Dec. 28, 1926. 1,612,485

M. C. BLEST

DRAFT RIGGING

Filed Jan. 13. 1923

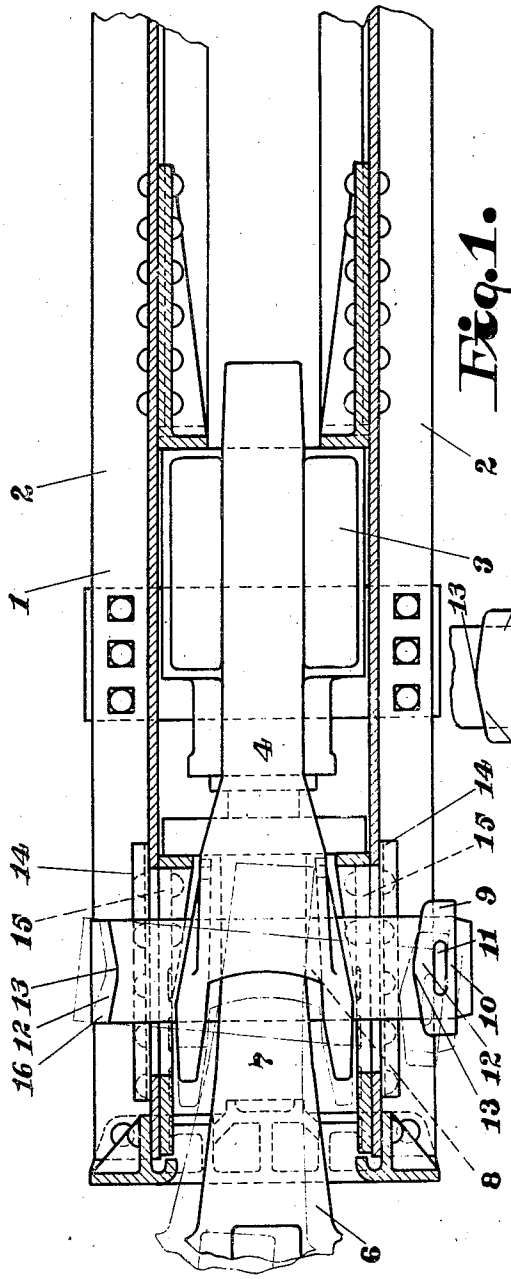


Fig. 1.

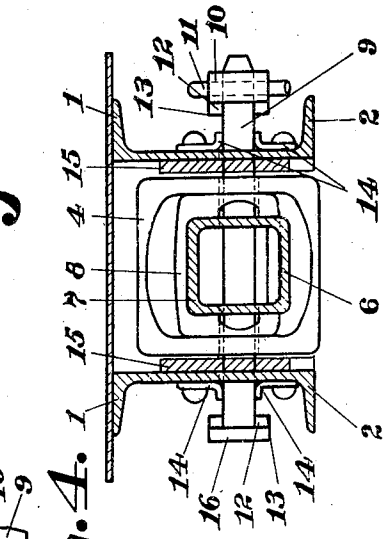


Fig. 3.

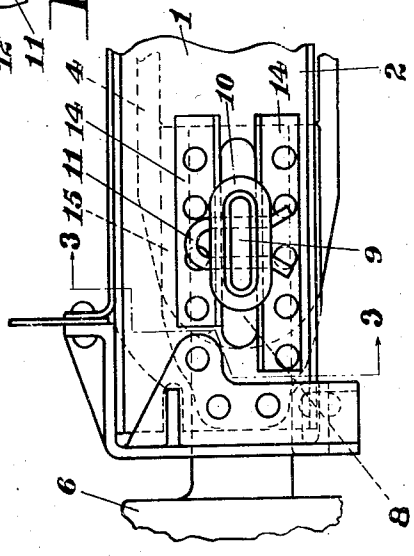


Fig. 2.

Fig. 4.

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UNITED STATES PATENT OFFICE.

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DRAFT RIGGING.

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This invention relates to railway draft rigging and has for an object the provision of a draft key washer of such a form that the shearing stresses caused by the washer engaging the draft sill will be transmitted directly to the means for securing the washer to the key regardless of the position of the key and will thus reduce to a minimum the danger of shearing such securing means and consequent loss of the washer and key.

Heretofore draft key washers have been provided having flat inner bearing surfaces which extend continuously from side to side of the washer and are adapted to engage the draft sills. These washers have been secured to draft keys by means of a single or a plurality of securing members, which in some cases pass through the washers and keys and in other cases pass through the keys only, the outer surfaces of the washers in these latter cases only contacting with the securing members. When a washer of this type is secured to a draft key by a plurality of securing members which pass through the washer and through the key, it will be noted that when such key has been moved at an angle to the draft sill, the side portion of the washer adjacent one of the longitudinal edges of the key, will engage the sill, and will thus form a leverage which causes severe shearing stresses in one direction, on one of the securing members and at the same time causes similar shearing stresses in the opposite direction on the other securing member. It will also be noted that when a draft key having a washer of the type just described secured thereto by means of a plurality of members which pass through the key only, is moved at an angle to the sill, the entire shearing stresses will come upon one of these securing members only. It is an object of this invention to provide a draft key washer which will eliminate the above objectionable features.

