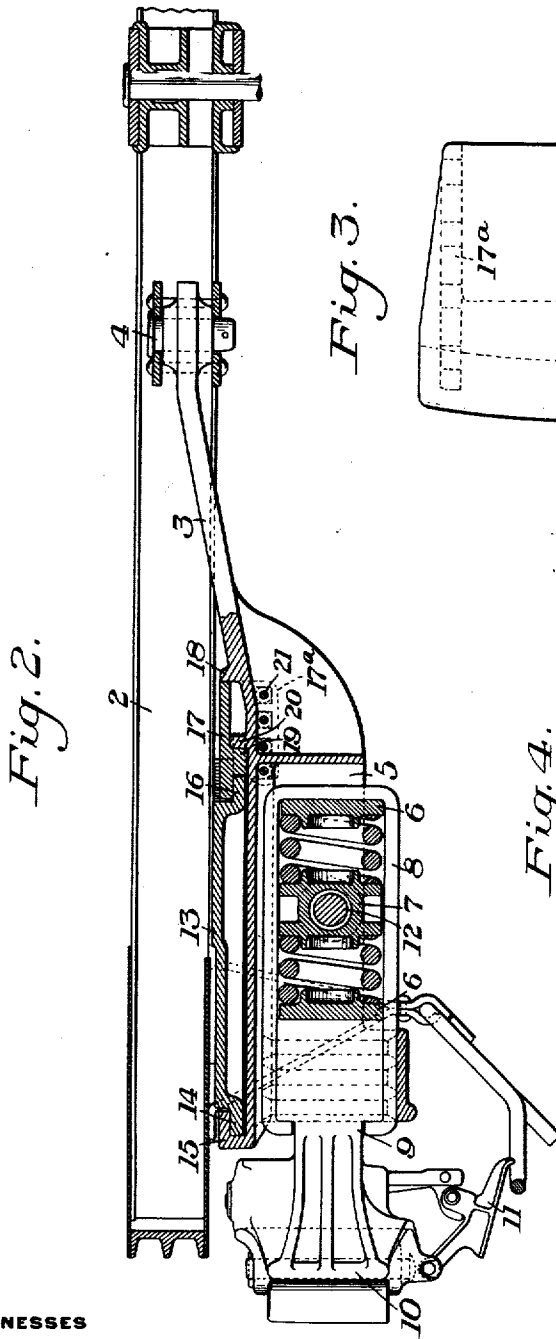


Fig. 3.

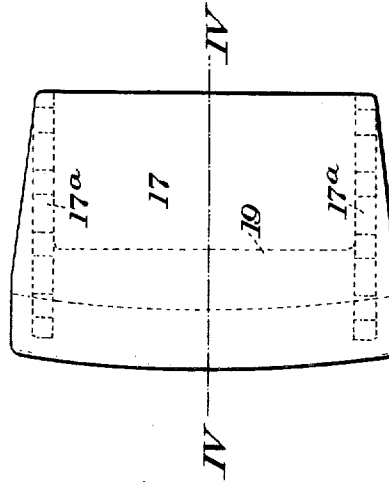
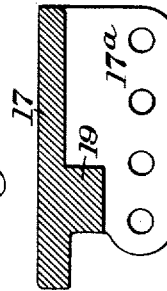


Fig. 4.



WITNESSES

R. A. Balderson
Walter L. Lammie

INVENTOR

H. T. Krakau,
by Baker, Byrnes & Parnell
his Attys

UNITED STATES PATENT OFFICE.

HARRY T. KRAKAU, OF CLEVELAND, OHIO, ASSIGNOR TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

DRAFT-GEAR.

1,023,109.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY T. KRAKAU, a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Draft-Gear, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view showing a portion of a car underframing having my improved draft gear applied thereto; Fig. 2 is a longitudinal section of the same; Fig. 3 is a plan view of the filler member; Fig. 4 is a section on the line IV—IV of Fig. 3.

My invention has relation to draft gear for railway cars, and is designed to provide a simple and desirable form of draft gear, which can be readily applied to existing cars, as well as to new cars, with very little change in the construction of the car underframing.

