

No. 656,532.

Patented Aug. 21, 1900.

J. F. DUNN.
LOCOMOTIVE BUFFER BEAM.

(Application filed Apr. 9, 1900.)

(No Model.)

Fig. 1.

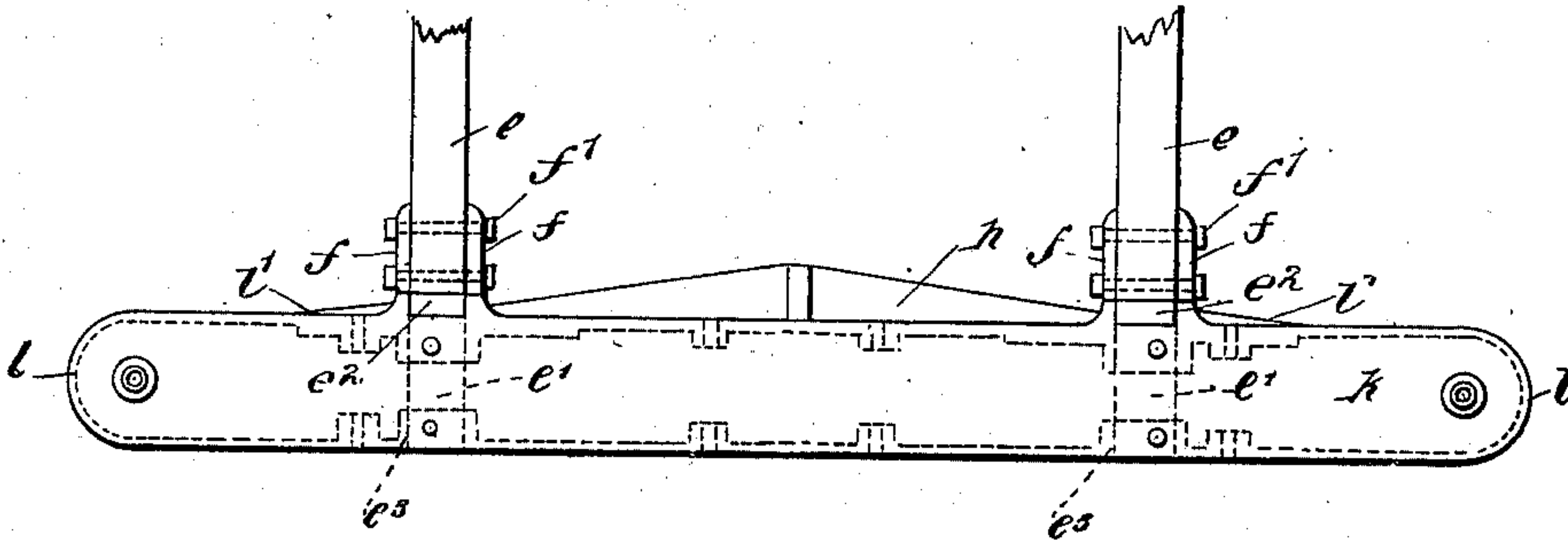


Fig. 2.

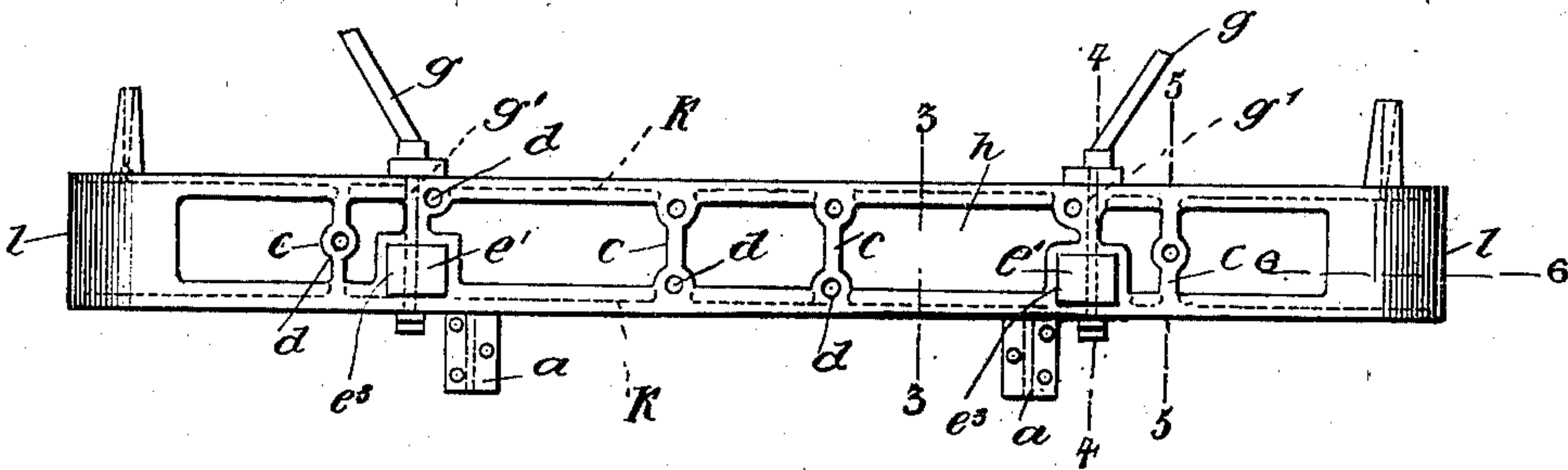


Fig. 3.

