Nov. 29, 1927. 1,651,265

G. J. FREDEN

CAR COUPLER

Filed Jan. 30, 1925

Fig. 1.

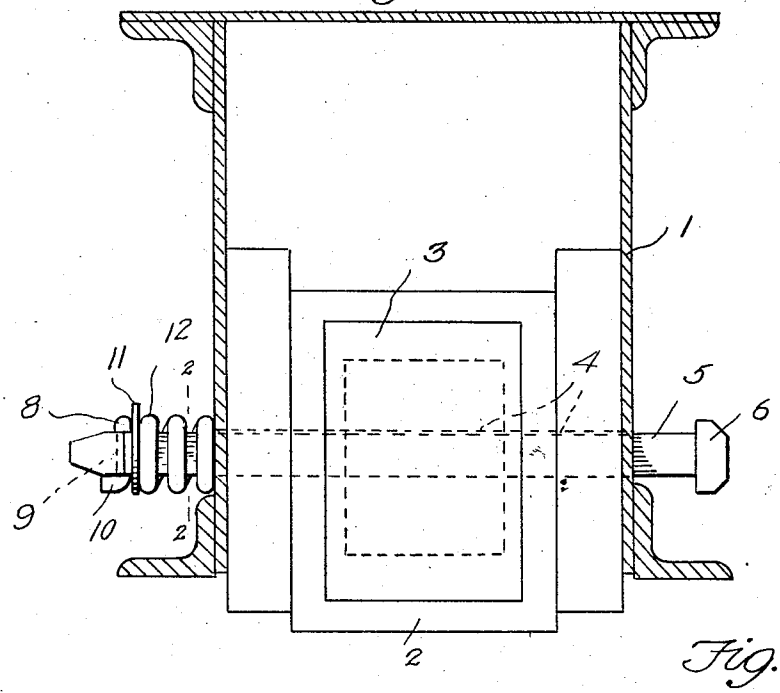


Fig. 2.

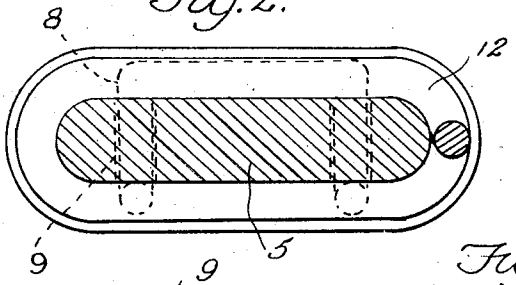


Fig. 3.

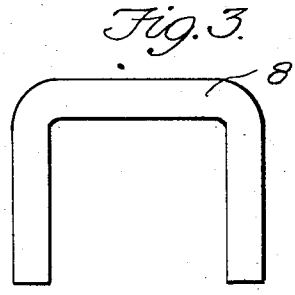
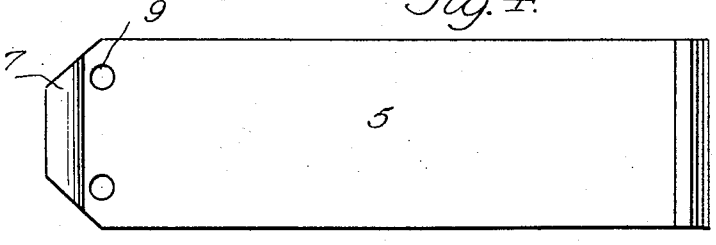


Fig. 4.



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Patented Nov. 29, 1927. 1,651,265

UNITED STATES PATENT OFFICE.

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CAR COUPLER.

Application filed January 30, 1925. Serial No. 5,849.

This invention relates to certain novel improvements in car couplers and more particularly to a safety device for the retaining pin of a draft key and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

Among the salient objects of the invention is the production of a device of this character whereby a resilient member is disposed between a retaining pin and an adjacent side of a draft sill upon a draft key whereby when the coupling key is shifted in a certain longitudinal direction the retaining key will yieldably bear against the adjacent side of the draft sill and be prevented by a yieldable member from being sheared from connection with the draft key when the cars with which the draft key is associated round a curve in a direction to shift the draft key in said certain longitudinal direction.

Other objects will appear hereinafter.

The invention consists in the combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings illustrating the preferred form of my invention, and in which:

Fig. 1 is a transverse section taken through a coupler, illustrating my improvement applied thereto.

Fig. 2 is a detail transverse section on the line 2—2 of Fig. 1.

Fig. 3 is a side elevation of the fastening key for the draft key, and

Fig. 4 is a plan view of the draft key.

Referring more particularly to the drawing, the numeral 1 indicates the center draft sills between which the draft yoke 2 is mounted. The draft yoke 2 is adapted to receive the draw bar 3 and this draw bar, draft yoke and draft sills are provided with transverse aligned openings 4 adapted to receive my improved draft key 5.

This draft key 5 is preferably flat, as shown in Fig. 4, and has formed at one end thereof a head 6. The other end of the draft key is tapered, as at 7, to permit the same to be readily inserted through the aligned openings 4. This draft key 5 is retained in position through the medium of a U-shaped retaining pin 8. The limb portions of this retaining key 8 pass through the openings 9 formed in the tapered end portion 7 of the draft key and the outer end portions of the limbs of the retaining pin are bent laterally as at 10 for the purpose of retaining the pin 8 in the position illustrated in Fig. 1.

As shown in Fig. 1 of the drawing a washer 11 is positioned upon the draft key 5 inwardly of the retaining pin 8 and disposed between this washer 11 and the adjacent side of the draft sills is a spring member 12. This spring member 12 is of the expansive type and serves in its principal capacity to provide yieldable bearing relation between the retaining pin 8 and the draft sills for the reasons above mentioned.

I do not mount upon the draft key 5 at the head bearing portion thereof a similar spring 12 because I have found by experience that the head 6 of the draft key is of sufficient strength to withstand shearing or the like when the draft key 5 is shifted in a direction to bring the head 6 in bearing relation with the adjacent side of the draft sills 1.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variations and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention, what I claim is:

1. The combination with a car coupler including a draft sill, a yoke, and a draw bar received by the yoke, of a draft key including a head at one end portion and extending transversely through the draft sill, draw bar and yoke, a retaining key at the opposite end portion of the draft key, and yieldable means disposed between the retaining key and adjacent wall of the draft sill.

2. In combination a draft key defining a head at one end, a removable retaining key for the draft key, and a spring member carried by the draft key and serving to relieve the retaining key of undue strain.

3. In a device of the character described, the combination with a draft sill, of a draft key extending transversely of the draft sill and having a head formed on one end portion thereof, a retaining key carried by the other

end of the draft key, a washer carried by the draft key adjacent the retaining key, and a coil spring carried by the draft key and arranged between the washer and the retaining key.

4. In combination with slotted car sills, a a draft key extending therethrough and adapted for supporting draft rigging, a retainer positioned exteriorly of said sills and resilient means for holding said retainer away from the adjacent sill.

5. In combination with slotted car sills, a draft key extending therethrough and adapted for supporting draft rigging, a retainer extending through an aperture in one end of said key and spring means acting between said retainer and the adjacent sill.

6. In an attachment for a draft rigging provided with a drawbar and draft sills at opposite sides thereof, a draft key slidable in said drawbar and having end portions extending from the drawbar so as to project through the draft sills, and a yielding device tending to prevent displacement of said draft key, said yielding device comprising a spring arranged near an end of the draft key so as to lie at the outer side of one of the draft sills.

In testimony whereof I affix my signature.

GEORGE J. FREDEN.