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FINGER GUARD FOR BRAKE BEAMS.

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919,565. Patented Apr. 27, 1909.

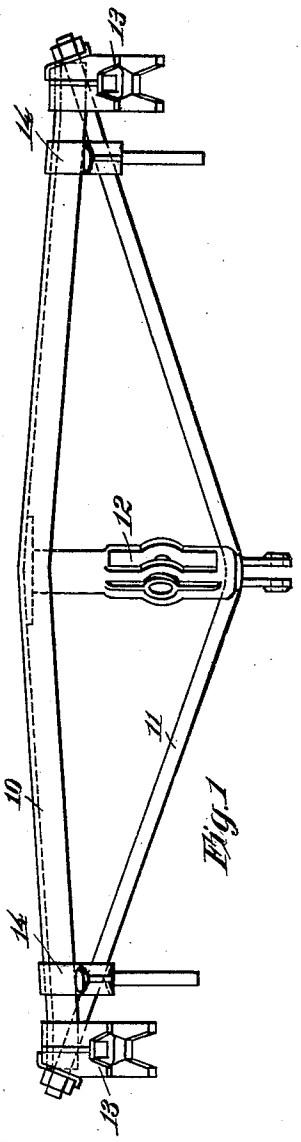

Fig. 1.

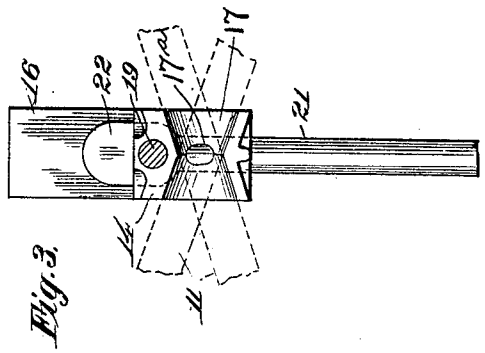

Fig. 3.

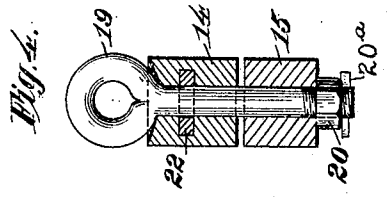

Fig. 4.

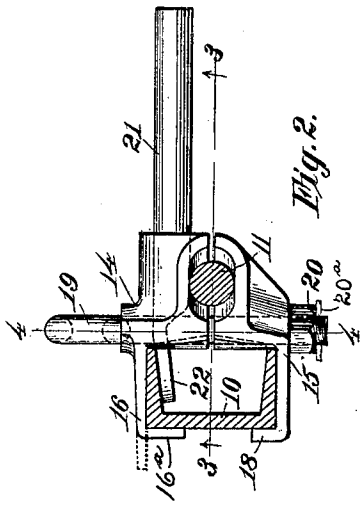

Fig. 2.

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FINGER-GUARD FOR BRAKE-BEAMS.

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To all whom it may concern:

Be it known that I, WILLIAM E. FOWLER, Jr., a citizen of the United States, residing at Hammond, in the county of Lake and State of Indiana, have invented certain new and useful Improvements in Finger-Guards for Brake-Beams, of which the following is a specification.

One of the main and leading features of this invention is the construction of a finger-guard for a car-truck brake-beam which will be fixedly held in place, which may be secured to the brake-beam with facility, and which may be readily and easily fastened to either end of the beam, a brake-beam tension member seat being provided thereon which is adapted to accommodate either of the oppositely-inclined or divergent ends of the tension rod. In other words, the seat is made divergent or doubly inclined whereby either portion may be used for the tension member, depending upon which end of the brake-beam the finger-guard is secured. Preferably the clamp portion of the guard is divided or made in two parts, which are bolted or otherwise fastened together and to the brake-beam. The finger proper is extended through an aperture in the clamp having a flat inner head intended to be wedged against and rest upon one of the flanges of the brake beam compression member. In the specific form of guard finger shown and described herein, the bolt which fastens together the two parts of the clamp also passes through a hole or aperture in the flat head of the finger or pin proper, and the finger-guard bears directly on the tension rod of the beam.

On the accompanying drawings I have illustrated a desirable embodiment of my invention, and on this drawing—Figure 1 is a plan view of a brake-beam equipped with my improved form of finger-guards; Fig. 2 is a side view of one of the finger-guards, the tension and compression members of the brake-beam being shown in section; Fig. 3 is a section on line 3—3 of Fig. 2, the members of the brake-beam being omitted; and Fig. 4 is a section on line 4—4 of Fig. 2.

As is clearly indicated in Fig. 1, the brake-beam has the usual cambered, channel compression member 10, tension rod 11, center strut or post 12, and brake-heads 13. At each end of the beam adjacent to each of the heads I provide a finger guard of the construction shown more clearly in detail in Figs. 2, 3 and 4. This guard has a clamp composed of two members 14 and 15, the former having a flat plate portion 16 adapted to rest on the top of the brake-beam and have its end 16^a bent over the back surface thereof, and a tension rod seat 17 curved in cross-section, contracted at its center, and having flaring outer ends, whereby this part of the guard may be readily secured to either end of the brake-beam and have a seat at the proper angle to accommodate the tension rod. I have indicated in Fig. 3, in dotted lines, how this portion of the clamp may receive the tension rod, regardless of the direction of inclination of the latter. The member 15 of the clamp fits beneath the compression member 10, having an upstanding flange 18 which engages the back side of the beam. At its opposite end this member 15 has a doubly-flared seat corresponding in shape and construction to and adapted to register with that of the companion clamp member 14. An eye bolt 19 equipped with a nut 20 and cotter pin 20^a passes through apertures in these two clamping members between the tension and compression members and securely and detachably fastens the two portions of the clamp to the brake beam.

