No. 705,299. Patented July 22, 1902.

G. P. RITTER.

ADJUSTABLE BRAKE HEAD.

(Application filed May 15, 1902.)

(No Model.)

Fig. 1.

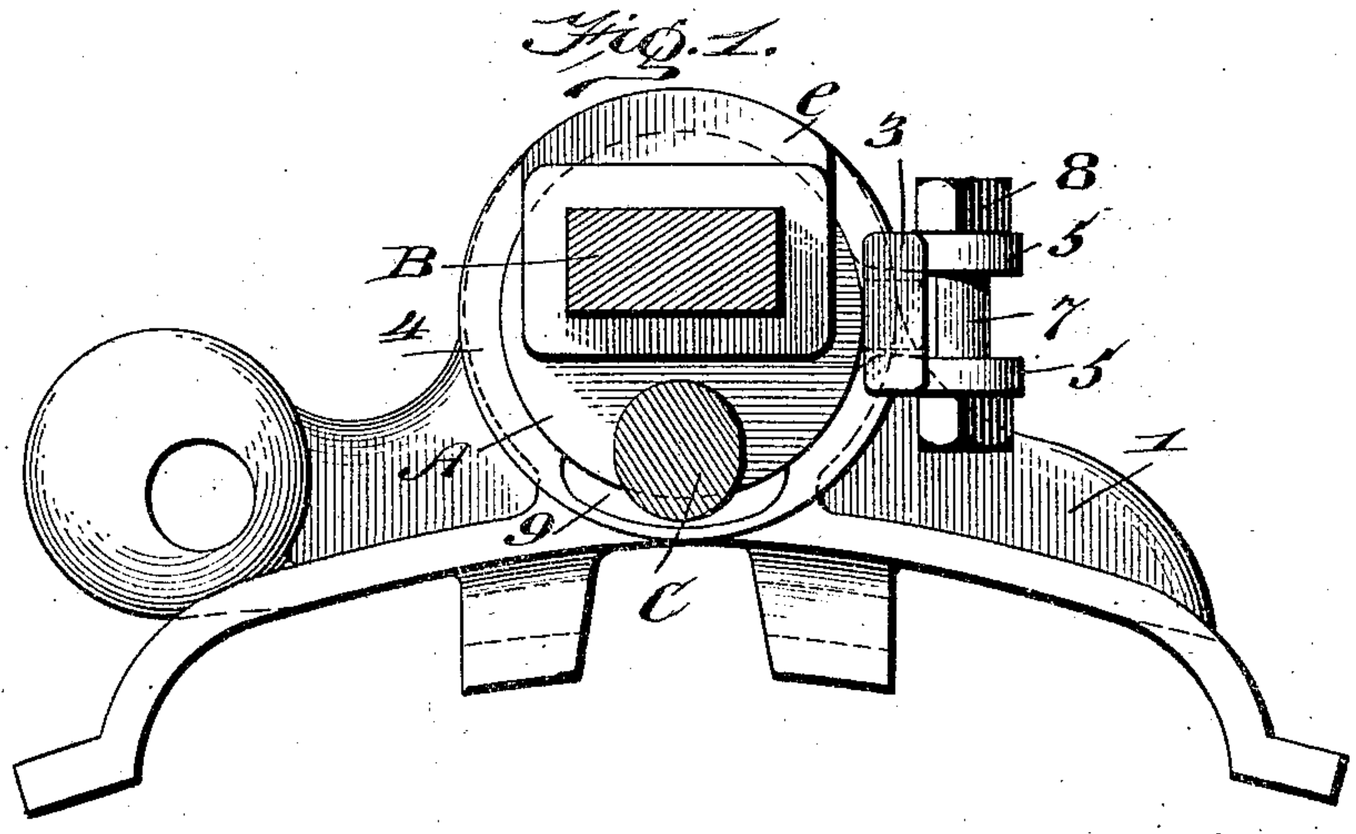


Fig. 2.

