

BRAKE BEAM.

1,041,222.

UNITED STATES PATENT OFFICE.

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BRAKE-BEAM.

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To all whom it may concern:

Be it known that I, HENRY ZIEMSS, Jr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brake-Beams, of which the following is a specification.

One of the objects of this invention is to provide improved means for securing together the compression member, the tension member and the thrust block or sleeve of a brake beam.

Another object of the invention is to provide improved means for locking the brake head against withdrawal from the brake beam.

A further object is to improve the means for securing the brake head against accidental rotation upon the beam.

The invention also relates to the other improvements in brake beams hereinafter set forth.

In the accompanying drawings, Figure 1 is a horizontal sectional view through one end of a brake beam embodying the features of my invention. Fig. 2 is a vertical sectional view taken on the plane of dotted line 2 2 of Fig. 1. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a fragmental view similar to that of Fig. 1, but showing the parts in different position. Fig. 5 is a detail view of one of the locking members.

The embodiment selected for illustration comprises a compression member 1, a tension member 2, and a thrust block or sleeve 3.

As herein shown, the compression member 1 is in the form of a channel or U-shape bar and the tension member consists of a round rod, but it will be understood that other shapes may be substituted therefor. The sleeve 3 is adapted to fit over the ends of the compression member and the tension member, has an end wall 4 against which the compression member abuts, and is provided with an opening 5 through which the tension member 2 extends. The compression members, the tension member and the sleeve are secured together by means herein shown as comprising two wedging keys 6 at opposite sides of the tension member. Said keys lie within key-ways 7 formed in the sides of the tension member and bear upon one wall of said key-ways and a wedging surface 8 upon the sleeve 3. One end of each key is

screw-threaded and passes through an open- end slot 9 in the sleeve 3. The keys are confined against lateral displacement by means of ribs 10 upon the outer end of the sleeve 3, and are moved to place tension upon the bars by means of nuts 11 turned upon the threaded ends of the keys.

In the construction herein shown, the sleeve 3 is substantially cylindrical in form to receive a brake head 12 having a round opening 13 therein, said brake head being adapted to lie against an annular flange 14 upon the inner end of the sleeve.

The means for adjustably locking the brake head against rotation upon the sleeve 3 comprises a block 15 slidably mounted in an opening 16 extending through one side of the sleeve, the outer face of said block being curved to conform to the periphery of said sleeve. The curved face of the block 15 is toothed, as at 17, to engage teeth 18 formed in the wall of the opening 13 in the brake head, the toothed surface 18, as herein shown, constituting nearly one-half of the periphery of said opening.

Upon the outer face of the block 15 is a locking lug 19 adapted to extend into a groove 20 formed in the walls of the opening 13 of the brake head, which groove may extend around substantially one-half of the opening, as illustrated in Fig. 2. At the lower side of the opening 13 the groove 20 is extended laterally and horizontally as at 21 to the opposite sides of the brake head. When the brake head is to be removed from the sleeve 3, said head is rotated until the opening 21 is in alinement with the lug 19, when said brake head may be slid off the sleeve. The opening 21 is extended to both sides of the brake head merely to adapt the head for use upon either end of the brake beam.

The toothed block 15 is held in engagement with the serrated surface 18 of the brake head by means comprising, in this instance, a wedge 22 adapted to engage a wedging surface 23 upon the block 15 and having a concave surface 24 to bear upon the truss rod 2. The means herein shown for moving the wedge 22 is a screw 25 seated in an opening 26 in the sleeve 3 and having a square outer end by means of which it may be rotated. The inner end of the screw 25 is in the form of a head 27 adapted to lie in an

opening 28 in the wedge 22. The screw 25 is reduced in diameter to form a neck 29 which is mounted in a slot 30 in the wedge 22. The screw is locked in position by means of a set nut 31.

When the wedge 22 is forced inwardly into contact with the block 15, the brake head is rigidly held against rotation upon the sleeve 3. In order that the head may, if desired, be yieldingly held against rotation, I have provided yielding means interposed between the block 15 and the wedge 22 so that when the latter is withdrawn from engagement with the block 15 said block will be yieldingly held in engagement with the toothed surface 18. Said yielding means, as herein shown, comprises a leaf-spring 32 adapted to lie within a shallow recess 33 in the rear face of the block 15, and a coiled spring 34 seated in a pocket 35 in the block 15 and bearing against one end wall of said pocket and the leaf-spring 32. If desired, a pin 36 may be secured to the spring 32, said pin extending into the coiled spring 34.

When it is desired to lock the brake head rigidly upon the brake beam, the wedge 22 is operated to force the block 15 firmly into engagement with the serrated surface 18 of the brake head, as shown in Figs. 1 and 2.

If it be desired to leave the brake head free to adjust itself to the wheel, the wedge 22 is positioned so that the springs 32 and 34 alone hold the block 15 in engagement with the toothed surface 18. In all of the positions assumed by the brake head when in use, it is securely held against displacement from the brake beam by the engagement between the lug 19 and the walls of the groove 20.

It is obvious that the brake-head securing means herein shown may be used with brake beams of various constructions.

I wish it to be understood that I desire not to be limited to the details of construction illustrated and described, for various modifications will occur to persons skilled in the art.

