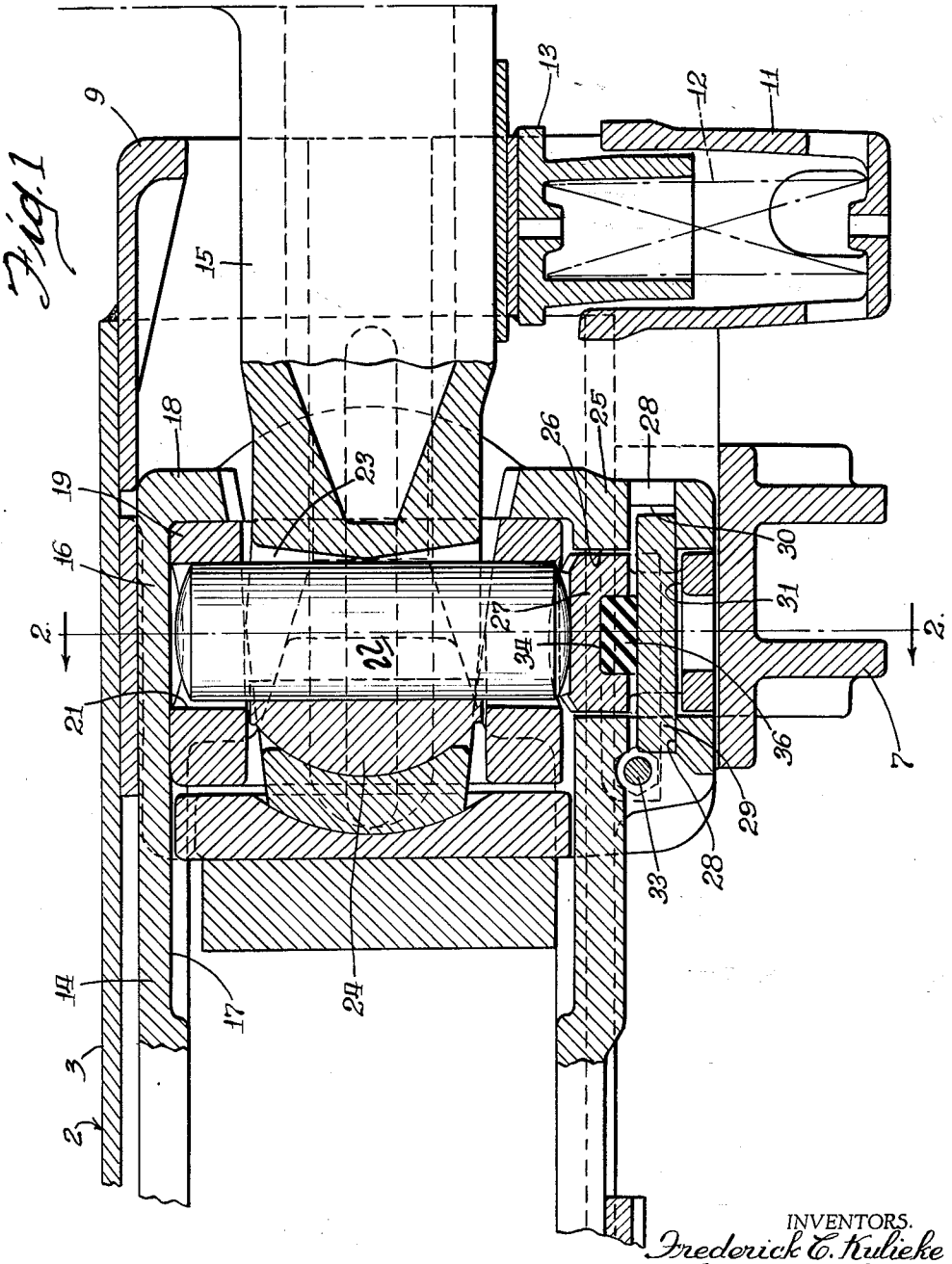
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ROTARY COUPLER

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Fig. 1



INVENTORS.
Frederick C. Kulieke
Kenneth V. Livelsberger
By: Walter L. Schlegel Jr. Atty.

