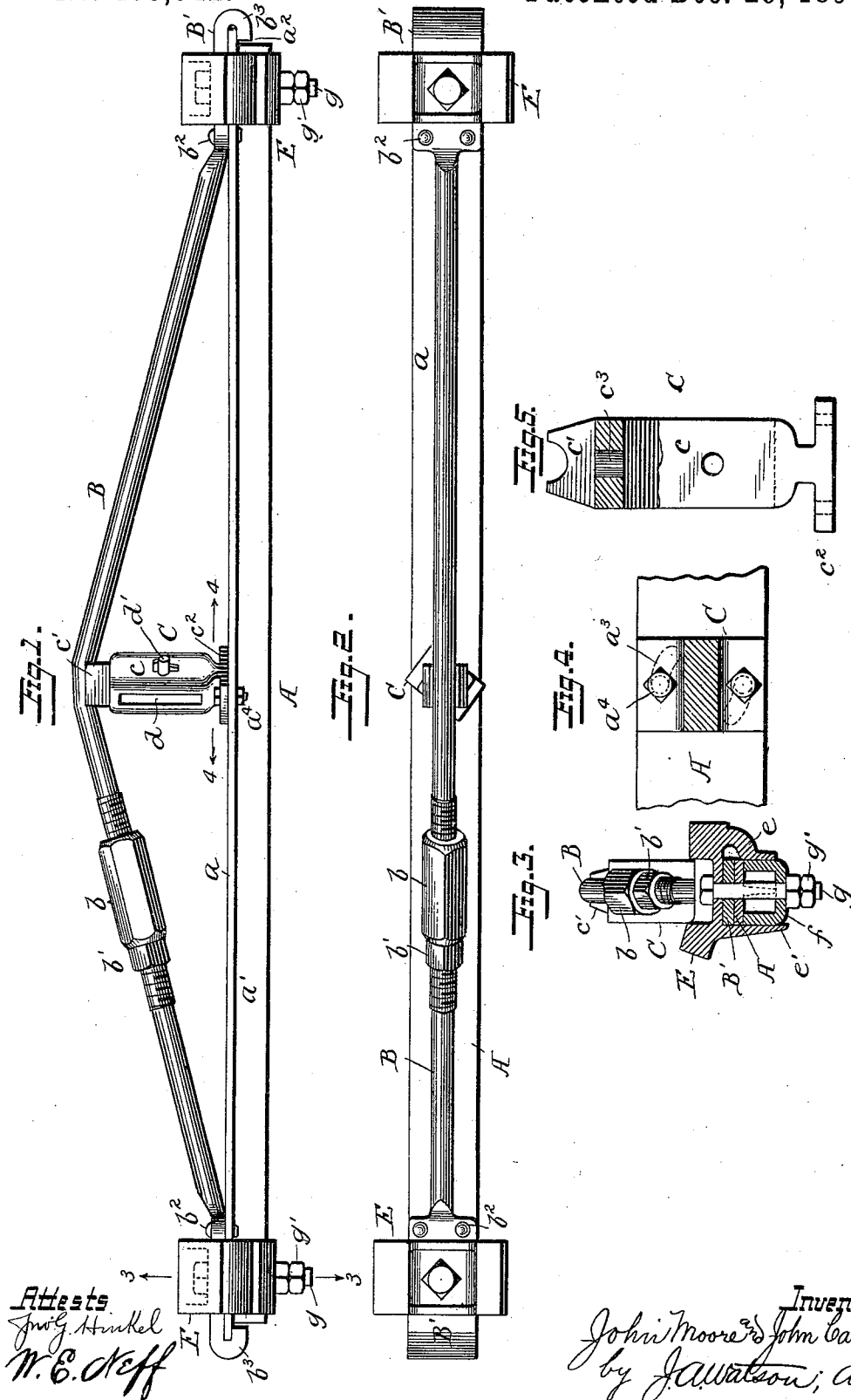


(No Model.)

J. MOORE & J. CAMPBELL.
BRAKE BEAM.

No. 465,942.

Patented Dec. 29, 1891.



UNITED STATES PATENT OFFICE.

JOHN MOORE AND JOHN CAMPBELL, OF DELANO, PENNSYLVANIA.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 465,942, dated December 29, 1891.

Application filed August 22, 1891. Serial No. 403,467. (No model.)

To all whom it may concern:

Be it known that we, JOHN MOORE and JOHN CAMPBELL, citizens of the United States, residing at Delano, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Brake-Beams, of which the following is a specification.

Our invention relates to brake-beams; and it consists in a trussed metallic beam which is light, strong, and durable, and is constructed of few and simple parts.