I claim as my invention:

1. In a brake beam, a compression member, a tension member, a connecting member, and a wedge interposed between said tension member and said connecting member for holding the parts together.

2. In a brake beam, in combination, a compression member, a tension member, a connecting member, and a wedging key extending through a recess in said tension member, said connecting member having a wedging surface which is contacted by said wedging key, the latter having a screw-threaded portion, and a nut mounted on said threaded portion bearing against said connecting member.

3. The combination with a brake beam, of a brake head rotatably mounted thereon, a

toothed member in said brake beam adapted to engage a toothed surface on said brake head, and means in said brake beam for moving said toothed member.

4. The combination of a brake beam, a brake head rotatably mounted thereon, a member slidably mounted in said brake beam and adapted to engage said head, and means in said brake beam for moving said toothed member.

5. The combination of a brake beam, a brake head rotatably mounted thereon, a member slidably mounted in said brake beam and adapted to engage said brake head, a wedge in said brake beam adapted to move said slidably mounted member, and means for moving said wedge.

6. The combination of a brake beam, a brake head rotatably mounted thereon, a wedging block slidably mounted in said beam and having teeth adapted to engage a toothed surface on said brake head, a wedge slidably mounted in said brake beam adapted to engage said wedging block, and means for moving said wedge.

7. The combination of a brake beam comprising a sleeve having an opening in one of its sides, a locking block slidably mounted in said opening and curved upon its outer side to conform to the periphery of said sleeve, said outer side being toothed and having a locking projection, a brake head mounted on said sleeve, and means for engaging said toothed surface and said locking projection with said head.

8. The combination of a brake beam, a brake head, a member carried by said beam and adapted to engage said head, and means for yieldingly holding said member in engagement with said head.

9. The combination of a brake beam, a brake head mounted on said beam, a head-locking member, a wedge for moving said member, and yielding means interposed between said wedge and said member.

10. The combination of a brake beam, a brake head mounted on said beam, a head-locking member, means for moving said member into engagement with said head, and yielding means interposed between said moving means and said member.

11. The combination of a brake beam, a brake head mounted on said beam, means in said beam for locking said head thereon, and means operable from the end of said beam for operating said locking means.

12. The combination of a brake beam comprising a sleeve, a brake head mounted on said sleeve, means in said sleeve for locking said head thereon, and a screw operable from the end of said sleeve for operating said locking means.

13. The combination of a brake beam comprising a tension member and a sleeve, a brake head mounted on said sleeve, means

in said sleeve for locking said head thereon, and a wedge for operating said locking means, said wedge being slidably mounted on said tension member.

5 14. The combination with a brake beam having a thrust block, of a brake head mounted thereon, and a spring-supported locking block arranged within the thrust block.

10 15. The combination with a brake beam having a sleeve, a spring-supported serrated locking block mounted in the sleeve, and a brake head with which the serrated face of said locking block coöperates.

15 16. The combination with a brake beam having a sleeve provided with a chamber for a locking block, a spring-supported locking block arranged in said chamber, and a brake head mounted on the sleeve.

20 17. A brake beam having a chambered sleeve on its end and a yielding locking block arranged in the chamber of said sleeve.

18. A brake beam having a chambered sleeve on its end and a yielding locking block arranged in said chamber above the lowest point of the sleeve.

25 19. A brake beam having a chambered sleeve on its end in combination with a brake head, a yielding member mounted in said chamber and so exerting its pressure that it will take up the clearance between the brake head and beam so as to prevent the head from rattling.

30 20. The combination of a brake beam and a brake head connected thereto by means of a bayonet lock, and yielding means on said brake beam for holding the head in adjusted positions.

21. The combination with a brake beam, of a movable brake head and an automatically yielding locking block mounted in a part of the brake beam and arranged within the brake head for preventing the tipping or gravitation of the head on the beam.

45 22. The combination with a brake beam having journaled ends, of a brake head and a spring-supported locking block arranged within the journaled end of the beam.

23. The combination with a brake beam having a sleeve at its end, of a brake head 50 mounted on said sleeve, a yielding locking block mounted in the sleeve, and means for preventing the longitudinal displacement of the brake head.

24. A sleeve for brake beams having a 55 rectangular chamber for the reception of a yielding locking block.

25. In a brake beam, the combination with a compression member, of a thrust member at the end of said compression member, a 60 brake head revolubly mounted on said thrust member, and yielding means arranged in said thrust member for holding said brake head in position.

26. A thrust member for brake beams, 65 having a seat for a compression member and means for the attachment of a tension member thereto, said thrust member also providing a mount for the brake head and said mount having a transversely disposed 70 chamber for the reception of a locking block.

27. The combination with a brake head, of a part of the brake beam on which it is mounted, said part having a transversely disposed opening, and a friction block ar- 75 ranged therein.

28. The combination with a brake head, of a part of the brake beam on which it is mounted, said part having a transversely disposed opening, and a yielding friction 80 block arranged therein.

29. The combination with a brake head, of a part of the brake beam on which it is mounted, said part having a transversely disposed opening, and an outwardly pressed 85 friction block arranged therein.

30. The combination of a brake head, and an expansible part of a brake beam on which the same is mounted.

31. The combination of a brake head, and 90 a yielding expansible part of a brake beam on which the same is mounted.

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Witnesses:

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