

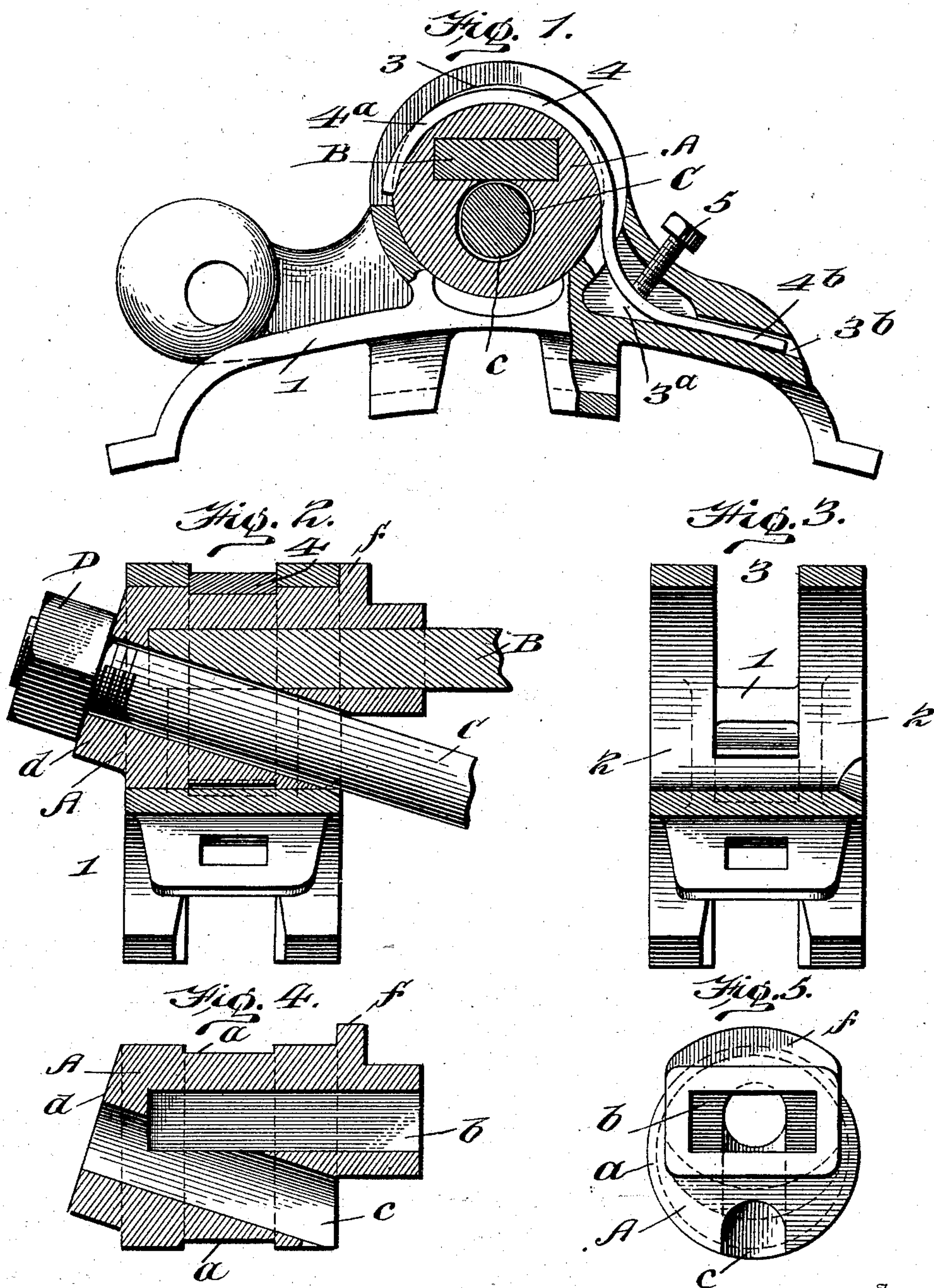
No. 705,611.

Patented July 29, 1902.

G. P. RITTER.  
ADJUSTABLE BRAKE HEAD.

(Application filed May 15, 1902.)

(No Model.)



Inventor

Witnesses  
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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE BRAKE-HEAD.

SPECIFICATION forming part of Letters Patent No. 705,611, dated July 29, 1902.

Application filed May 15, 1902. Serial No. 107,479. (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, together with a cross-section of the end of the brake-beam to which the brake-head is attached. Fig. 2 is a transverse central section of the brake-head and a longitudinal central section of the included end of the brake-beam. Fig. 3 is a detached transverse central section of the brake-head. Fig. 4 is a detached longitudinal central section of the end of the brake-beam; and Fig. 5 is an end view of that portion of the brake-beam shown in section, Fig. 4.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of that class of brake-heads for use on brake-beams in railway service wherein the brake-head is of a character to automatically adjust itself with relation to the periphery of the car-wheel and with relation to the line of applied force, so as to relieve the brake-beam of torsional strains, and after said adjustment to retain its position so long as the conditions remain unchanged.