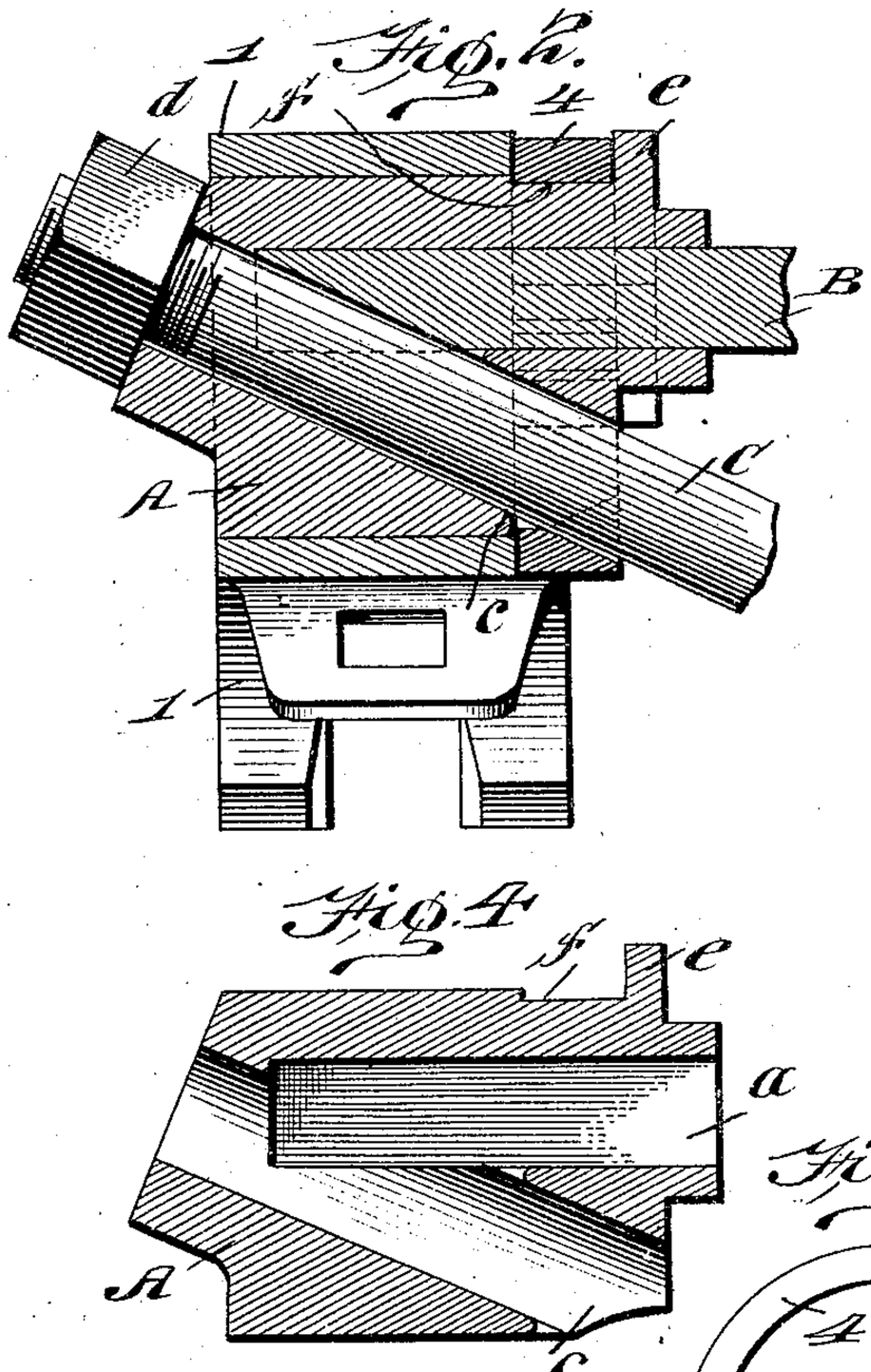


Fig. 3.