The clamping member 14 is provided with an aperture therethrough transversely of the brake-beam and slightly intersecting the tension rod seat 17 at 17^a which is adapted to accommodate a portion or part of the cylindrical body of the independent guard-finger or pin 21 and a part of its inner flat head 22, which is provided with a hole in alinement with the apertures of the clamping members 14 and 15 to permit the bolt 19 to pass therethrough. The flat head 22 of the cylindrical pin or finger 21 is slightly angularly disposed with relation to the axis of the pin, so as to neatly lie against the inner face of the upper flange of the channel compression member 10 of the brake-beam, as is clearly indicated in Fig. 2. The finger guard and its clamp are fastened or applied to the brake-beam by placing the finger or pin 22 in its aperture in member 14, then driving these united parts on to the top flange of the beam, the flange acting as a

wedge to firmly hold the pin or finger in place and against the top of tension rod 11. Subsequently the end 16ª of the strip 16 is bent down as shown in full lines in Fig. 2 to prevent separation of the parts. The clamp member 15 and eye bolt 19 are applied, the bolt acting to bind together the two parts of the clamp and its eye providing convenient means for the attachment of a safety chain.

It will be apparent to those skilled in this art from this description and illustration that my improved finger guard is supplied with a divided clamping member which may be readily secured to or detached from the brake-beam, and, furthermore, that this clamp is supplied with a tension rod seat of such shape and form that it can be employed at either end of the brake beam and still have a seat disposed at the proper angle to accommodate the end portion of the tension rod, these end portions of the rod being oppositely-inclined at the two ends of the brake-beam, as is apparent. Furthermore, the finger or pin is of simple construction, is readily inserted in or removed from the clamp, prevented from rotating, and is firmly and rigidly held in place.

This construction may be modified in its minor mechanical features without sacrificing the advantages and benefits of my invention and without departure from its substance and essence.

I claim:

1. In a finger-guard for a railway car-truck brake-beam, a clamp adapted to be secured to said beam and having a seat for the tension member of the beam, said seat having two oppositely flared portions whereby the clamp may be used at either end of the brake-beam, substantially as described.

2. In a finger-guard for a railway car-truck brake-beam, the combination of a divided clamp adapted to be secured to said beam and having a seat for the tension member of the beam, said seat having two oppositely flared portions, whereby the clamp may be used at either end of the brake-beam, and means to secure the parts of said clamp to said brake-beam, substantially as described.

3. In a finger-guard for a railway car-truck brake-beam, the combination of a clamp adapted to be secured to said brake-beam and having a seat for the tension member of the beam with two oppositely flared portions whereby the clamp may be used at either end of the brake-beam, said clamp also having an aperture, and a removable finger-guard extended through said aperture, substantially as described.

4. In a finger-guard for a railway car-truck brake-beam, the combination of a clamp adapted to be secured to said brake-beam and having a seat for the tension member of the beam, said seat having two oppositely flared portions, whereby the clamp may be used at either end of the brake-beam, said clamp also having an aperture, and a removable finger-guard extended through said aperture and having a head adapted to bear on a flange of the compression member of the brake-beam, substantially as described.

5. In a finger-guard for a railway car-truck brake-beam, the combination of a divided clamp adapted to be secured to said brake-beam and having a seat for the tension member of the beam with two oppositely flared portions, whereby the clamp may be used at either end of the brake-beam, means to hold the parts of said clamp to said brake-beam, said clamp having an aperture, and a removable guard-finger extended through said aperture and having a flat head adapted to bear on a flange of the compression member, substantially as described.

6. In a finger-guard for a railway car-truck brake-beam, the combination of an apertured clamp adapted to be secured to said brake-beam, and a finger or pin adapted to fit in said aperture, said pin having a flat head larger than said aperture and disposed substantially longitudinally of the finger or pin, substantially as described.

7. In a finger-guard for a railway car-truck brake-beam, the combination of an apertured clamp adapted to be fastened to said brake-beam, and a guard-finger or pin extended through said aperture and having a flat head disposed substantially longitudinally of the pin and adapted to bear against a flange of the compression member of the brake-beam, substantially as described.

8. In a finger-guard for a railway car-truck brake-beam, the combination of a clamp member having a portion adapted to bear on one face of a flange of the compression member of the brake-beam, the end of said portion being adapted to be bent over the back of the beam, a companion clamp member, means to bind the two members together, said first mentioned clamp member having an aperture therethrough, and a guard-finger located in said aperture and having a flat head adapted to coöperate with the opposite side of said flange, whereby the flange acts as a wedge to firmly hold the guard-finger in place, substantially as described.

9. In a finger-guard for a railway car-truck brake-beam, the combination of a pair of clamp members having registering seats adapted to accommodate the tension member of the brake-beam, each of said clamp members bearing against a flange of the compression member of the brake-beam, means to secure said clamp members together, one of said clamp members having

an aperture intersecting its tension rod seat, and a guard-finger in said aperture having a flat head adapted to coöperate with the inner face of one of the flanges of the brake-beam compression member, whereby said flange acts as a wedge to hold said guard-finger in place and force it against the tension rod of the brake-beam, substantially as described.

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