

(No Model.)

H. B. ROBISCHUNG.
BRAKE BEAM.

No. 533,559.

Patented Feb. 5, 1895.

Fig. 1.

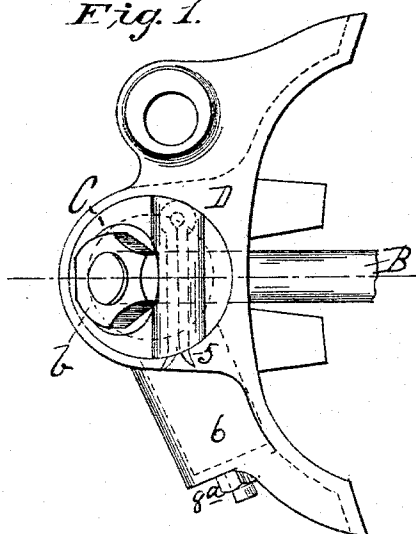


Fig. 2.

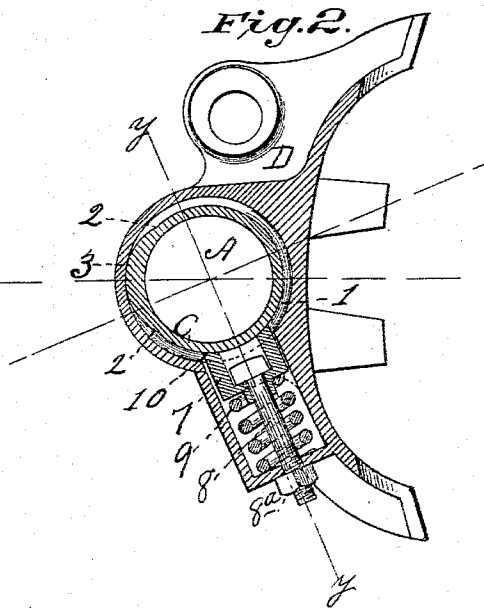


Fig. 3.

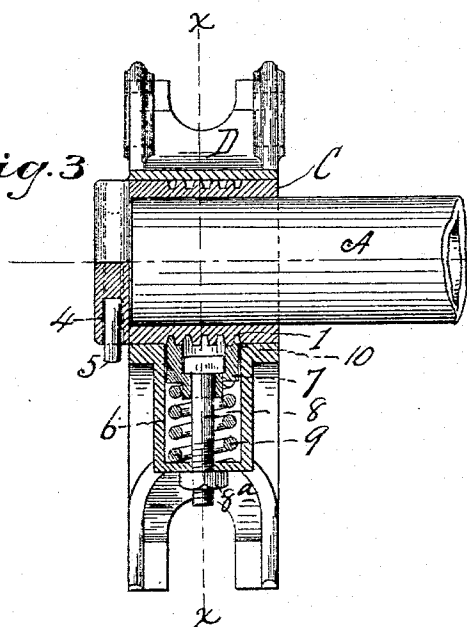


Fig. 4.

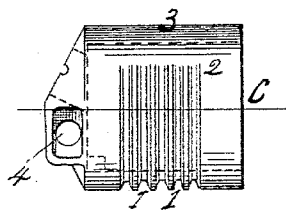


Fig. 5.

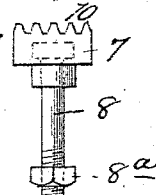
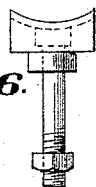


Fig. 6.



Witnesses:
Wm. D. Dye.
M. Darby.

Inventor:
Henry B. Robischung
by F. W. Rutter
att.

UNITED STATES PATENT OFFICE.

HENRY B. ROBISCHUNG, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO THE CHICAGO RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 533,559, dated February 5, 1895.

Application filed March 26, 1894. Serial No. 505,163. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. ROBISCHUNG, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Brake-Beams; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1, is an end view of a brake-beam embodying my invention, the tension member or truss rod broken off and the strut or post omitted. Fig. 2, is a vertical sectional view of the brake head, yielding locking block, and beam on the line $x-x$ of Fig. 3. Fig. 3, is a sectional view of the brake-head, yielding locking block, and the sleeve on the end of the beam taken on the line $y-y$ Fig. 2, a portion of the beam, or compression member being shown in elevation. Fig. 4, is a detached view of the sleeve or end cap in elevation. Figs. 5 and 6, are detached views of the yielding locking block, the view 6 being at right angles to view 5.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of that class of brake-beams wherein the head is automatically adjustable on the beam to accommodate changes in the relation of the brake-heads to the car wheels, and is in the nature of an improvement on the devices covered by my former patent, No. 485,823, dated November 8, 1892.

The main objects of the present invention are to increase the frictional grip of the locking block or grip-bolt of the automatically adjustable head, guard the construction against reduced efficiency from wear of the grip-bolt and journal, and to simplify and reduce the cost of construction.

To this end the main feature of the invention embraces the formation of the journal end of the beam or sleeve therein with a peripheral groove or grooves, that is to say, grooves arranged in planes substantially at right angles to the axial line of the beam and the grip-bolt or locking block with corresponding rib or ribs adapted to interlock with the

peripheral groove or grooves in the journal end of the beam, whereby the rotation as well as the lateral movement of the head on the beam is effectually limited or restrained.