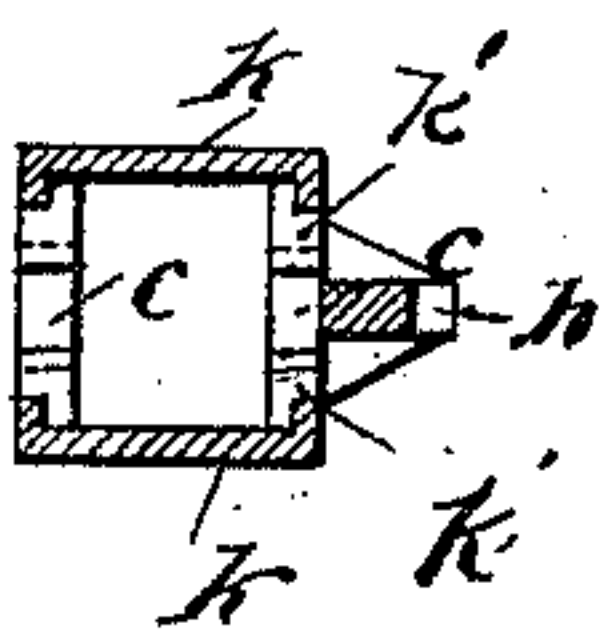


Fig. 4.