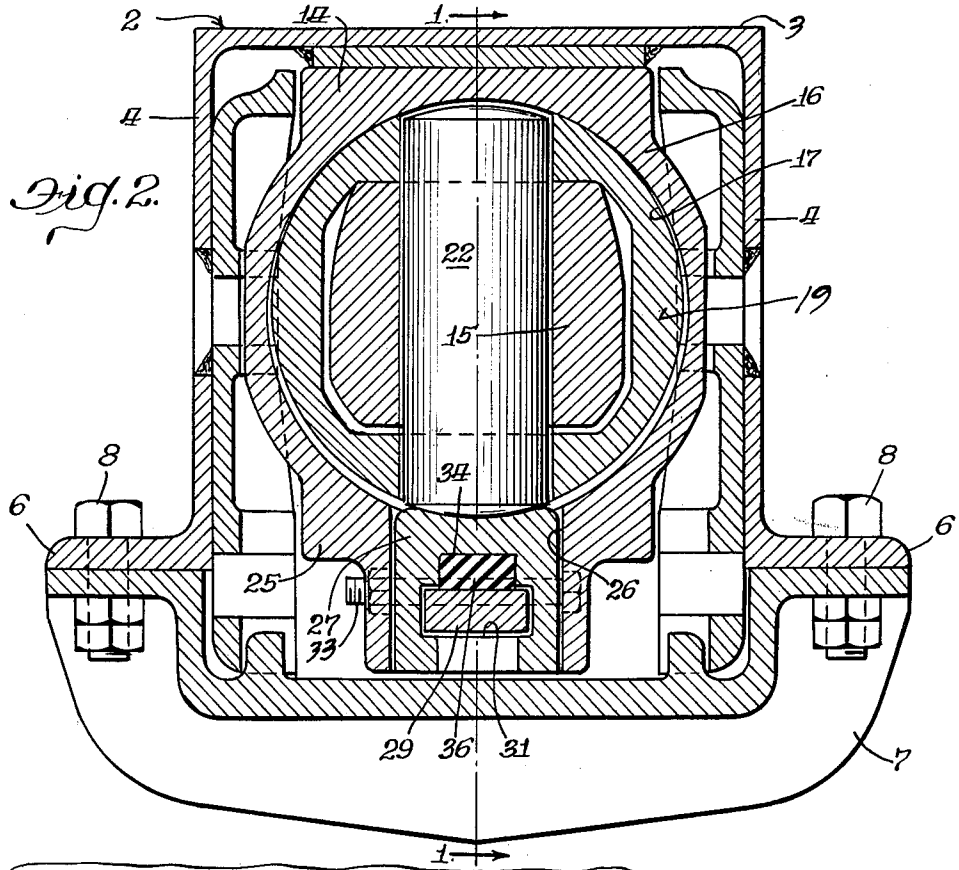
Witness:
C Bassett

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Fig. 2.



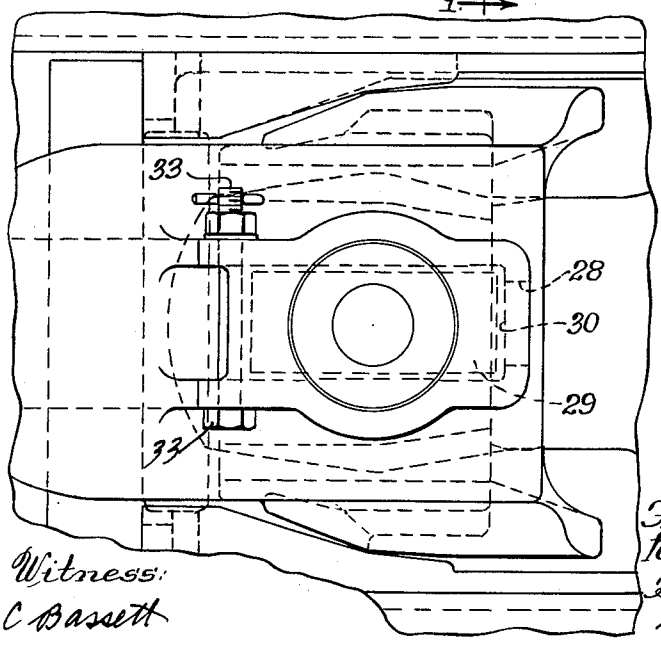


Fig. 3.

Witness:
C Bassett

INVENTORS.
Frederick C. Kulieke
Kenneth V. Livelsberger
By: Walter L. Schlegel Jr.
Atty.