I will now proceed to describe my invention more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings A indicates the compression and B the tension member of a trussed brake beam—chosen for purposes of illustration—and C a sleeve or cap thereon through which passes the end of a truss rod or tension member B being secured by the tension nut b .

In case of a non-trussed or simple beam, or where an end cap or sleeve C is not used or required the construction hereinafter specified as pertaining to the end-cap C may be applied directly to or formed integral with the member A.

The end cap C which forms the journal of the beam whereon the head D rotates in automatically assuming its proper relation to the wheel, is formed with a series of peripheral grooves 1, 1 or grooves in planes substantially transverse of the actual line of the beam of any desired number, which grooves extend nearly—but preferably, not entirely—around the circumference of the journal, becoming shallower at their ends so as to finally terminate flush with the circumference of the beam—as at 2, 2 Fig. 2, thus leaving a plain surface of the journal as at 3 to lift the locking block when the head is to be removed from the beam. I also prefer to form the outer end of the cap C with a hole 4 for a cotter or safety pin 5 to insure the retention of the brake-head on the beam in case the locking block or grip-bolt should, from any cause, become inoperative.

D indicates the brake-head having the usual suitable opening to receive the journal of the beam, and at right angles thereto a pocket or housing 6 for the reception of the locking block or grip-bolt 7.

The locking block or grip-bolt 7 may be of general right angular cross section with curved friction face to adapt it to the contour of the housing and journal—or of any other suitable shape dictated by circumstances, and

may be provided with an integral tail bolt if preferred, but preferably is provided with a detachable tail bolt 8 the threaded end of which projects through a hole in the housing and is provided with a nut 8^a by means of which the locking block or grip-bolt 7 may be drawn within the housing or pocket 6 when the head D is to be placed on or removed from the journal. Within the housing or pocket 6, encircling the tail bolt 8 and bearing on the back of grip bolt or locking block 7, is a spiral spring 9 of sufficient power to insure the proper grip of the locking block on the journal to prevent rotation by gravity or accidental rotary movement of the brake-head D on the journal of the brake-beam. The curved face of the locking block or grip-bolt 7 is provided with a series of projections or ribs 10 which interlock with the grooves 20 1, 1—and said ribs or projections—as well as the peripheral groove of the journal—are preferably of V-shape in cross section.

The construction being of substantially the character hereinbefore specified, the parts will be assembled by first inserting the spring 9 in the housing 6, then placing the grip-bolt or locking block in the housing with its tail bolt 8 passing through the spiral spring 9 and projecting through the bolt hole in the bottom of pocket 6, after which the nut 8^a is turned on the end of the bolt until the locking block is drawn within the housing sufficiently to allow of the head D being placed on the beam-journal. The head D is then placed on the end of the beam and the nut 8^a loosened until the locking block can move freely forward under the force of spring 9—whereupon the ribs or projections 10 will engage in the peripheral grooves 1, 1, with such a frictional grip as will at all times insure the head retaining its proper relation to the beam and wheel, and yet will yield to permit the automatic adjustment of the head when change becomes necessary. After the head has been applied to the beam the safety pin or cotter 5 can be inserted in the pin hole 4 to prevent any lateral displacement of the head in case the locking bolt should become inoperative for said purpose.

While it is evident that the position of grooves 1, 1, and the journal and ribs 10, 10 of the locking bolt might be reversed—yet it is equally evident that the grooves are preferably placed in the journal so as to avoid

lost motion between the beam and head, which would necessarily occur if the ribs were on the journal of the beam.

In case the nut 8^a should be lost, the head D can be readily removed from the journal by rotating said head until the locking block 7 escapes from the grooves 1, 1, and rests on the plain surface 3 of the journal when the head D can be driven off the end of the beam by a sledge in the usual manner.

Among the advantages arising from the present construction are, first, the facility of automatic adjustment of the head, and, second, that the line or direction of the grooves and ribs obviates any lost motion from wear and insures increased frictional grip of the locking block.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a brake-beam having a journal, a brake-head, and a yielding locking-block or grip-bolt, the grip-bolt and journal having interlocking peripheral groove and rib, that is to say a groove or rib in a plane substantially at right angles to the axial line of the beam substantially as and for the purposes specified.

2. The combination with a brake-beam having a journal end provided with peripheral grooves, that is to say grooves which are in planes substantially at right angles to the axial line of the beam of a brake-head, and a yielding locking-block or grip-bolt having ribs adapted to interlock or engage with the grooves of the journal; substantially as and for the purpose specified.

3. The combination with a brake-beam having a journal provided with peripheral grooves that is to say grooves in planes transverse of the beam and a plain surface transverse of and bounding the ends of said grooves, of a brake-head, and a yielding locking-block having ribs or projections adapted to engage in the peripheral grooves of the journal; substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 22d day of March, 1894.

HENRY B. ROBISCHUNG.

Witnesses:

E. B. LEIGH,
E. T. WALKER.