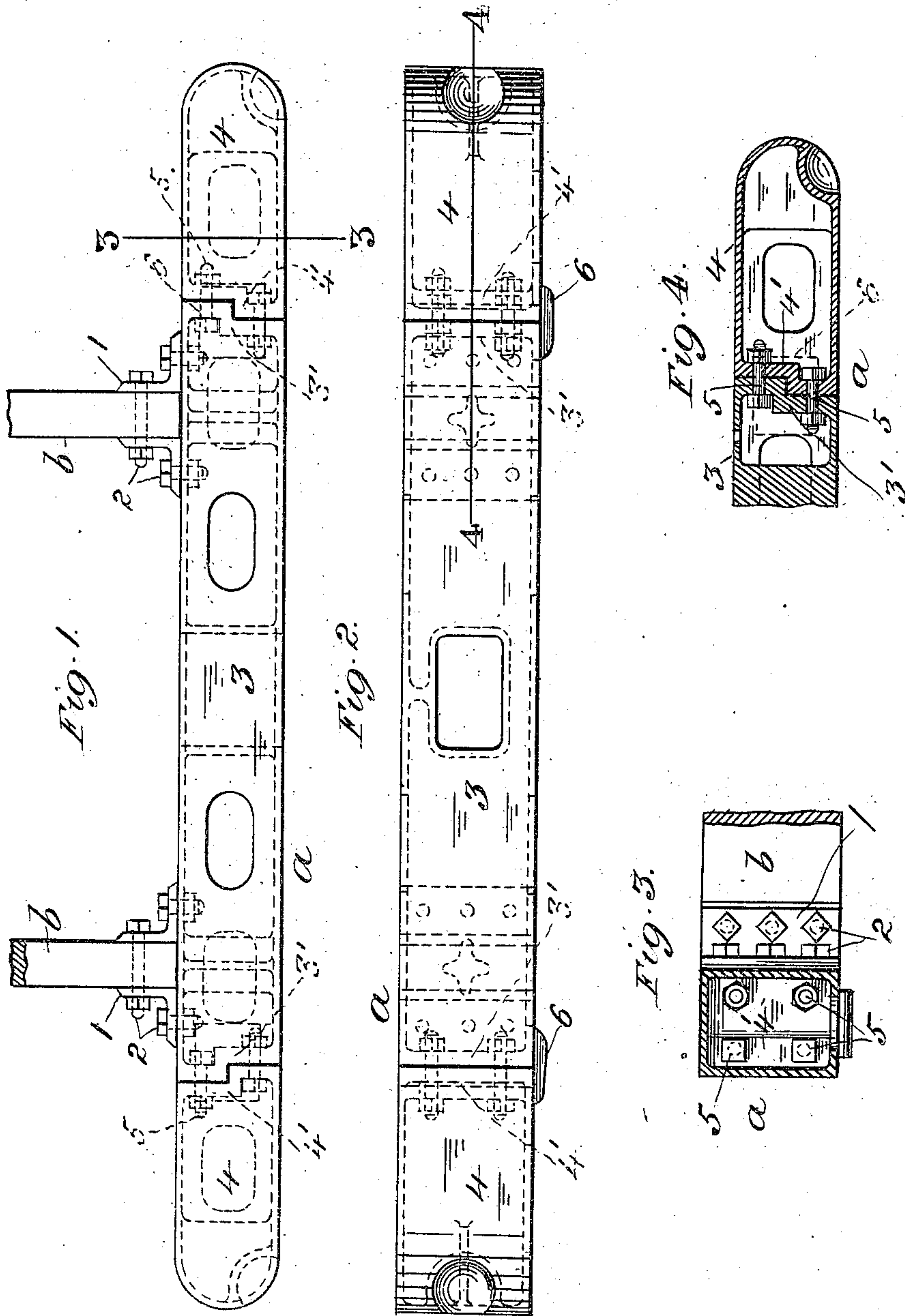


No. 848,427.

PATENTED MAR. 26, 1907.

J. B. BARNES.
LOCOMOTIVE BUFFER BEAM.
APPLICATION FILED DEC. 26, 1906.



WITNESSES
J. W. Renbow
M. D. Whitcomb

INVENTOR
Joshua B. Barnes
By Edward W. Funnell
His Atty

UNITED STATES PATENT OFFICE.

