

1,018,618.

Fig. 1.

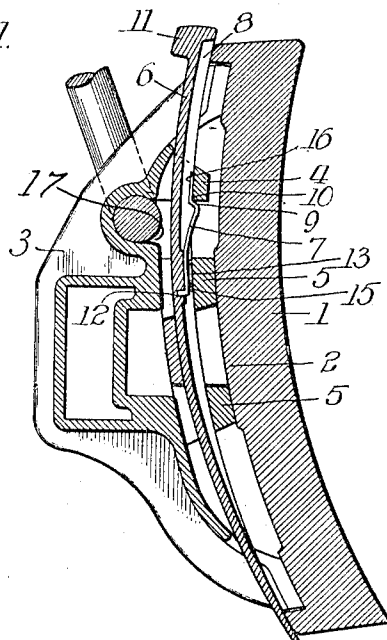


Fig. 2.

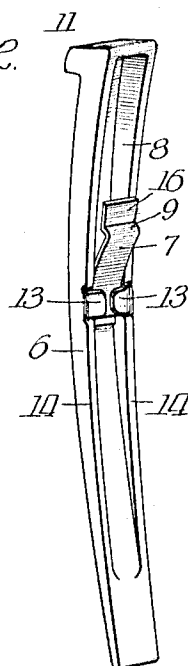


Fig. 3.

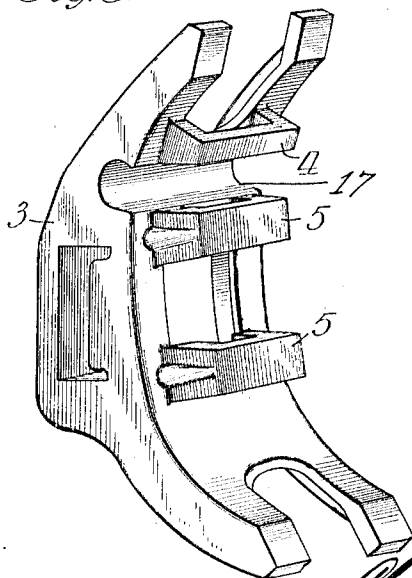
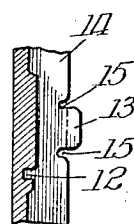


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BRAKE-HEAD AND KEY.

1,018,618.

Specification of Letters Patent.

Patented Feb. 27, 1912.

Application filed January 21, 1911. Serial No. 603,967.

To all whom it may concern:

Be it known that I, CHARLES F. HUNTOON, a citizen of the United States of America, and a resident of Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Brake-Heads and Keys, of which the following is a specification.

The main objects of this invention are to provide an improved construction for brake-heads and their keys, whereby the brake shoes will be securely held against becoming accidentally loosened in their connection with the head; to provide an improved form of breakhead; and to provide an improved form of breakhead key.

A specific embodiment of this invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a vertical section taken on a plane parallel with the plane of the car wheel, and illustrating the interfitting relation of the brakehead, shoe and key. Fig. 2 is a perspective view of the key. Fig. 3 is a perspective view of the breakhead. Fig. 4 is a fragmentary sectional detail of the key.

In the construction shown, the brake shoe 1 is of standard form, being provided with the usual central attaching lug 2. The brakehead 3 is, for the most part, of standard construction, but is provided on its face with a lug 4, in addition to the usual attaching lugs 5. The lugs 2 and 5 have the usual alined apertures which provide a key-way for the key 6, by means of which the shoe and head are locked together, and the lug 4 has a similar aperture to form a continuation of said key-way. The shank of the key 6 is suitably tapered so that when the key is driven to the position in which it is shown in Fig. 1, it will draw the shoe 1 into firm contact with the face of the head 3.

In the form shown, the key is curved, as usual, and its shank is grooved on the side which faces the shoe, so that the transverse section of the key is substantially U-shaped. A spring tongue or detent 7 is secured to the shank of the key 6, so as to lie along the recess or groove 8 in said shank, as will be seen from Figs. 1 and 2, and is bent so that its upper end projects outward from the face of the key. The tongue 7 is off-set near its upper end to provide a shoulder 9, located in suitable position to engage the shoulder 10 on the lug 4 and lock the key

against becoming accidentally loosened after it has been driven home. The shoulder 9 is inclined at a slight angle so that if sufficient force is applied to the key, as by an upwardly directed blow under its head, the tongue will be caused to retract into the recess 8 and permit the withdrawal of the key.

In order to prevent the spring 7 from shifting lengthwise of the key, its lower end is bent at right angles, and seated in a notch 12 in the bottom of the groove 8. Lips 13 are formed on the key at each side of the spring 7 and are bent down, as shown in Fig. 2, to hold the spring in place. The side flanges 14 are preferably notched at 15 above and below the lips 13, so as to permit these lips to be readily bent in such manner that their outer faces will be substantially flush with or below the outer edges of the flanges 14.

