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C. H. EVANS

DRAFT KEY RETAINER

Filed Sept. 15, 1926

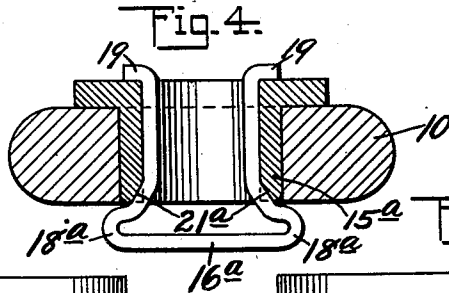
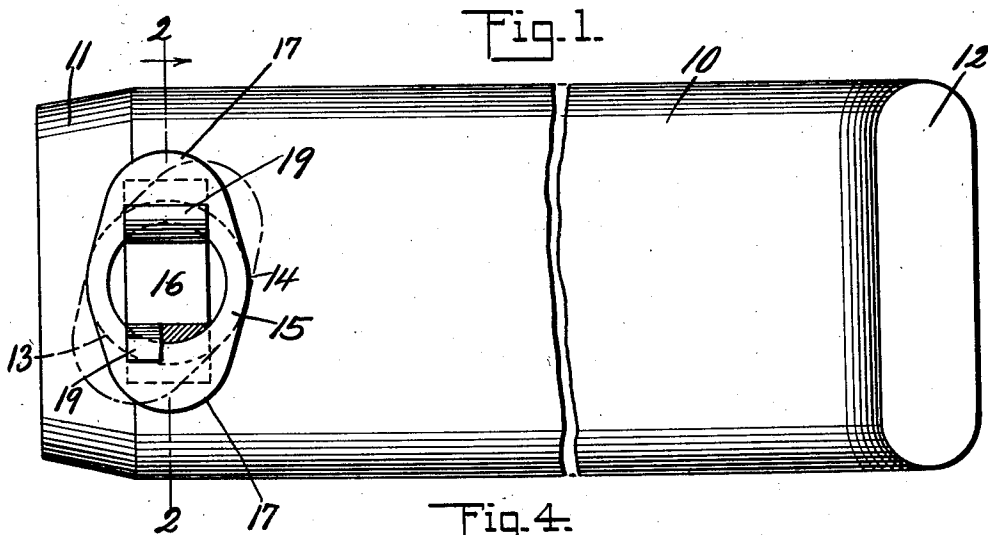


Fig. 2.

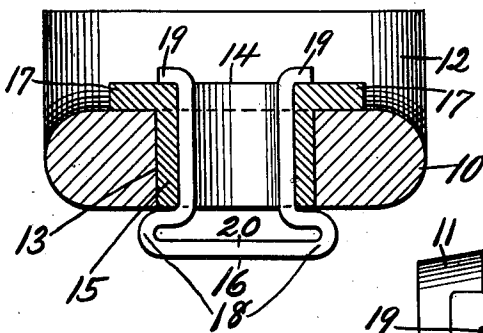


Fig. 3.

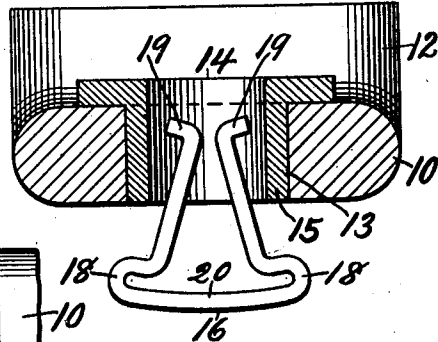
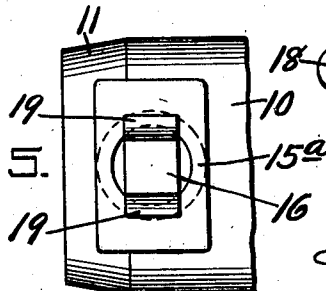


Fig. 5.



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DRAFT-KEY RETAINER.

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Reference is had to the accompanying drawings, which illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof within the scope of the claims will occur to persons skilled in the art.

10 In said drawings:

Fig. 1 is a plan view of a draft key equipped with a retainer conveniently embodying my invention, one of the parts of the retainer being shown partly broken away and in horizontal section.

Fig. 2 shows a section through the drawbar key and the retainer, taken as indicated by the line 2—2 in Fig. 1.

Fig. 3 shows a similar section with the retainer fastener collapsed for insertion or withdrawal.

Fig. 4 shows a section similar to Fig. 2, illustrating a somewhat different construction.

Fig. 5 is a fragmentary plan view similar to Fig. 1, but illustrating the construction shown in Fig. 4.

My invention relates to draft key retainers, my aim being to provide a simple, rugged, durable, and inexpensive device that can be very easily and quickly installed or removed. In suitable forms of embodiment, such as here shown and described, the invention affords the advantage that the means by which the retainer is secured in place in the drawbar need not be exposed to wear against the sills through which the draft key extends. Other advantages that may be realized through my invention will also appear from my description of particular embodiments.

In Fig. 1 is shown the usual type of drawbar key 10, adapted to be inserted through the draft sills of a railway car and the draft rigging between them. (Not shown.) Such a key 10 serves to transmit the pull on the rigging to the sills, as well as to support the rigging. This key 10 consists of a flat, round-edged bar with one end 11 slightly tapered to facilitate insertion through sills and draft rigging, and with a lateral head 12 at the other end to prevent the key from working through the corresponding sill. At the end 11, the key 10 has a round (cylindrical) opening 13 for a retainer 14 to prevent working out of the key in service.

