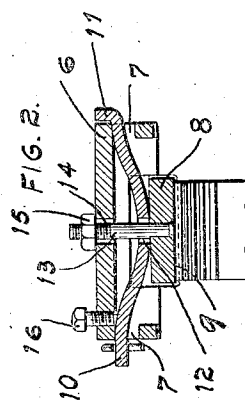
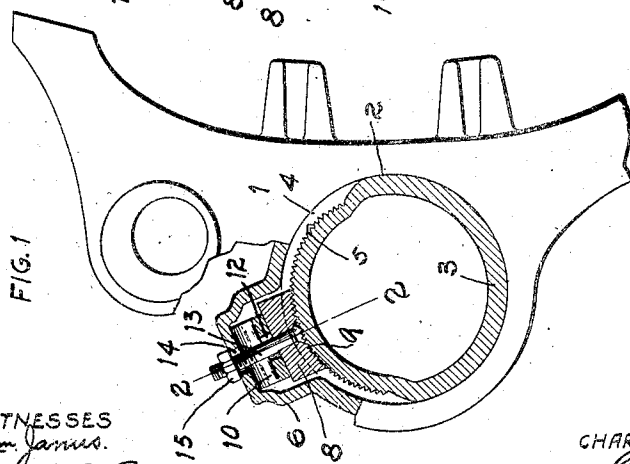
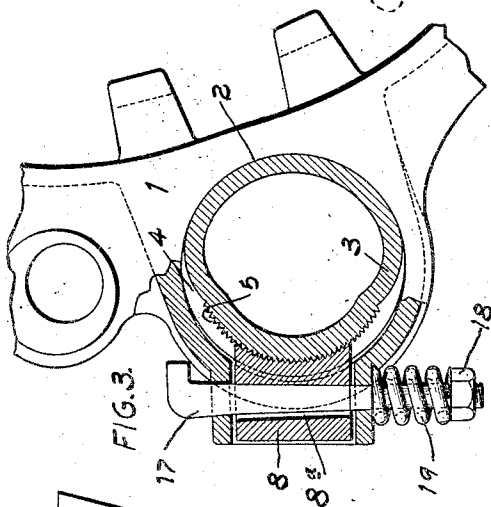
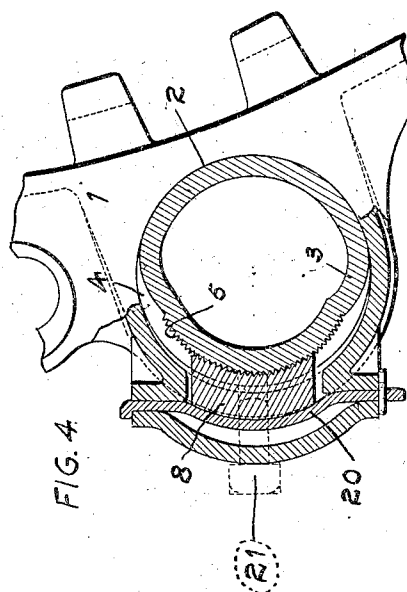
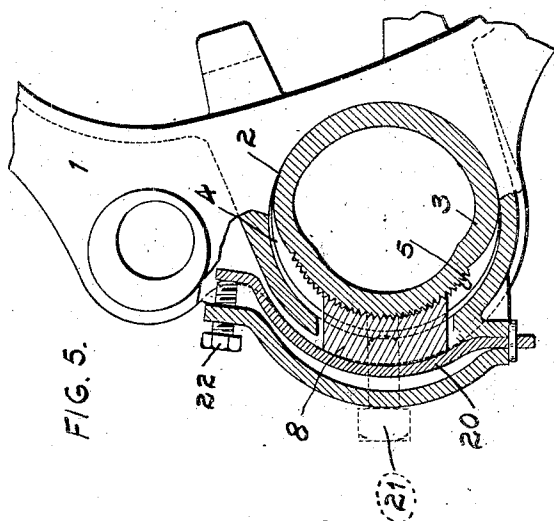


C. H. WILLIAMS, JR.
BRAKE BEAM.
APPLICATION FILED JULY 17, 1909.

957,400.

Patented May 10, 1910.



WITNESSES
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BRAKE-BEAM

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Specification of Letters Patent.

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Application filed July 17, 1909. Serial No. 508,124.

To all whom it may concern:

Be it known that I, CHARLES H. WILLIAMS, JR., a citizen of the United States, residing at Chicago, Illinois, have invented a certain new and useful Improvement in Brake-Beams, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of the brake head used on my improved beam, with parts thereof in section. Fig. 2 is a section taken on the line 2—2 of Fig. 1. Fig. 3 is a side elevation of a brake head, partly in section, and illustrating a modified arrangement of the means employed for locking the head on the beam. Fig. 4 is a side elevation of a brake head, partly in section, and showing a further modified form of the means employed for locking said head on the beam. Fig. 5 is a side elevation of a brake head, partly in section, and illustrating a further modified arrangement of the means employed for locking the head on the beam.