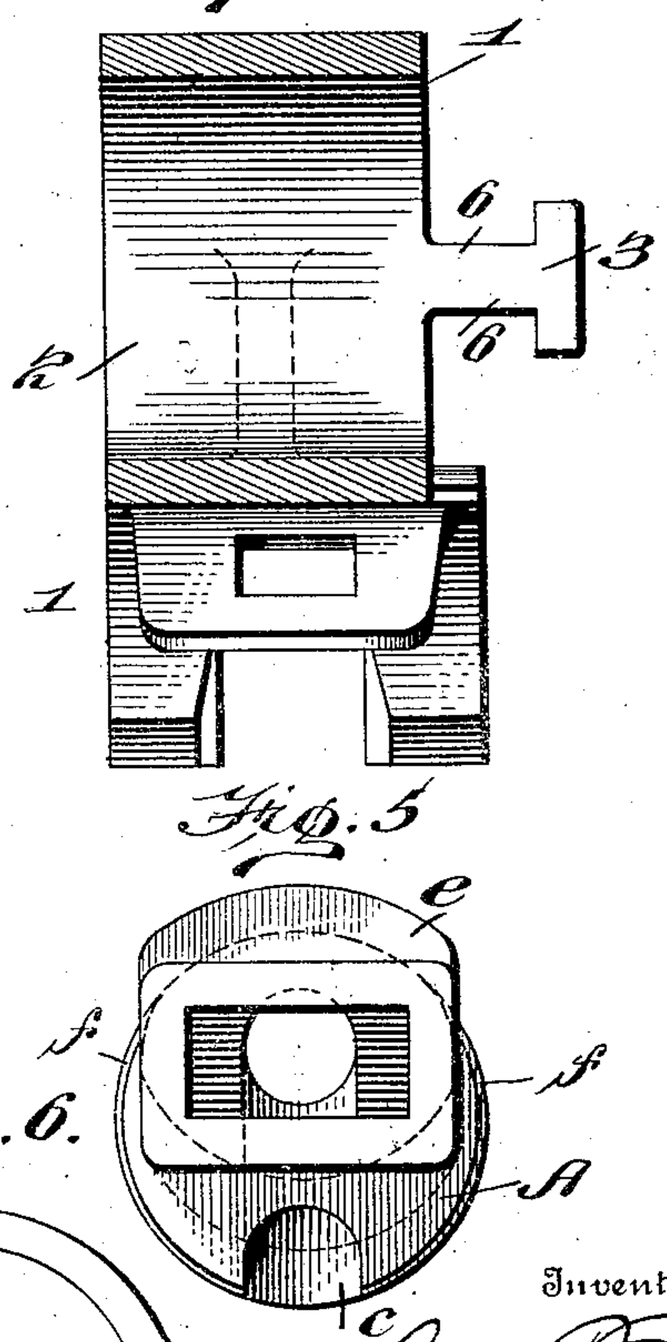
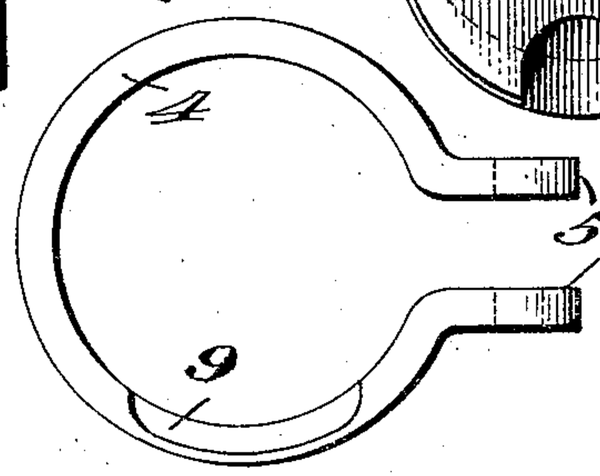


Fig. 5

Fig. 4

Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

GILBERT P. RITTER, OF CHICAGO, ILLINOIS.

ADJUSTABLE BRAKE-HEAD.

SPECIFICATION forming part of Letters Patent No. 705,299, dated July 22, 1902.

Application filed May 15, 1902. Serial No. 107,478. (No model.)

To all whom it may concern:

Be it known that I, GILBERT P. RITTER, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Adjustable Brake-Heads; 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 side elevation of a brake-head embodying my invention, also showing the end of the brake-beam to which the same is attached. Fig. 2 is a transverse central section of the brake-head and end of the brake-beam shown in Fig. 1. Fig. 3 is a detached sectional view of the brake-head. Fig. 4 is a detached sectional view of the end of the brake-beam. Fig. 5 is an end view of the brake-beam. Fig. 6 is a detached view, in side elevation, of the friction-clamp or clamp-ring band which adjustably confines the brake-head to the brake-beam.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of that class of brake-heads for use with brake-beams in railway service wherein the head is automatically adjustable with relation to the beam and the car-wheel to insure the proper frictional application of the brake-shoe to the car-wheel and the proper distribution of the strain from the brake-head to the brake-beam.

As is well understood by those familiar with railway practice, brake-beams are hung at varying heights above the rail. When suspended from the car-body, as in the case of outside-hung beams, the height of the beam above the track will vary with the load, and in the case of inside-hung beams the tilting of the truck when the direction of motion of the train is reversed will alter the relation of the brake-head to the wheel, all of which causes will, in case the relation of the brake-head to the beam is unchangeably fixed, prevent the most effective application of the brakes and cause torsional strains on the brake-beam; and this, while true of solid or bar beams, is especially true of trussed beams. To attain the greatest degree of efficiency the brake-head should be automatically adjustable on the beam and at the same time substantially fixed after adjustment, so as to prevent movement of the head independently of the beam unless under the force which applies the brakes.