In the accompanying drawings, in which like reference-signs refer to like parts throughout the several views, Figure 1 is a side elevation of the entire brake-beam. Fig. 2 is a plan view. Fig. 3 is a sectional view on the line 3-3 of Fig. 1, looking toward the middle of the beam. Fig. 4 is a section on the line 4-4 of Fig. 1; and Fig. 5 is a side elevation of the brace, part being broken away to show how the notched head is swiveled to the body.

It is the purpose of our invention to produce a brake-beam which is simple and strong in construction, and which may be readily adjusted to bring the brake-shoes accurately to correspond with the tread of the wheels.

Another object of the invention is to permit the central brace or strut to be readily removed for repairs or replacement without dismembering the remaining portion of the beam.

The beam proper A may be of any desired form of angle-iron, although I prefer the T-section, as shown in the drawings, having a flat web *a* and a flange *a'* along the middle of the web. The truss-rod B is made in two parts, preferably of round iron about an inch in diameter, and united by a right and left hand threaded nut *b*, which is held securely in any desired position by a check-nut *b'*. By thus forming the rod in two parts and arranging the connecting and adjusting means at a point between the ends of the rod, we are enabled to fasten the ends permanently and securely to the beam. We are also enabled to separate the two parts of the rod, so as to permit the brace C to be quickly removed and replaced if broken or out of repair. Thus, as shown in the drawings, the

ends B' of the rod B are flattened to correspond in width with the web of the brake-beam, and are secured thereto by rivets *b²*, and, furthermore, by bending the flat ends at *b³* around and underneath the web A of the beam, the flange of the beam being cut away at *a²* to receive the ends of the truss-rod.

The brace C consists of a body portion *c* and a notched head *c'*, swiveled to the body. At the inner end of the brace is a flange or foot *c²*, provided with bolt-holes for securing it to the web *a* of the beam A. In the web *a* are cut circular slots *a³*, as shown in the dotted lines in Fig. 4, and through these slots pass bolts *a⁴*, which securely fasten the brace to the beam. The curved slots in the beam permit the brace to be turned through a considerable angle, in order to adapt it to the angle of the brake-lever, which passes through a longitudinal slot *d* in the body of the brace. The brake-lever is pivoted on a bolt or pivot-pin *d'*, which passes through the body at right angles to the slot.

At either end of the beam we attach a brake-head E. The brake-head rests upon the flattened portion B' of the brace-rod, and is provided with flanges *e e'*, which extend down upon either side of the beam A. A U-shaped filling-block *f* is arranged to span the flange *a'* of the beam and rest against the outer edges of the web. It also abuts against the inner faces of the flanges *e e'*. Through all of the parts bolts *g*, provided with locking-nuts *g'*, pass centrally, thus clamping them securely together.

It will be evident from the above description that our improved brake-beam can be readily adjusted to produce more or less camber in the beam A, and fit the brake-shoes accurately to the wheel-tread. By loosening the nuts *b* and *b'* the brace C may be readily removed without taking off the truss-rod, and, furthermore, by removing the bolts *g* the brake-head and filling-pieces *f* may be quickly removed to be painted or replaced by new ones; but the beam A and the truss-rod B, which form the main portion of the brake-beam, and which are not liable to get out of order, are in our construction securely attached to each other.

The beam and truss-rod may be made of either steel or iron, and the brace and other parts of wrought-iron, cast-iron, or cast-steel.

5 Having described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A metallic brake-beam consisting of the beam proper, the brace removably connected to the beam, and the truss-rod permanently
10 joined to the beam at its ends and resting upon the brace, said truss-rod being formed in two separable parts which are adjustably connected together, substantially as described.

2. A metallic brake-beam consisting of the beam A, the brace, and the truss-rod having flattened ends B' bent around and under the ends of the web portion of the beam and secured thereto, said truss-rod being formed in
15 two parts which are adjustably connected by a right and left hand threaded nut, substantially as described.

3. A metallic brake-beam consisting of a T-shaped beam A, a brace C, adjustably connected to the web of the beam A and having
20 a notched and swiveled head, and a truss-rod resting in said notched head and flattened and secured to the web of the beam at its outer ends, said rod being formed of two parts

adjustably connected together by a right and left hand threaded nut, substantially as described. 30

4. In a metallic brake-beam, the combination, with the beam A, the brace C, and the adjustable truss-rod B, which is flattened and secured to the beam at its outer ends, of the
35 brake-heads E, resting upon the flattened portion of the truss-rod and provided with flanges *e* and *e'*, the U-shaped filling-blocks between the flanges, and the securing-bolts *g*, substantially as described. 40

5. In a trussed brake-beam, the combination, with the beam and truss-rod, of a brace consisting of a body portion, a foot integral with the body, and a swiveled head notched to receive the truss-rod, the foot portion of
45 said brace being adjustably connected to the beam by means of curved slots and bolts, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN MOORE.
JOHN CAMPBELL.

Witnesses:

F. J. HOWELL,
W. S. CAMPBELL.