Referring to the drawings in which like reference characters refer to like parts, Figure 1 is a sectional plan view of a portion of a railway car with the invention mounted thereon. Fig. 2 is a side elevational view of the same; Fig. 3 is a sectional view of the same taken on the line 3—3 of Fig. 2 and Fig. 4 is a plan view of a modification of the manner of securing the draft key washer.

Referring now in detail to the drawing, the reference character 1 indicates the draft sill or center sill of a railway car, which may be of any suitable construction, and which is illustrated in the drawing as comprising spaced channel members 2 suitably connected together.

Between the members 2 a draft rigging is mounted, which comprises a shock absorbing device 3 and yoke 4, and a coupler 6. The shank of this coupler extends into a jaw 8 formed in the outer end portion of the yoke and is connected with such jaw portion and sills by means of a transverse key member 9, which passes through openings formed in the sill members 2, jaw portion 8 of the yoke and shank 7. The key 9 is of greater length than the distance between the webs of the sill members 2 and when in operative position, extends beyond such webs. One end of this key is provided with a washer 10 which preferably surrounds the key and is secured thereto, preferably by a U-shaped member 11, both legs of which extend through the two thicknesses of the washer and the key, which legs at their lower ends are so bent that the member will be held against accidental loss. This washer is of greater width at its central portion than at its side portions, and is provided with an inwardly extending projection 12, the sides of which slope from each side of the washer toward the sill, the apex or inner bearing surface 13 of such projection being located intermediate the side edges of the key, and adapted to engage the sill or a member 14 secured to the sill when the key is moved at an angle to the sill, as shown in dot and dash lines in Fig. 1, and when the key is moved at right angles to the sill from its normal operative position shown in full lines in this figure. It will be noted that as the apex 13 of the projection 12 is at substantially the longitudinal center line of the key and the legs of the securing members are arranged on both sides of such center line, any shearing stresses caused by the washer engaging the sill or member 14 will be transmitted to both of the legs of the securing member equally. Instead of engaging the sill or member 14 the washer 10 may engage the cheek plates 15. This may be done by eliminating the member 14 and so forming the cheek plates that a portion thereof will extend through the opening formed in the sills for the reception of the key. It will be understood that instead of making

the projection 12 of the washer 10 of the shape just described, it may be made of any other suitable shape by which the shearing stresses caused by the washer engaging the sills or the member 14 will be transmitted centrally of the washer to the washer securing means.

The opposite end portion of this key is provided with an integral head portion 16, the inwardly extending projection of which is preferably of the same shape as the projection 12 of the washer 10. If desired, this integral head may be omitted, and both ends of the key provided with a washer 10.

In Figure 4, a modification of the invention has been illustrated, in which the washer 10 is secured to the key by means of a U-shaped member, which passes through the key only, and forms an abutment for the washer. The operation of this washer is substantially the same as the washer just described.

It will be apparent to those skilled in the art to which this invention appertains that changes may be made in the arrangement and form of the details of the invention without departing from the spirit and scope of the appended claims.

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

1. The combination with a sill of a railway car, of draft rigging associated therewith, said rigging comprising a key extending beyond said sill and movable at different angles thereto, and V-shaped means on said key adapted to engage said sill whereby the stresses set up longitudinally of said key are transmitted centrally of said means regardless of the angular position of said key.

2. The combination of a sill of a railway car, of draft rigging associated therewith, said rigging comprising a key extending beyond said sill and movable at different angles thereto, a washer secured to said key and adapted to engage said sill, and V-shaped means on said washer whereby the stresses set up longitudinally of said key regardless of the angular position are transmitted centrally of said washer.

3. The combination with draft sills of a railway car, of draft rigging mounted thereon, said rigging comprising a key adapted to assume different angular positions relative to said sills, and projections on said key adapted to engage said sills, and apply centrally thereof stresses set up longitudinally of said key regardless of the position of said key.

4. The combination with a draft sill of a railway car, of draft rigging associated therewith, said rigging comprising a key, and means on said key having vertically aligned apices adapted to engage said sill.

5. The combination with the draft sills of a railway car, of draft rigging associated therewith, said rigging comprising a key loosely mounted relative to said sills and adapted to assume various angular positions relative to said sills, and projections at substantially the longitudinal center line of said key adapted to engage said sills regardless of the position of said key.

In testimony whereof I affix my signature.

MINOT C. BLEST.