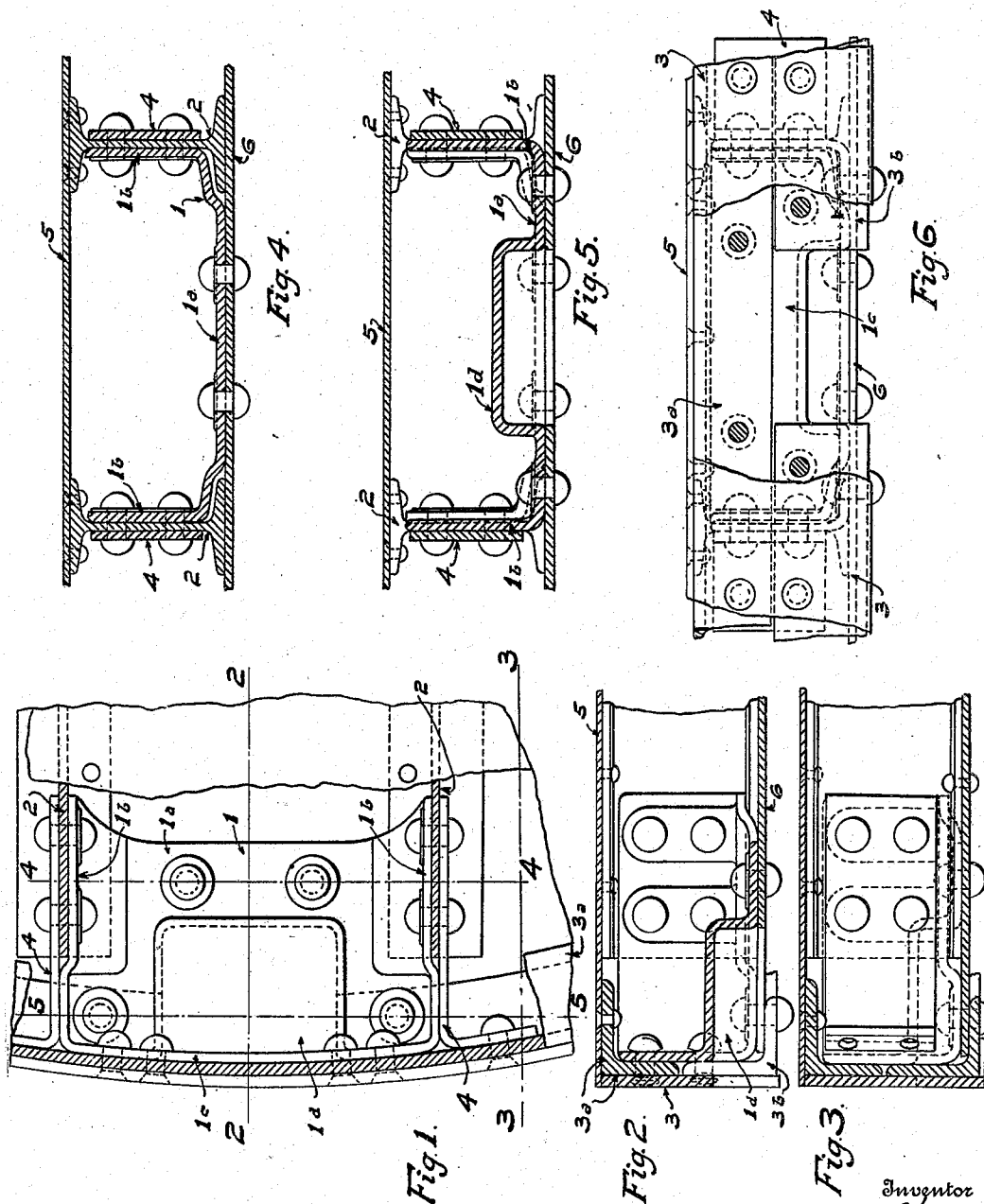


F. KOCH.
 REINFORCING PLATE FOR RAILWAY CAR CENTER AND END SILLS.
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930,391.

Patented Aug. 10, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

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REINFORCING-PLATE FOR RAILWAY-CAR CENTER AND END SILLS.

No. 930,391.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed October 14, 1908. Serial No. 457,634.