My invention relates generally to brake beams, and more particularly to the brake heads and the means employed for adjustably mounting the same on the ends of the beam, and my invention relates to that class of adjustable brake heads illustrated in the patent issued to Henry B. Robischung, No. 485,823, November 8th, 1892.

The principal object of my invention is to generally improve the construction shown in the patent above referred to, and to use a flat or leaf spring for forcing the locking block into engagement with the sleeve on the end of the brake beam, which construction does away with the use of a coil spring, and thereby economizes space, which is an important factor in brake beam construction. In the patent above referred to the heads are adjustably locked on the ends of the beam in such a manner that when the beams are hung in proper position the heads will automatically adjust themselves to the surfaces of the wheels, regardless of the character or position of the brake hangings, and during which automatic adjustment the locking blocks between the heads and beam yield to permit the heads to assume their proper positions, and which blocks firmly

hold and lock the heads in proper positions during the time the brakes are off.

As hereinbefore stated, the principal object of my present invention is to generally improve the construction of the Robischung beam, and in addition, to provide a construction wherein a considerable saving of space is effected in the arrangement of the locking block, spring and housing, which saving of space is particularly desirable, especially in inside hung brakes. By my improved construction, the spring-pressed locking block is located at the ideal point on the brake head, the taking up of all wear and lost motion is provided for, and a simple, compact construction is provided which is very effective in use and which permits the brake heads to be readily positioned upon or removed from the ends of the beam.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts hereinafter more fully described and claimed.

Referring by numerals to the accompanying drawings, 1 designates the brake head which is provided with the usual opening 2, which receives the thrust block or sleeve 3, and which latter is detachably positioned on the end of the beam. Formed in the surface of the thrust block or sleeve 3 is a segmental recess 4, the bottom of which is provided with transverse serrations or teeth 5. Formed integral with the brake head 1 is a combined locking block and spring housing 6, the same being preferably arranged above the opening 2, and slightly to the rear of a vertical line drawn through the center of said opening and formed in the ends of this housing 6 are apertures 7. Positioned in the center of the housing 6 is a locking block 8, the under side of which is provided with a series of transverse serrations or teeth 9, which are adapted to engage with the serrations or teeth 5.

10 designates a flat or leaf spring which is curved or bowed and provided at one end with an integral head 11. When the parts are assembled, the spring 10 occupies a position within the upper portion of the housing 6, its central portion bearing on top of the locking block 8 and its end portions projecting through the apertures 7 in the ends of the housing. Formed in the central portion of the spring 10 is an aperture 12 which accommodates a pin 13 seated in the

block 8, which pin passes through an opening 14 formed in the central portion of the housing 6, and the outer end of said pin being threaded and provided with an adjusting nut 15.

Passing through one end of the housing 6 is a screw 16, the inner end of which bears against the corresponding end of the spring 10, thus providing means for adjusting the tension of said spring.

In Fig. 3, I have illustrated a construction wherein the brake head is not automatically adjustable upon the end of the beam, but in this form of head I provide the locking block 8 with an aperture 8^a, and passing therethrough and through suitable apertures formed in the locking block housing is a wedge key 17, on the lower end of which is positioned a nut 18, and located upon the lower portion of said key and interposed between said nut on the under side of the housing is an expansive coil spring 19. The pressure normally exerted by this coil spring 19 tends to draw the wedge key 17 downward, thereby forcing the block 8 inwardly to rigidly engage and lock against the sleeve and compression block, thus taking up all wear between the front side thereof and the brake head, and also serving the purpose of an anti-rattler.

In Fig. 4, I have illustrated the head as being automatically adjustable on the beam, and the combined spring and locking block housing is arranged on the rear side of the head. In this construction, a bowed leaf spring 20 passes vertically through the housing, and the central portion of said spring bears against the locking block and normally forces the same against the serrated portion of the sleeve or thrust block. A tap bolt 21 passes through the rear portion of the housing, through the central portion of the spring 20, and is seated in the locking block and provides means for drawing said block rearward into the housing to permit the removal of the head from the sleeve without removing the spring.

In Fig. 5, I have illustrated a construction similar to the construction shown in Fig. 4, but with the addition of a screw or bolt 22 which passes through the upper portion of the housing and bears against the upper end of the spring 20 for the purpose of regulating the tension of said spring.