Those familiar with railway practice are aware that the relative position of the brake-head to the wheel and to the brake-beam must be changed to accommodate the various heights above the track at which the beam is hung, whether the beam is an inside or outside hung beam, and according to the diameter of the wheel in order to obtain the best braking effect or proper application of the brake-shoe to the wheel and to avoid undue torsional strains on the brake-beam. To meet these requirements of railway practice in a simple, economical, and effective manner is the object of the present invention; and to that end the main feature of my present invention may be generally stated to reside in the combination, with a brake-head having a

journal-opening for the reception of the journal end of a brake-beam, of a friction strap grip-tongue coincident with the journal-opening and anchored or secured to the brake-head, whereby the brake-head is secured to the beam against accidental displacement, but may automatically adjust itself under braking force.

There are other minor features of invention, 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 journal end of a brake-beam to which the brake-head embodying my invention is to be applied. The brake-beam may be of any character, provided it has a journal end to receive the brake-head. In the present instance the part A is shown as a casting having a socket *b* for the end of the compression member B, an opening *c* for the passage of the end of the tension member C of a trussed brake-beam, a seat *d* for the nut D on the end of the tension member, and a flange *f* to limit the inward movement of the brake-head on the journal A.

1 indicates the brake-head, provided with a suitable journal-opening 2 and a recess 3 for the reception of the grip-tongue. This recess 3 where it coincides with the journal-opening 2 should be of such depth as to permit of at least a limited play of the grip-tongue to permit the application to and removal from the journal A of the brake-head 1 and is preferably an open slot at such point as shown in the drawings, extending thence into the lower end of the brake-head, as at 3<sup>a</sup>, where it may be enlarged, and finally terminating in a channel 3<sup>b</sup>, adapted to confine and secure the anchored end of said grip-tongue.

4 indicates the strap grip-tongue, which is preferably of a flat strip of spring metal curved, as at 4<sup>a</sup>, to conform to the journal A on the end of the brake-beam and straight, as at 4<sup>b</sup>, where it is anchored to the brake-head. If desired, the grip-tongue 4 may be secured to the brake-head by allowing the end 4<sup>b</sup> of the grip-tongue to project and bending the same up or by riveting the end of the tongue to the brake-head.

5 indicates a set-screw which passes through



the brake-head opposite the cavity 3<sup>a</sup>, the inner end of which impinges on the grip-tongue 4 and by means of which the grip of the tongue 4 on the journal A may be regulated at 5 will as well as any wear of the parts taken up.

As shown in the drawings, the journal end A of the brake-beam is recessed or channeled, as at *a*, to form a seat for the grip-tongue 4; but the same is not necessary, though if used 10 it will add somewhat to the security of the brake-head against lateral movement on the journal A.

The construction of the devices being substantially such as hereinbefore pointed out, 15 the strap grip-tongue 4 is inserted in the recess 3 3<sup>a</sup> 3<sup>b</sup> of the brake-head, the set-screw 5 being withdrawn. The brake-head is then slipped on the journal end A of the brake-beam and the set-screw 5 turned down to 20 give the grip-tongue the desired frictional grip on the journal A of the beam. In applying the brake-head to the beam no special adjustment thereof other than for the friction-grip is required, for the reason that in 25 service the first application of the brakes will overcome the friction-grip of the strap or tongue on the journal and cause the partial rotation of the brake-head until the brake-shoe has assumed its proper relation to the 30 periphery of the car-wheel and the brake-head its proper relation to the brake-beam, which position it will maintain after the brakes are released and until a subsequent

application of the brakes under changed conditions.

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, of a strap grip-tongue 40 coincident with the journal-opening and anchored to the brake-head, substantially as and for the purposes specified.

2. The combination with a brake-head having a journal-opening, of a curved spring 45 grip-tongue coincident with the journal-opening and anchored to the brake-head, substantially as and for the purposes specified.

3. The combination with a brake-head having a journal-opening of a grip-tongue coincident with the journal-opening, and a set-screw which bears on the grip-tongue, substantially as and for the purposes specified. 50

4. The combination with a brake-head of a curved spring grip-tongue having its curve 55 coincident with the journal-opening, and a set-screw which bears on the curved spring grip-tongue, substantially as and for the purposes specified.

In testimony whereof I affix my signature, 60 in presence of two witnesses, this 15th day of May, 1902.

GILBERT P. RITTER.

Witnesses:

EDWIN S. CLARKSON,  
JNO. R. ADAMS.