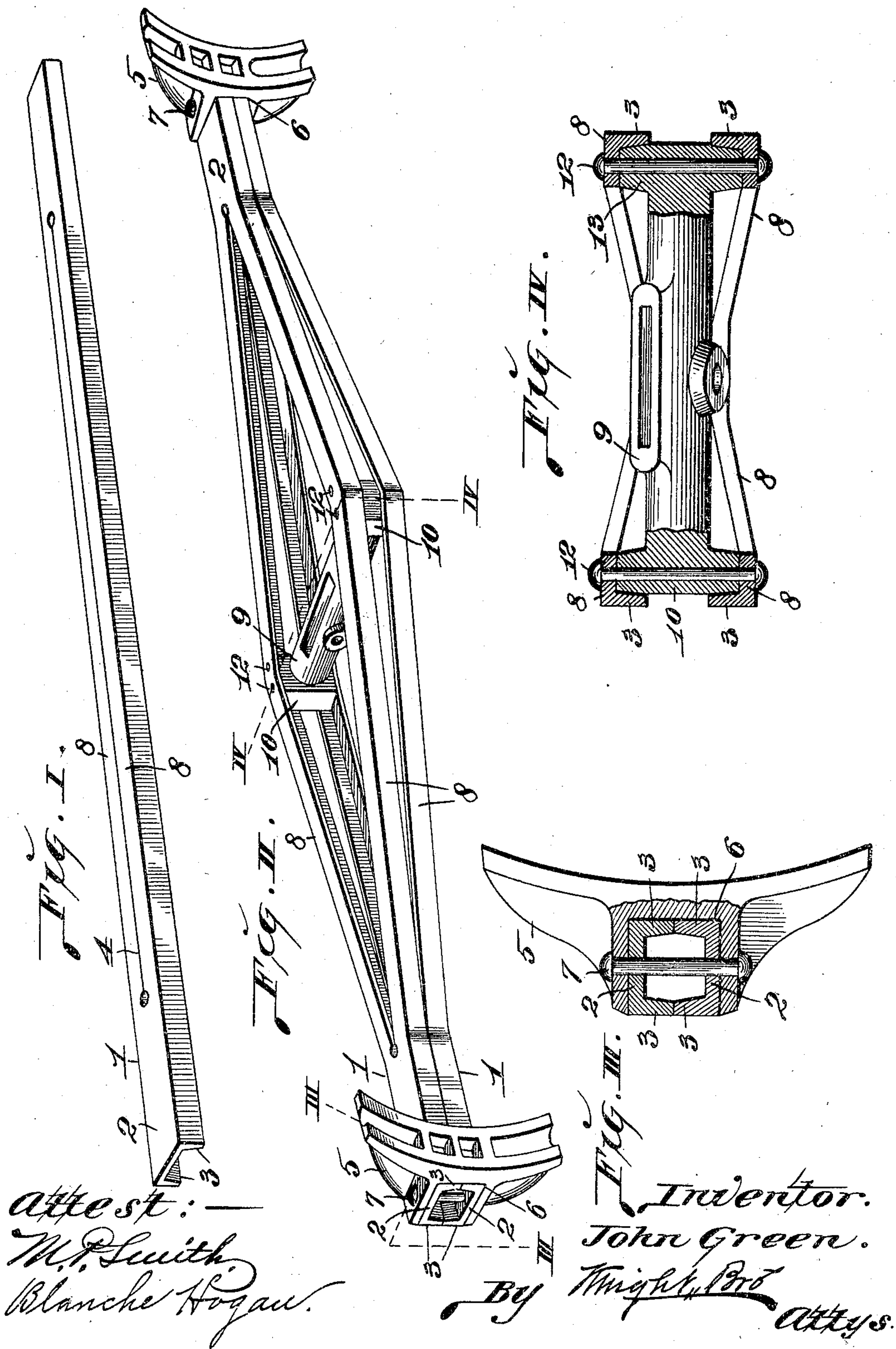


No. 794,404.

PATENTED JULY 11, 1905.

J. GREEN.  
BRAKE BEAM.

APPLICATION FILED NOV. 19, 1904.





