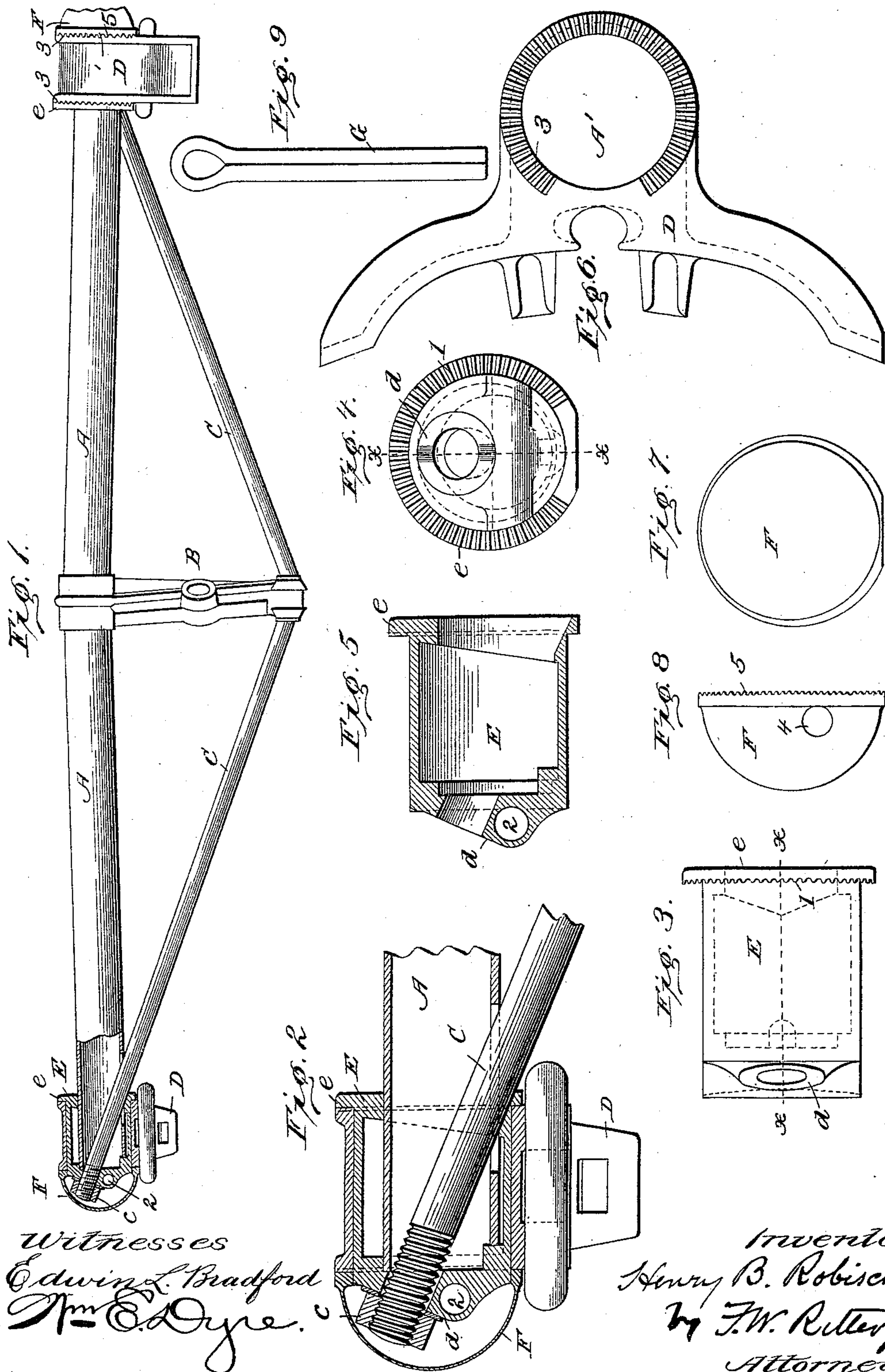


(No Model.)

H. B. ROBISCHUNG  
BRAKE BEAM.

No. 494,709.

Patented Apr. 4, 1893.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 494,709, dated April 4, 1893.

Application filed December 13, 1892. Serial No. 454,995. (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 a plan view of a trussed brake-beam embodying my invention. Fig. 2, is a horizontal longitudinal section of the end of the beam, showing portions of the beam or compression member, the truss rod or tension member, a sleeve, and a brake head. Fig. 3, is an elevation of the sleeve detached. Fig. 4, is an end view of the sleeve. Fig. 5, is a longitudinal section of the sleeve on the lines  $x-x$  of Figs. 3 and 4. Fig. 6, is a side view of the brake head, detached. Fig. 7, is an elevation of the end cap. Fig. 8, is a side view of the end cap and Fig. 9, is a view of a cotter which may be used to secure the end cap.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of brake-beams, and is directed to the improvement and simplification of the means for adjusting the brake head to the line of draft or applied power, and also with relation to the hanging of the beams, and diameter of wheels.

