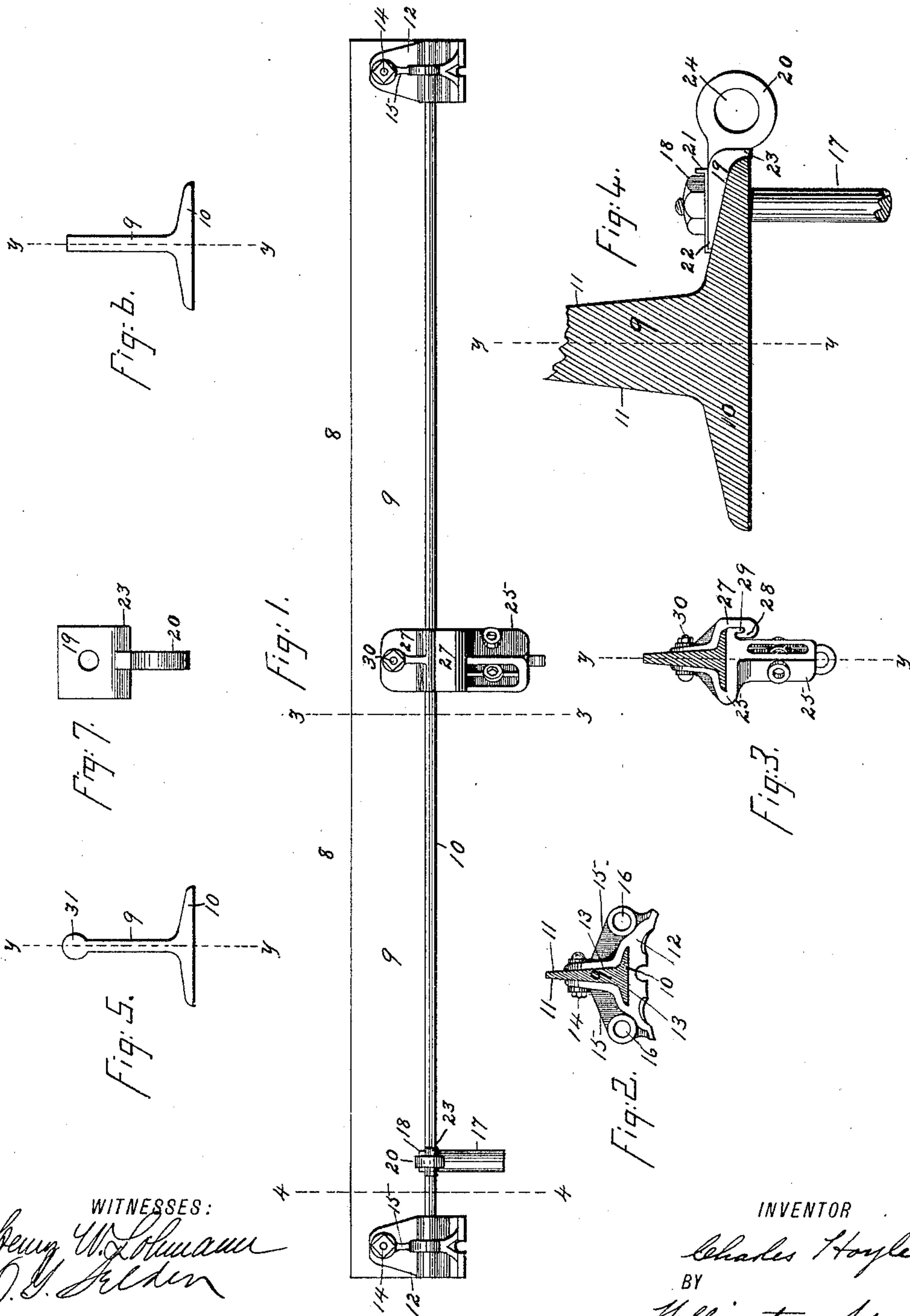


(No Model.)

C. HOYLE.  
METALLIC BAR BRAKE BEAM.

No. 581,726.

Patented May 4, 1897.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES HOYLE, OF ST. LOUIS, MISSOURI.

## METALLIC-BAR BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 581,726, dated May 4, 1897.

Application filed January 6, 1897. Serial No. 618,123. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES HOYLE, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Metallic Brake-Beams; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the reference-numerals marked thereon, which form a part of this specification.

Similar parts throughout the different figures are correspondingly marked.

In the accompanying drawings, Figure 1 is a plan view of the complete brake-beam; Fig. 2, an end elevation showing a section of the T-bar, forming the body of the beam, and a side view of the brake-head without the brake-shoe attached; Fig. 3, a sectional view taken on the dotted line 3 3 of Fig. 1, showing a side elevation of the lever-clamp and the method of attaching the same to the body of the beam; Fig. 4, an enlarged sectional view taken on the dotted line 4 4 of Fig. 1, showing a side elevation of the finger-guard and combined suspension-clip and nut-seat for the finger-guard nut; and Fig. 7, an enlarged detail plan view of the said combined suspension-clip and nut-seat detached from the beam, while Figs. 5 and 6 are designed for purposes of comparison between existing beams and some features of my present improvement, as will hereinafter appear.