# UNITED STATES PATENT OFFICE.

JOHN GREEN, OF ST. LOUIS, MISSOURI, ASSIGNOR TO OSWALD S. PULLIAM, OF ST. LOUIS, MISSOURI.

## BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 794,404, dated July 11, 1905.

Application filed November 19, 1904. Serial No. 233,390.

*To all whom it may concern:*

Be it known that I, JOHN GREEN, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Brake-Beams, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a brake-beam for railway-cars, the object being to produce a brake-beam of light weight, of great strength, and capable of resisting both the lateral and vertical strains to which all brake-beams are subjected in practical service.

My invention embraces a brake-beam composed of two channel-shaped beams so arranged that their flanges meet at either end. The webs of the channel-beams are split longitudinally intermediate of their ends and are spread to form truss-chords, leaving the ends of the beams integrally united. Further, the opposing flanges of the channel-beams are drawn apart at their longitudinal centers, leaving their ends united. Suitable struts are provided for both horizontal and vertical chords.

Figure I is a perspective view of one of the channel-beams which are used in the construction of my brake-beam. Fig. II is a perspective view of my brake-beam. Fig. III is an enlarged cross-section taken on line III III, Fig. II. Fig. IV is an enlarged cross-section taken on line IV IV, Fig. II.

1 represents channel-beams, each having webs 2 and flanges 3. Each beam is slit at 4 longitudinally of its web 2, said slit being located entirely within the length of the beam, as shown in Fig. I. The beams 1 are placed together in such position that their flanges at the ends of the beams are brought together edge to edge, as shown in Fig. II.

5 represents brake-heads made with forks 6, into which are fitted the ends of the channel-beams 1, as shown in Figs. II and III. The ends of the beams are held firmly within the brake-heads by rivets 7.

The slits 4 in the webs 2 produce chords 8, one on each side of each of said slits. These

chords are drawn apart, thereby forming truss-chords which terminate at each end with the terminations of the slits 4. Between the chords 8 and centrally located with respect to the ends of said chords I place a brake-lever fulcrum-strut 9, said strut serving to receive the force of compression between the chords. The fulcrum-strut is held in position at each end by rivets 12, as shown in Figs. II and IV, that connect the strut with the beam-chords 8.

As a resistance to vertical strain on the brake-beam, I spread the mating flanges and chords of the opposing channel-beams apart at their longitudinal centers and hold them apart, as shown in Fig. II, by heads or enlargements 10 at the ends of the strut 9. By thus separating and spreading the sections of my beam the chords 8 have both vertical and horizontal divergency from the horizontal and vertical planes of the beam ends, and great strength is obtained for withstanding not only horizontal and vertical strains, but also for overcoming the peculiar rotary or twisting strain to which a brake-beam is subjected.

I claim as my invention—

1. A brake-beam consisting of a pair of channel-beams each having its web slit longitudinally intermediate of its ends and spread to form truss-chords, and a strut interposed between said chords; said channel-beams being arranged so that the flanges of one beam oppose the flanges of the other beam, substantially as set forth.

2. A brake-beam consisting of a pair of channel-beams each having its web slit longitudinally intermediate of its ends and spread to form truss-chords, and a strut interposed between said beams to hold the chords of each individual beam in spread condition and also holding the opposing chords of the two beams separated, substantially as set forth.

3. A brake-beam consisting of a pair of channel-beams having their flanges arranged edge to edge and having their webs slit longitudinally intermediate of their ends and spread to form truss-chords, and a strut interposed between said chords to hold them in spread condition; said strut having heads at its ends

to hold the chords of one beam separated from the chords of the other beam in trussed condition, substantially as set forth.

4. A brake-beam consisting of a pair of  
5 channel-beams having their flanges arranged edge to edge and having their webs slit longitudinally intermediate of the ends of the beams, brake-heads confining the unslit ends of the beams, and a strut interposed between

said chords to hold them in spread condition; 10  
said strut having heads at its ends to hold the chords of one beam separated from the chords of the other beam in trussed condition, substantially as set forth.

JOHN GREEN.

In presence of—

BLANCHE HOGAN,  
M. P. SMITH.