A further object of my invention is to provide a draft gear of the radially swinging type, in which the buffing and pulling stresses are received by a radial segmental abutment rigidly secured to the draft sills, and which is strong enough to receive all stresses which it may be called upon to resist. Also to provide means in a draft gear of this character which will permit vertical movement of the coupler head so that couplers when coupled together can be maintained in substantial alinement in a vertical plane, notwithstanding changes in the grade of the track which, if the couplers were restrained from vertical movement by their attachment to the car, would cause them to angle with each other in a vertical plane, thereby resulting in disastrous strains to their parts or to the car structure. Also to provide a draft gear in which the coupler and draft rigging can be easily removed for replacement or repair of the parts.

The nature of my invention will be best understood by reference to the accompanying drawings, in which I have shown the preferred embodiment thereof and which will now be described, it being premised, however, that various changes may be made in the details of construction and arrangement of the several parts, by those skilled in the art, without departing from the spirit

and scope of my invention, as defined in the appended claims.

In these drawings, the numeral 2 designates the central or draft sills of the car.

3 is a draft member which is suitably pivoted between said sills at 4, and which is arranged to swing radially. The forward end portion of this draft member is depressed below the draft sills and is formed with a pocket portion 5, to receive a draft rigging. This draft rigging may be of any desired type. As shown, it consists of two heavy capacity buffing and pulling springs arranged in tandem between the end followers 6 and a center block or member 7.

8 is the usual yoke, which embraces the followers and springs within the cage portion of the draft member and which is rigidly secured to the shank 9 of the coupler head 10. This coupler may also be of any desired form. As shown, it is of the automatic knuckle type, having bottom-operating means 11, which constitute no part of the present invention.

A transverse pin 12 passes through the center block or member from and into the sides of the draft gear pocket, the draft rigging and coupler being capable of vertical movement within certain limits about the axis of this pin to compensate for changes in the grade of the track, this pin being in double shear.

13 designates a radial segment which is rigidly secured to the underside of the sills 2, near the front end of the car, and which is made sufficiently strong to receive all the stresses which it may be called upon to resist. This segment is formed at its front curved edge with a depressed lip portion 14, which is engaged by a lip 15, on the front end of the upper pocket portion of the draft member. The rear curved edge of the segment is provided with a similar depressed portion or lip 16, which is engaged by a filler member 17, seated between the vertical shoulder of said lip and a projection 18 on the draft member. The filler member preferably has a depending portion 19, which fits between the end of the lip 16 and a lug or projection 20 on the draft member. This filler is rigidly secured to the draft member by any suitable means, such as the bolts 21, which are passed through the de-

pending side portions 17^a of said member. This filler member provides means whereby the draft member can be properly engaged with the radial segment, and for readily detaching the draft member from the car.

The operation will be readily understood. The buffing and pulling stresses are transmitted through the coupler shank, springs and followers to the draft member, and thence are received directly by the radial buffing segment.

By removing the transverse pin 12, the coupler and draft rigging can be easily and quickly removed for replacement of any worn or broken parts of the coupler or draft rigging, and the latter in its assembled form can then again be inserted into the pocket or case of the draft member. This pocket or case is preferably formed integrally with the draft member, thereby eliminating separate castings and bolts or other fastening devices.

I claim:

1. A draft gear having a segmental abutment supporting the forward end of the draft gear and rigidly secured to the car frame, a radially swinging draft member whose forward end portion is suspended from and has a buffing and pulling engagement with said abutment, and a draft rigging and coupler carried by said draft member, substantially as described.

2. A draft gear having a segmental abutment rigidly secured to the car frame, a radially swinging draft member having a portion extending below said abutment, and

a draft rigging and coupler mounted on the draft member below the abutment, the draft member having a buffing engagement with the abutment above one end of the draft rigging, and a pulling engagement with the abutment above the opposite end of the draft rigging; substantially as described.

3. A draft gear, comprising a segmental abutment rigidly secured to the car frame, and a radially movable draft member pivoted behind the abutment and having a downwardly offset forward portion extending underneath the abutment and having upward projections which have a supporting and shock-transmitting engagement with the abutment, substantially as described.

4. A draft gear, comprising a segmental abutment, a pivoted radially swinging draft member extending below the abutment, and having a lip which has a sliding and supporting engagement with the forward edge portion thereof, said member also having an upward projection back of the rear edge of the abutment, and a filler piece carried by the draft member with a portion fitting between the projection thereof and the rear edge of the abutment, and also having a sliding engagement with the rear edge portion of the abutment, substantially as described.

In testimony whereof, I have hereunto set my hand.

HARRY T. KRAKAU.

Witnesses:

HARRY E. ORR,

GRACE E. CUNNINGTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."