When the parts of my improved construction are assembled, as shown in Figs. 1 and 2, it will be noted that the energy of the spring 10 is so directed that all clearance space between the front and lower portion of the sleeve 3 and the head 1 is taken up, thereby doing away with all lost motion which might otherwise be transmitted to the brake mechanism. As hereinbefore stated, the housing 6, containing the locking block 8 and the spring, is located at the ideal point

on the head, as considered by the M. C. B., and by utilizing a flat or leaf spring, I am able to economize space, which is a matter of considerable importance, particularly on inside hung beams. The set screw 16 provides means for increasing or decreasing the tension of the spring 10, and by providing the pin 13 and nut 15, the locking block may be withdrawn to permit the removal of the head from the sleeve without removing the spring.

It will be readily understood that where brake heads of my improved construction are in use and the brakes are applied, the frictional force of the wheels on the shoes carried by the heads will be sufficient to overcome the gripping or locking action of the block 8, and thus the heads will automatically adjust themselves to the proper positions, whereupon the locking block will again lock the heads on the beam and retain the same in such position when the brakes are off or until said heads readjust themselves whenever cause arises to change the relation of the wheels and heads.

It will be readily understood that minor changes can be made in the construction and form of the various parts of the beam and head, without departing from the spirit of my invention.

I claim:

1. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks carried by the brake heads and engaging the beam, and flat springs carried by the heads and bearing against the locking blocks.

2. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks carried by the brake heads and engaging the beam, and adjustable flat springs carried by the heads and bearing against the locking blocks.

3. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks carried by the brake heads and engaging the beam, and flat springs removably arranged in the heads and bearing against the locking blocks.

4. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks carried by the brake heads and engaging the beam, and adjustable flat springs removably arranged in the heads and bearing against the locking blocks.

5. In a brake beam of the class described, a head provided with a housing, a locking block located therein, and a flat spring arranged therein and bearing against the locking block.

6. In a brake beam of the class described, a head provided with a housing, a locking block located therein, and an adjustable flat spring arranged therein and bearing against the locking block.

7. In a brake beam of the class described, a head provided with a housing, a locking block located therein, and a flat spring longitudinally disposed within the housing with its center bearing on the locking block and its ends seated in the ends of the housing.

8. In a brake beam of the class described, a head provided with a housing, a locking block located therein, a flat spring longitudinally disposed within the housing with its center bearing on the locking block and its ends seated in the ends of the housing, and means for adjusting the tension of said spring.

9. In a brake beam of the class described, a head provided with a housing, a locking block located therein, a flat spring longitudinally disposed within the housing with its center bearing on the locking block and its ends seated in the ends of the housing, and means for drawing the locking block into the housing against the tension of the spring.

10. In a brake beam of the class described, a head provided with a housing, a locking block located therein, a flat spring longitudinally disposed within the housing with its center bearing on the locking block and its ends seated in the center of the housing, means for adjusting the tension of said spring, and means for drawing the locking block into the housing against the tension of the spring.

11. In a brake beam of the class described, a head provided with a housing, there being openings in the ends of said housing, a locking block located within the housing, and a flat spring arranged in the housing and bearing against the locking block, the ends of which spring project through the openings in the ends of the housing.

12. In a brake beam of the class described, a head provided with a housing, there being openings in the ends of said housing, a locking block located within the housing, an adjustable flat spring arranged in the housing and bearing against the locking block, the ends of which spring project through the openings in the ends of the housing, and means carried by the locking block and extending to the exterior of the

housing for drawing the block into the housing against the resistance offered by the spring.

13. The combination with a brake beam, of a sleeve located on the ends thereof, there being a groove formed in said sleeve, the bottom of which groove is serrated, a brake head mounted on the sleeve, a locking block carried by the brake head, which locking block engages in the groove in the sleeve, and a flat spring carried by the head and bearing against the locking block.

14. The combination with a brake beam of a sleeve located on the ends thereof, there being a groove formed in said sleeve, the bottom of which groove is serrated, a brake head mounted on the sleeve, a locking block carried by the brake head, which locking block engages in the groove of the sleeve, an adjustable flat spring carried by the head and bearing against the locking block, and means whereby the locking block is withdrawn from engagement with the sleeve against the pressure of the spring.

15. A brake head having a spring housing open at each lateral extremity.

16. A brake head having a spring housing and a recess for a locking block in communication therewith and disposed at an angle thereto.

17. A brake head having a spring housing adapted to receive a leaf spring, and a locking block engaging the spring between its bearing points.

18. The combination with a brake head of a locking block loosely mounted therein and a flat spring carried by the head and bearing against said locking block.

19. The combination with a brake head of a locking block loosely arranged therein and having a corrugated face and a flat spring carried by the head and bearing against said block.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 2nd day of July 1909.

CHARLES H. WILLIAMS, Jr.

Witnesses:

EDWARD T. WALKER,
JOSEPH W. WEINLAND.