My present invention relates to that class of brake-beams commonly termed "metallic-bar beams" for brakes employed on steam and other cars; and it consists principally in a novel construction and arrangement of the beam of the brake, as hereinafter more fully set forth and claimed, by which a stronger, more durable, cheaper, and effective device of this character is produced than is now in use. It has heretofore been customary to construct beams of this character with metallic T-bars having sections similar to those shown in Figs. 5 and 6, in which the surfaces of the web or body of the T-bar are parallel to each other, and in most instances the web or body is provided with a head or web 31, Fig. 5, in

addition to the base, as shown in said figure. Inasmuch as the beam is generally suspended in such manner that the plane of the body will be in a horizontal position, so that the direction of the strain will be that of the dotted line Y Y of Figs. 3, 4, 5, and 6, dirt and water collect on the horizontal surface of the web of such a beam and cause it to rust and deteriorate. One of the objects of my present invention is to remedy this defect by providing a form for the bar of the beam, which will shed all water and dirt and yet allow of the beam being suspended in a horizontal position, so that the direction of the strain may still remain in line with the horizontal axis of the beam, as indicated by said dotted line Y Y. It is my further object to provide a ready, practicable, and cheap means of attaching the lever-clamp to and removing it from the body of the beam without having to first remove the brake-head, thus facilitating repairs and renewals, and, further, to provide a cheap, convenient, and substantial means of attaching the finger-guard to such beams and suspending such beams by auxiliary safety-chains.

The nature and operation of the improvement will be readily understood by the following explanation.

In the accompanying drawings, 8 indicates the body of the brake-beam; 9, the body or web of the metallic T-bar, forming the body of the brake-beam; 10, the base of said T-bar; 11, the inclined surfaces of the web, forming a section of wedge shape, with its base toward the base of the T-bar; 12, the brake-head; 13, an open T-shaped slot conforming to the section of the beam, whereby said head is slipped upon the beam; 14, bolt and nut for fastening said head to the beam; 15, a centrally-located stiffening-web for said brake-head; 16, suspension-eyelets formed in said stiffening-web; 17, the finger-guard; 18, a retaining-nut for said finger-guard; 19 and 20, a combined nut-seat and suspension-clip; 21, a nut-lock for the nut 18; 22, the elevated edge of the nut-seat, which serves as a retaining-seat or engagement for the nut-lock; 23, a projecting lip upon the nut-seat 19, which projects over the edge of the base of the T-bar and thus prevents the nut-seat from turning; 24,



a hole in the combined nut-seat and suspension-clip for the attachment of a safety-chain; 25, the lever-clamp, formed in one part; 27, a sliding auxiliary clamp; 28, an interlocking lip for the sliding auxiliary clamp 27; 29, a lug or rib upon the lever-clamp 25 to engage with the interlocking lip 28; 30, retaining-bolt and nut for fastening the lever-clamp to the body of the beam and which may also be used for retaining the auxiliary clamp 27 in position upon the beam.

In forming the T-bar for my beam I take the metal usually placed in the head or rib 31, Fig. 5, as such beams are usually constructed, and so dispose of it in the web of the T-bar as to secure the inclined surfaces 11, thus retaining the same strength of beam. The open T-shaped slot in the brake-head is made to conform with the section of the beam.

In order to remove the lever-clamp from the body of the beam without removing the brake-heads, it is only necessary to remove the nut and bolt 30 and slide the auxiliary retaining-clamp 27, which forms no part of the lever-clamp, to one side of the lever-clamp 25, when the latter will become detached from the body of the beam, and by a reverse action the lever-clamp may be reattached. It is apparent that by this construction an accidental loss of the bolt and nut 30 will not allow of the lever-clamp being detached from the beam, as in some present constructions, it being necessary to also drive the auxiliary clamp 27 to one side before detachment is effected. This double fastening also gives greater security and strength.

Having thus fully described my invention, I claim—

1. In a metallic-bar brake-beam, a solid T-bar having a transversely-continuous base and a wedge-shaped solid web or body, adapted to shed water when the beam is suspended in such manner that the base of the T-bar is

practically at right angles to the direction of the strain.

2. In a metallic-bar brake-beam, a solid T-bar having a wedge-shaped solid web or body, brake-heads upon the ends of said bar, provided with open T-shaped slots conforming to the wedge-shaped web of the said T-bar, in combination with a lever-clamp attached to said bar.

3. In a brake-beam having a metallic T-bar, carrying a brake-head at each end, a lever-clamp adapted to be attached to or removed from the beam without removing either of said heads, a retaining-bolt and nut for said lever-clamp, in combination with an auxiliary sliding clamp for said lever-clamp.

4. In a brake-beam having a metallic T-bar carrying a brake-head at each end, a lever-clamp attached to said bar, and an auxiliary sliding clamp for said lever-clamp, having an interlocking lip, designed to engage with a corresponding lip upon the said lever-clamp.

5. In a brake-beam having a metallic T-bar carrying a brake-head at each end, and a lever-clamp attached to said bar, a finger-guard fastened to the base of said bar by a nut, in combination with a nut-seat for said nut, forming a part of a suspension-clip, having an eyelet or hook for the attachment of a safety-chain.

6. In a metallic brake-beam, the combination of the T-bar base 10, the finger-guard 17, the nut 18, the nut-seat 19, with lip 23, and elevated or free edge 22, and a nut-lock 21, engaging with the edge 22 of the nut-seat and with the said nut.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES HOYLE.

Witnesses:

J. M. THOMPSON,  
WM. N. PEARCE.