As is now well understood the angle of the brake-head with relation to the line of draft on the beam will vary materially accordingly as the mechanism is applied to a four or six wheel truck, and further the mode of suspension, height of beam above the truck, and diameter of wheel will determine the angle at which the brake-head (and shoe) will be set. All of which demands means for adjusting and securing the head at the time the beam is applied to the cars. While this is necessary in all brake beams, it is especially so in the case of trussed beams, and therefore I have chosen a trussed beam for purposes of illustration, though without intention of limiting the application of the invention to trussed beams.

The first feature of my invention generally stated, embraces the combination, with the

brake-beam of an adjustable head having on one of its sides or faces corrugations, and means secured to the beam and adapted to coact with the corrugations on the head to secure the head after the adjustment thereof.

A second feature of my invention embraces the combination with a trussed brake-beam and its head, of a detachable end cap adapted to confine the head to the beam and to inclose the end of the tension member and prevent tampering with the tension devices (in the present instance the nut on the end of the tension rod.)

The features of invention thus enumerated and broadly considered, while capable of individual construction and separate use, are preferably conjointly constructed and adapted to coact, as will hereinafter appear.

There are other minor features of invention, involving special combinations and specific forms of construction, all as will hereinafter more fully appear.

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 member (or beam proper) B the strut, C the tension rod provided with nuts  $c c$ , the whole constituting a trussed brake-beam.

The ends of the beam are constructed and adapted to receive an adjustable head D, preferably by means of a casting or sleeve E, which forms a journal on which the head D may be rotated for purposes of adjustment. It will be evident that the journal thus obtained by the use of a detachable sleeve or casting, in many instances, (especially non-trussed structures) may be made integral with the beam A, but in cases of trussed structures a casting or sleeve is preferably employed, said sleeve having an inclined seat  $d$  for the tension nut  $c$ , and a flange  $e$  to limit the longitudinal movement of the brake-head. If desired the inner face of the flange  $e$  may be corrugated as at 1 (Figs. 3 and 4) to coact with the corrugations on the side of the adjustable head, and constitute the means secured to the beam and adapted to secure the head after adjustment, but preferably said means is provided on the detachable end cap, as will hereinafter be pointed out.



Though both may be used without departing from the spirit and scope of my invention.

2, indicates a transverse pin hole formed in the end of sleeve E to receive a cotter G which secures the detachable end cap. Other well known means of securing the end cap may be used if desired.

D, indicates the brake-head which may be of any desired pattern, provided with a beam opening A', by which it is journaled on the beam, as hereinbefore set forth. On its opposite sides or faces, and preferably adjacent to the beam opening A', are corrugations 3, adapted to coact with the corrugations on the locking mechanism attached to the beam. For the purposes of the broad ground of the present invention, these corrugations 3, may be upon one side or face only, to be determined by the position of the locking mechanism attached to the beam, whether said co-acting locking mechanism be on the flange e or on the end cap F, but in order that the brake-head may be used as either a right or left it is desirable to have the corrugations 3 on both faces as shown.

F, indicates the end cap which is usually of a hemispherical cup form with rim adapted to bear on the brake-head D, and with cotter openings 4, for the passage of the cotter G, which secures the cap to the end of the beam and confines the brake-head forcing it against the flange e, before referred to. This cap F incloses the tension nut c and prevents any tampering with the tension member, and if it is only intended to perform such function, its rim may be plain or smooth, but I prefer to use it as a means, or one of the means, secured to the beam for coacting with the corrugations on the head to secure the head after adjustment, and to effect this I corrugate the rim of cap F, as indicated at 5.

The separate elements embodying the features of invention and preferably of the special construction hereinbefore specified, are assembled in a manner as clearly shown in Fig. 2, and the head D, having been rotated on the bearing on the end of the beam until it is in the desired position, it is forced to its bearing on flange e by means of the cap F and cotter G, or equivalent devices, whereupon the corrugations on the side of the brake head D engage those on the part attached to the brake-beam A, and the head is thus securely

maintained in the desired position to which it has been set.

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

1. The combination with a brake beam, of a head adjustable thereon, and having on one of its sides corrugations, and means secured to the beam and adapted to engage with the corrugations on the side of the brake-head; substantially as and for the purposes specified.

2. The combination with a brake beam, of a brake head, provided on one of its sides with corrugations, an end cap having on its rim corrugations or serrations adapted to engage those on the side of the brake head, and means for securing the end cap to the beam; substantially as and for the purposes specified.

3. The combination with a brake beam, of an adjustable reversible brake head having corrugations on both faces or sides, and means secured to the brake beam and adapted to engage the corrugations on the side of the brake head; substantially as and for the purposes specified.

4. The combination with a brake beam having a flange corrugated on one face, of an adjustable brake head corrugated on both faces, an end cap having a corrugated rim, and means for securing the end cap to the beam; substantially as and for the purposes specified.

5. The combination with a brake beam, of a sleeve having a flange and provided at its outer end with a cotter hole, an adjustable brake head corrugated on both faces, and an end cap having cotter holes, and a cotter adapted to secure the end cap to the beam sleeve; substantially as and for the purposes specified.

6. The combination with a trussed brake beam having a tension rod, and means for taking up the slack of the tension rod, of a detachable brake head, and an end cap to inclose the end of the tension rod and confine the brake head; substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 28th day of November, 1892.

HENRY B. ROBISCHUNG.

Witnesses:

E. B. LEIGH,

E. T. WALKER.