To all whom it may concern:

Be it known that I, FELIX KOCH, a subject of the Emperor of Germany, residing at Bellevue, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Reinforcing-Plates for Railway-Car Center and End Silks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which like reference characters refer to like parts, and in which—

Figure 1 is a sectional plan view showing said plate and adjacent parts of the car construction; Fig. 2 is a longitudinal vertical section on the line 2—2, Fig. 1; Fig. 3 is a like view on the line 3—3, Fig. 1; Fig. 4 is a transverse vertical section on the line 4—4, Fig. 1; Fig. 5 is a like view on the line 5—5, Fig. 1; and Fig. 6 is a front elevation of the structure shown in Fig. 1, with parts broken away for sake of clearness.

An object of the present invention is to provide a combined end and center silks connecting and reinforcing plate which will add materially to the stiffness and strength of the end construction of a car underframe, and which will also provide a suitable recess on its under surface to provide room for removal of the coupler pin (not shown).

Referring now in detail to the drawings: 1 represents the plate, substantially of U-shape, having a bottom 1^a, sides 1^b and a curved or arched face 1^c. The sides 1^b are riveted to the center silks 2; the face 1^c is riveted to the stiffening angles 3^a, 3^b, forming, with the plate 3, the end sill of the car; 4 are connecting angles riveted to the center silks 2 through the medium of the same rivets which secure the sides 1^b to center silks 2, and riveted at their outer ends to stiffening angles 3^a, 3^b; 5 is the upper end sill cover plate riveted to the upper flanges of the center silks 2 and to the stiffening angle 3^a; and 6 is a lower end sill cover plate riveted to the lower flanges of the center silks 2, to the bottom 1^a of the plate 1 and to the stiffening angle 3^b.

1^d is an upward depression or recess in the under face 1^a of the plate 1, which, when the draft rigging is applied to the car understructure, is located immediately over the coupling pin, and is designed to permit sufficient vertical movement of the coupler pin to permit of its removal from the drawhead.

Cover plate 6 and end sill plate 3 are each recessed in line with the depression 1^d in the buffer plate 1.

An advantage of the structure thus described is that with a comparatively small amount of material properly disposed the maximum degree of shock resisting strength and the maximum degree of stiffness for the entire center end construction of the car underframe is attained.

The depression 1^d while designed primarily for the purpose of permitting the removal of the coupling pin (not shown), likewise forms a central brace or stiffening member for the face 1^c of the plate 1 which is designed to receive the full force of a buffing shock in the event of the end silks of adjacent cars coming in contact with each other and transmit same through the other portions of the plate to the center silks. This upward depression also stiffens the plate 1, in any direction, and counteracts any tendency of the same to buckle. By riveting top and bottom cover plates to upper and lower flanges of the center silks, to the bottom of the plate 1 and to the upper and lower stiffening angles 3^a, 3^b, it will be seen that a box-like structure is produced for resisting the force of shocks.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A combined center and end sill connecting and reinforcing plate for a car formed with a face for attachment to the car end sill, rearward extensions for attachment to the car center silks and a bottom connecting the lower edges of said face and sides.

2. A combined center and end sill connecting and reinforcing plate for a car formed with a face for attachment to the car end sill, extensions at the ends of said face for attachment to the car center silks, and a web connecting the edges of said face and extensions.

3. A combined center and end sill connecting and reinforcing plate for a car formed with an arched face for attachment to said end sill, extensions at each end of said face for attachment to the car center silks, and a web connecting said face and extensions.

4. A combined center and end sill connecting and reinforcing plate for a car formed with a recessed face for attachment to the car end sill, extensions at the ends of said

face for attachment to the car center sills, and a web connecting the lower edges of said face and extensions and formed with a recess in its under side in line with the recess in said

5 face.

5. A combined center and end sill connecting and reinforcing plate for a car formed with an arched, recessed face for attachment to the car end sill, extensions at each end of

10 said face for attachment to the car center sills, and a web connecting the lower edges of said face and extensions, and having a recess formed in its under side in line with the recess in said face.

15 6. A car combined center and end sill connecting and reinforcing plate formed with an arched face and extensions at the side of said

face, and a web connecting said face and extensions in combination with a car end sill, center sills and angles securing said plate, 20 end sill and center sills together.

7. A combined center and end sill connecting and reinforcing plate for a car formed with a face engaging the car end sill, extensions on said face for attachment to the car 25 center sills, and a web connecting said extensions and face, and a depression in said web forming a brace for said face and web.

In testimony whereof I affix my signature, in presence of two witnesses.

FELIX KOCH.

Witnesses:

T. J. JONES,
H. B. FISHER.