JOSHUA B. BARNES, OF SPRINGFIELD, ILLINOIS, ASSIGNOR TO DAVIS LOCOMOTIVE WHEEL COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF DELAWARE.

LOCOMOTIVE BUFFER-BEAM.

No. 848,427.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed December 26, 1906. Serial No. 349,536.

To all whom it may concern:

Be it known that I, JOSHUA B. BARNES, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Improvement in Locomotive Buffer-Beams, of which the following is a specification.

My invention relates to the buffer-beam secured to the butting end portions of the longitudinal members of a locomotive or car underframe, and is particularly applicable to that class of buffer-beam which is composed of cast metal, preferably steel, and hitherto made in one piece throughout.

My invention has for its object to obviate the labor, delay, and expense heretofore incurred of disconnecting and discarding the main or that part of the buffer-beam located between and immediately beyond its connection to the said members when breakage of either free end part of the beam happens from collision or other abnormal strain thereat.

The invention consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a top plan view of my improved buffer-beam; Fig. 2, a front elevation thereof; Fig. 3, a vertical transverse section through the same on line 3 3 in Fig. 1, and Fig. 4 a horizontal section through the end and adjacent part of the beam on line 4 4 in Fig. 1.

Like letters and numerals of reference denote like parts in all the figures.

a represents my improved buffer-beam for a locomotive or car underframe, and *b* the longitudinal members (broken away) of the frame, which butt at their ends against the rear side of the buffer-beam *a*, to which they are fixed by angles 1 and bolts 2 (rivets or otherwise) in the usual well-known manner.

The buffer-beam *a*, which in the present case is preferably composed of cast-steel and shown as box-shaped in cross-section, consists of three parts, respectively integral—namely, a middle part 3, to which the longitudinal members *b* are fixed, and two end parts 4, which extend beyond the said members and are separably fixed to the middle part 3 in any suitable manner—such as that shown, wherein each end of the middle part 3

is closed by an upright wall 3', preferably rabbeted in cross-section, which when the parts 3 and 4 are assembled is engaged by a similarly-shaped wall closing the inner meeting end of the end part 4, the walls 3' and 4' being fixed securely together, preferably by bolts 5 inserted therethrough from the interior of the parts 3 and 4, respectively, as shown.

From the bottom of the middle part 3, at each end thereof, preferably projects outwardly a flange or lug 6, which bears against the bottom of the inner closed end 4' of the end part 4 for guiding the same in assembling the parts 3 and 4, or in lieu of the flange 6 one or more dowel-pins projecting from one of the said parts and registering with corresponding holes in the other part may be used in assembling the parts 3 and 4.

The parts 3 and 4 of the buffer-beam *a* when assembled and secured together are collectively in every other respect similar in construction and equipment to the ordinary buffer-beam of this class and needs no further description, and, furthermore, my invention may be applied with slight modification of the means for securing its separable parts together to a built-up metal or combination wood and metal buffer-beam, as the case may be.

In operation in the event of a sufficiently sudden and abnormal blow from collision or otherwise to either end part 4 of the buffer-beam *a* the bolts 5, which normally secure the said part to the middle part 3 are broken, and thereby releases the end part 4, leaving the middle part 3 of the buffer-beam *a*, with its connections, to the longitudinal members *b* of the underframe intact.

I do not limit myself to the particular means described for securing the parts 3 and 4 together, as in lieu of the rabbeted meeting walls 3' and 4' their meeting surfaces may be plain or formed with dovetailed connections, as found most suitable, without departure from the principle of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A buffer-beam for a locomotive-engine or car underframe, having its body divided transversely into three parts separably fixed endwise to each other, substantially as described and for the purpose set forth.

2. A buffer-beam for a locomotive-engine or car underframe, having its body divided

transversely into three parts, namely, a middle part adapted to be attached to, and extending beyond the longitudinal members of the said frame, and two end parts adapted
5 respectively to engage with the corresponding end of the middle part, and means for separably fixing the said parts endwise to each other, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSHUA B. BARNES.

Witnesses:

EPHRAIM R. JEFFERY,
ALONZO B. MARS.