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3,157,291

ROTARY COUPLER

Frederick C. Kulicke and Kenneth V. Livelsberger, Alliance, Ohio, assignors to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey

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1 Claim. (Cl. 213—62)

This invention relates to railway car couplers and more particularly to means for connecting a coupler shank to a draft gear yoke to permit rotation of the coupler about its longitudinal axis.

Briefly, the present invention contemplates the provision of a rotary coupler arrangement in which a coupler shank is pivotally connected to a collar by means of a pivot pin, the collar being mounted for axial and rotational movement within a yoke. To facilitate assembly and disassembly of the coupler shank and the yoke, an opening is provided in the lower side of the yoke to permit insertion and withdrawal of the pivot pin, the opening being normally closed by means of a retainer pin assembly detachably connected to the yoke.

An object of the invention resides in the provision of a rotary coupler arrangement embodying means to facilitate assembly and disassembly of the coupler shank and the yoke.

Another object of the invention resides in the provision of a retainer assembly detachably connected to the yoke to close the pivot pin opening in the yoke.

A further object of the invention resides in the provision of a pivot pin retainer assembly embodying a resilient rubber pad to take up slack in the assembly.

The invention embodies other novel features, details of construction and arrangement of parts which are hereinafter set forth in the specification and claim and illustrated in the accompanying drawings, forming part thereof, wherein:

FIGURE 1 is a longitudinal section taken along the line 1—1 of FIGURE 2, showing a rotary coupler arrangement embodying features of the invention.

FIGURE 2 is a transverse section taken along the line 2—2 of FIGURE 1.

FIGURE 3 is a bottom plan view showing the coupler arrangement.

Referring now to the drawings for a better understanding of the invention, the rotary coupler is shown as comprising a center sill 2 having a top wall 3 and depending side walls 4—4. Flanges 6 are provided on the lower ends of the side walls 4 to support a yoke support member 7, the member being secured to the flanges by means of bolts 8.

A striker casting 9 is secured to the forward end of the center sill and provided with a spring pocket 11 to receive a plurality of helical compression springs 12. A carrier 13 is mounted upon the springs 12 to resiliently support the shank 15 of an automatic railway coupler.

A draft gear yoke 14 is mounted within a center sill 2 and formed with a head portion 16 having a cylindrical

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inner surface 17. The forward end of the yoke 14 is provided with an inturned annular flange 18. A collar 19 is mounted for rotational movement within the forward end of the yoke 14 and provided with coaxial openings 21 to receive a pivot pin 22. The coupler shank 15 is formed with an opening 23 to receive the pivot pin 22. A bearing block 24 is mounted within the opening 23 in the yoke to engage the pin 22.

To facilitate assembly and disassembly, the lower portion 25 of the yoke head 16 is formed with an opening 26 adapted to receive a plug 27. The yoke head portion 25 is also formed with aligned retainer plate openings 28 adapted to receive a retainer plate 29 for abutting engagement against a shoulder 30. The retainer plate 29 extends through an opening 31 in the plug 27. The retainer plate 29 is engaged against accidental displacement by a bolt 33 mounted on the yoke head 16.

To take up slack between the plug 27 and the retainer plate 29, the plug is formed with a chamber 34 to receive a resilient rubber pad 36 which, as illustrated in FIGURE 1, acts to bias the plug upwardly toward the pivot pin 22.

It will be noted that the coupler shank 15 may be disassembled from the yoke by removing the yoke support member 7, the bolt 33, the retainer plate 29, and the plug 27 to permit the pivot pin 22 to fall by gravity downwardly through the opening 26.

We claim:

In a rotary coupler arrangement, a yoke having a head portion provided with a cylindrical inner surface, a collar mounted for rotational movement in said head portion, a coupler shank extending through said collar, a pivot pin extending through aligned openings in said collar and shank, said head portion having an aperture for registry with said aligned openings for the passage of the pivot pin therethrough, a plug mounted in said aperture in abutting engagement against an end of the pivot pin, said plug having a downwardly facing chamber, said head portion and plug having horizontally aligned retainer plate openings, a retainer plate extending through said retainer plate openings and operative to limit vertical movement of said plug relative to said head portion, a pad of resilient material mounted in said plug chamber and engaged against the upper surface of the retainer plate to bias the plug upwardly against the end of the pivot pin, and abutment means provided on said head portion engaging opposite ends of said plate.

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