As shown in Figs. 1, 2 and 3, the draft key retainer 14 comprises parts or sections 15, 16 inserted in the opening 13 already mentioned and co-operating to secure one another therein. The part 15—which may be distinguished as the retainer proper, while the other part 16 may be distinguished as a fastener—has an elongated and approximately diamond-shaped head, formed by rounded ears 17, 17 projecting laterally from the upper end of its shank or body portion. It also has an opening for the fastener 16, which extends through the key 10 and the retainer 15 and secures the latter in the key. The fastener 16 fits in the opening of the retainer 15, and has a head 18 for engaging the lower side of the key 10 to prevent withdrawal of the key 15 from the opening 13. As shown in Figs. 2 and 3, the interfitting parts 15 and 16 are inserted in the retainer opening 13 from opposite sides of the key 10: the retainer 15 from the top, and the fastener 16 from the bottom. In the present instance, the retainer 15 has the hollow form of a cylindrical sleeve, headed as already described, while the fastener 16 consists of a strip bent to a form somewhat resembling an inverted staple, with its outer side rounded to conform to the interior of the retainer 15 when the parts are telescoped one within the other. As shown in Figs. 2 and 3, the fastener head 18 is formed by bending or doubling the fastener strip outward at the corners of the staple so as to project outward beneath and beyond the lower end of the retainer sleeve and underlie the key 10 adjacent the opening 13. The upper free ends 19, 19 of the inverted staple-like fastener 16 are turned or bent outward to overlie and engage or interlock with the upper surface of the retainer 15, and lock the fastener 16 therein.

In practice, the fastener 16 may be made of springy metal, so that its bottom cross member or bight 20 can be bent or bowed downward slightly as shown in Fig. 3 by squeezing its sides or legs together, so as to bring the upper free ends 19, 19 together sufficiently to permit their insertion through the retainer 15. After insertion, the bowed cross piece 20 will flatten itself and the ends 19, 19 thus separate and expand into interlocking engagement with the retainer 15, as shown in Fig. 2.

The retainer shown in Figs. 4 and 5 dif-

fers from that of Figs. 1-3 in that the head of the retainer 15^a proper is rectangular and straight-sided, instead of diamond-shaped as shown in Fig. 1. Also, the inner corners 5 21^a at the lower end of its bore are reduced or notched somewhat as shown in Fig. 4, to permit easier bending of the retainer strip at these points. The shoulders 18^a, 18^a at the lower end of the fastener 16^a slope or 10 flare outward in conformity with the bevels 21^a, 21^a. The engagement of these sloping portions 18^a, 18^a of the fasteners 16^a in the grooves 21^a, 21^a formed by the corresponding flare of the retainer 15^a locks the fastener 15 16^a against rotation in the retainer 15^a, thus making it impossible for the fastener to become angularly displaced from the position with reference to the retainer shown in Figs. 4 and 5 into such a position as to come in contact with a drawbar sill and be subjected to 20 wear.

From Figs. 1 and 5 of the drawings, it will readily be seen that in service the retainer 15 or 15^a proper will engage against the draft 25 sill to prevent withdrawal of the key 10 and to take the wear to the exclusion of the fastener 16 or 16^a, which is protected and prevented from coming in contact with the sill. Accordingly, it is impossible for the fastener 30 to become worn out and allow the retainer to become lost.

What is claimed is:

1. A draft key retainer comprising a flanged tubular member supported by its 35 flange in the opening in a draft key, and a yieldable fastening element insertible and expansible within said tubular member, and having means on each end thereof for retaining the same in interlocked relation with 40 said tubular member.

2. A draft key retainer comprising a flanged tubular member supported by its flange in the opening in a draft key, and a 45 yieldable fastening element insertible and expansible within said tubular member, and having means on each end thereof for retaining the same in interlocked relation with said tubular member whereby to retain the 50 tubular member and said yieldable fastening element in position within the draft key opening.

3. A draft key retainer comprising a flanged tubular member formed of non-yielding material supported by its flange in a draft key opening, and a yieldable fastening 55 element insertible and expansible within said tubular member, and having means on each end thereof engaged with adjacent ends of the tubular member to retain said tubular member and said fastening element in assembled position within the draft key opening. 60

4. A draft key retainer comprising a tubular member positioned in a draft key opening, and a yieldable fastening element insertible and expansible within said tubular 65 member with the ends thereof positioned beyond the ends of the tubular member and so formed as to retain said fastening element and tubular member in interlocked relation. 70

5. A draft key retainer comprising a flanged tubular member formed of non-yielding material adapted to be positioned in a draft key opening and a yieldable fastening 75 element insertible and expansible within said tubular member, and means on each end of said fastening element engaged with adjacent ends of the tubular member for retaining said tubular member and said fastening element in assembled position within the draft key opening.

6. In an apertured draft key, a retainer comprising an inflexible flanged member in the aperture and closely engaging the walls thereof, and a yieldable headed fastener insertible and expansible into interlocked engagement with said inflexible member. 85

7. In an apertured draft key, a headed tubular retainer arranged in the key aperture, and means extending through the retainer 90 and engaging the ends thereof for securing the retainer in said aperture.

8. A draft key retainer comprising a headed sleeve, and a fastener comprising a staple with shouldered bight and out-turned ends 95 insertible through said sleeve, said bight and ends engaging the ends of the sleeve within the plane of the edge of the head on said sleeve.

In witness whereof I have hereunto set my 100 hand.

CHARLES H. EVANS.