In order to limit the outward movement of the spring 7 when the key is in position as in Fig. 1, and thereby insure that it will be properly retracted when the key is driven out, the upper end of the spring is provided with a lip 16, which engages the inner face of the shoulder 10.

In operation, the key is inserted and withdrawn in the usual manner, but when the key is driven home, the spring detent locks it against becoming automatically loosened by jarring of the parts when in service, and also insures that a heavier blow will be required to drive the key out than is the case with usual constructions.

By reason of the fact that the lug 4 straddles the key at a point above the brake hanger slot 17, it also acts as a safeguard against the bending of the key and the falling of the brakebeam from the hanger when the brake shoe is broken or lost. In usual constructions, where the hanger extends through a slot like the slot 17, which is open at the front, the key is relied upon to confine the hanger in the slot. If the shoe is then lost, reliance is had upon the lugs 5 for retaining the key. As both of these lugs are below the hanger slot, the upper part of the key can easily become bent so as to release the hanger from the slot. Such contingency is prevented in the construction shown by the lug 4.

Although but one specific embodiment of this invention is herein shown and described, it will be understood that numerous details of the construction shown may be altered or

omitted without departing from the spirit of this invention, as defined by the following claims.

I claim:—

5 1. The combination of a brakehead and a brake shoe having overlapping parts shaped to fit one within the other, a wedge-shaped key extending through said overlapping parts and adapted to have driving fit
10 between them for securing said shoe on said head, and a detent adapted to prevent accidental shifting of the key, said detent being adapted to yield to permit said key to be withdrawn.

15 2. The combination of a brakehead and a brake shoe having overlapping parts shaped to fit one within the other, a wedge-shaped key extending through said overlapping parts and adapted to have driving
20 fit between them for securing said shoe on said head, and a detent carried by said key and adapted to prevent accidental shifting of the key, said detent being adapted to yield to permit said key to be withdrawn.

25 3. The combination of a brakehead and a brake shoe having overlapping parts shaped to fit one within the other, a wedge-shaped key extending through said overlapping parts and adapted to have driving
30 fit between them for securing said shoe on said head, a spring tongue carried by said key and having thereon a shoulder normally urged to project outward from the adjacent face of said key, and a second
35 shoulder on one of the other of said parts adapted to coact with said shoulder on said tongue to prevent accidental release of said key.

40 4. A brakehead having on its face, in addition to the usual attaching lugs, a lug providing a shoulder spaced away from said attaching lugs, and a locking key provided with a spring detent located to engage said shoulder when the key is in its
45 normal shoe retaining position.

5 A key for brakeheads, comprising a tapered shank, and a spring detent embedded in said shank and normally urged to project outward therefrom.

50 6. A key for brakeheads, comprising a tapered shank, and a spring tongue embedded in one face of said shank and extending lengthwise thereof, said tongue being secured to said shank at the end which is
55 adjacent to the point of the key and being disposed so that its opposite end will normally project outward from the key to provide a locking shoulder.

60 7. A key for brakeheads, comprising a tapered shank, and a spring tongue embedded in one face of said shank and extending lengthwise thereof, said tongue being secured to said shank at the end which is

adjacent to the point of the key and being disposed so that its opposite end will normally project outward from the key to provide a locking shoulder, said shoulder being inclined so that when it engages an obstruction during the withdrawal of the key, it will cause said spring to be retracted. 65 70

8. The combination of a brakehead and shoe having overlapping attaching lugs shaped to provide a key-way extending through said lugs, a key having a wedge-shaped shank adapted to be inserted into
75 said key-way and to have wedging fit with said lugs for securing said shoe to said head, one face of said shank being grooved, a spring tongue secured in said groove and normally projecting therefrom, a shoulder
80 on said head located to coact with said tongue to prevent the withdrawal of said key, said tongue and shoulder being inclined relatively to each other and adapted to cause said tongue to be retracted into
85 the recess when said key is driven toward its released position.

9. A key having a tapered shank of substantially U-shaped transverse section, a spring lying along and between the flanges
90 of said key, interfitting shoulders on said spring and key to prevent longitudinal displacement of the spring, and lips adapted to be bent down from said side flanges to overlap said spring and prevent the disen-
95 gagement of said interfitting shoulders.

10. A key having a tapered shank of substantially U-shaped transverse section, a spring lying along and between the flanges of said key, interfitting shoulders
100 on said spring and key to prevent longitudinal displacement of the spring, and lips adapted to be bent down from said side flanges to overlap said spring and prevent the disengagement of said interfitting
105 shoulders, said side flanges being recessed at each side of said lips whereby said lips may be readily bent down so that their outer surfaces are substantially flush with or below the outer edges of said flanges. 110

11. A brakehead having a hanger slot in its face and having on its face, in addition to the usual attaching lugs, a lug providing a shoulder spaced away from said attaching lugs, and a locking key provided with
115 a spring detent located to engage said shoulder when the key is in its normal shoe retaining position, said shouldered lugs being located above said hanger slot and straddling the key. 120

Signed at Chicago this 15th day of December 1910.

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