To overcome the objections and obtain the advantages above noted, I combine with a brake-head having a journal-opening adapted to receive a journal upon the end of a brake-beam, a friction strap or band clamp secured to the brake-head and adapted to grip the journal end of a brake-beam, and such a construction embodies the main feature of my invention.

There are other minor features of invention, all as will hereinafter more fully appear.

In the drawings, A indicates the journal end of a brake-beam to which the brake-head embodying my invention is applied. In the present instance this journal end A is shown as the end casting of a trussed brake-beam, having a socket *a* to receive the end of the compression member B and the intersecting bore *c* for the passage of the end of the tension member C, the latter provided with the nut *d*, by means of which the members of the beam are combined. In case of a single member or solid brake-beam the journal end A may be integral therewith and in either case may be provided with a flange *e* to limit the inward movement of the brake-head and a peripheral recess *f* to receive the friction-clamp and limit the outward movement of the brake-head on the journal, though the peripheral recess *f* may be omitted, and other means—as, for instance, an end cap—may be provided to confine the brake-head to its journal A.

1 indicates the brake-head, which may be of an approved style. It has a journal-opening 2 for the reception of the journal end A of the brake-beam and a lateral projection 3, of T form or its equivalent, adapted to receive the free ends of a split-ring or strap clamp 4 and secure the same to the brake-head 1, with which and with the journal end of the brake-beam said clamp 4 coacts.

4 indicates a split-ring or strap clamp provided with means for securing the same to the brake-head. This clamp, which is intended to grip the journal of the brake-beam with a centering friction-grip which will hold the brake-head against accidental displacement on the beam, is preferably in the form of a

clamp-ring or split ring, which encircles the journal end of the beam and is provided with perforated flanges or ears 5, that enter the recesses or notches 6, formed by the T projection 3, and through the perforations of which passes a bolt 7, having a nut 8, by means of which the diameter of the split ring may be reduced, so as to cause the ring or clamp to grip the journal end of the beam with any desired force. This bolt 7 and nut 8 will also serve to take up any wear which might otherwise reduce the efficiency of the devices. Where the brake-head is to be applied to a trussed brake-beam having a tension-rod C, the inner side of the clamp-ring 4 is beveled off, as at 9, for a limited distance to accommodate the rod and permit sufficient rotation of the head for the purposes of its automatic adjustment, and in the case of single member beams, if desired, stops may be provided as equivalents thereof to limit the rotation of the brake-head.

The construction of the devices being of the general character hereinbefore pointed out, the parts are readily assembled by applying the split ring or clamp 4 to the inner side of the head, in line therewith, and with the ears or flanges 5 in the notches or recesses 6 of the projection 3, after which the head and clamp are slipped on the journal end A of the beam and the nut 8 tightened on the bolt 7 to confine the parts and secure the desired friction-grip on the journal end A of the brake-beam.

When in position on the brake-beam and the brakes are applied in service, the brake-shoe will apply its face properly to the periphery of the wheel, and the force exerted upon the brake-head will be sufficient to overcome the friction-grip of the band or strap clamp or split ring on the journal end of the beam, whereupon the brake-head rotating on the end of the beam will assume a position normal to the line of force and will retain said position after the brakes are released until change of load, tilting of truck, or other changed condition calls for a readjustment of the brake-head with relation to the brake-beam and car-wheel.

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

1. The combination with a brake-head having a journal-opening for the reception of a journal on the end of a brake-beam, of a split-ring or strap clamp adapted to grip said journal and means for confining said clamp to the brake-head, substantially as and for the purposes specified.

2. The combination with a brake-head having a journal-opening, of a split-ring clamp which coincides with the journal-opening of the brake-head, substantially as and for the purposes specified.

3. The combination with a brake-head having a journal-opening and a lug or projection adjacent thereto, of a split-ring clamp having ears which engage the lug or projection on the brake-head, and means for confining the split ring thereto, substantially as and for the purposes specified.

4. The combination with a brake-head having a journal-opening, of a split-ring clamp, and means for confining the split-ring clamp to the brake-head and reducing the diameter of the split-ring clamp, substantially as and for the purposes specified.

5. The combination with a brake-head having a journal-opening and provided with a T-lug adjacent to said opening, of a split ring having perforate ears and a bolt and nut which engage the ears of the split ring, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 15th day of May, 1902.

GILBERT P. RITTER.

Witnesses:
EDWIN S. CLARKSON,
JNO. R. ADAMS.