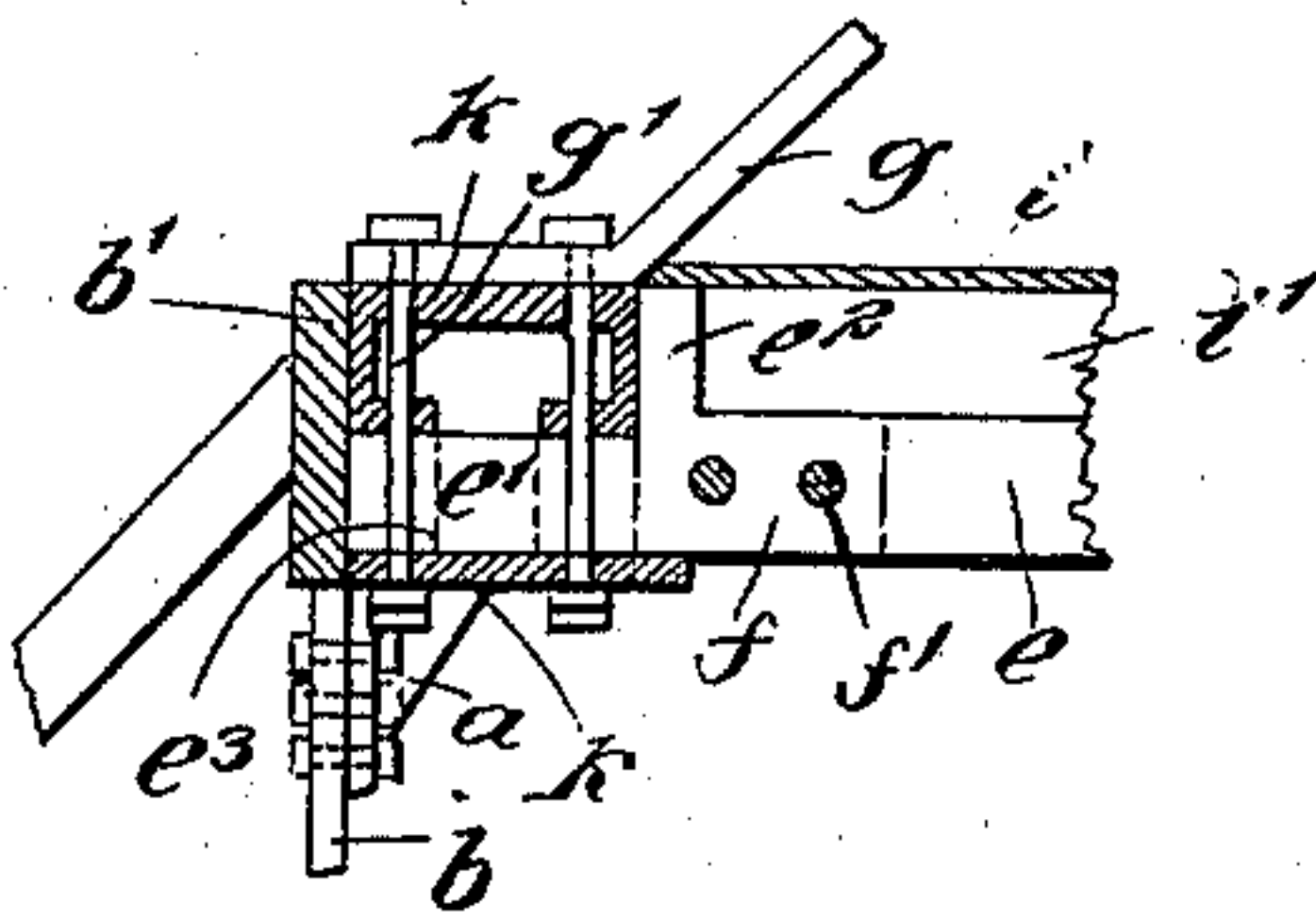


Fig. 5.

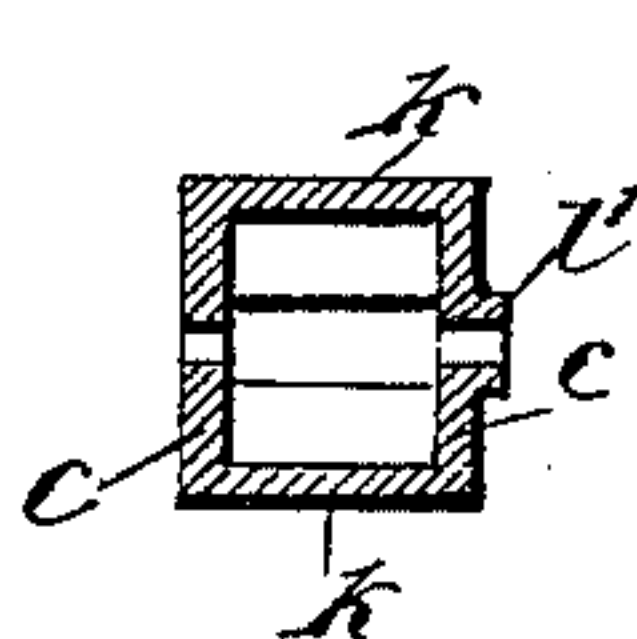
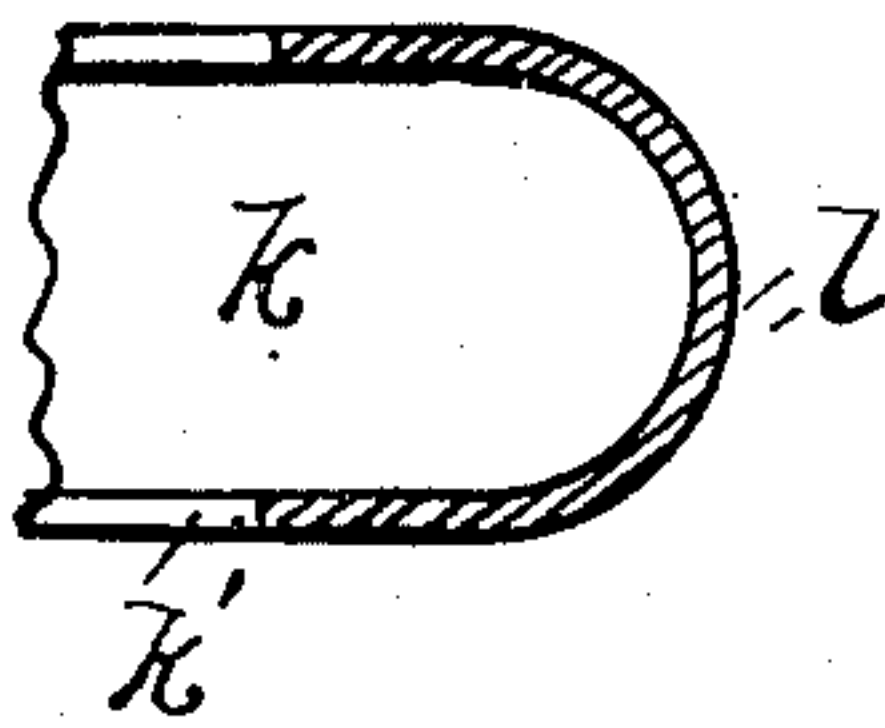


Fig. 6.



WITNESSES:

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LOCOMOTIVE BUFFER-BEAM.

SPECIFICATION forming part of Letters Patent No. 656,532, dated August 21, 1900.

Application filed April 9, 1900. Serial No. 12,088. (No model.)

To all whom it may concern:

Be it known that I, JAMES FRANCIS DUNN, a citizen of the United States, and a resident of Salt Lake City, in the county of Salt Lake and State of Utah, have invented a new and Improved Locomotive Buffer-Beam, of which the following is a full, clear, and exact description.

This invention relates to certain improvements by means of which I am enabled to construct a locomotive buffer-beam of cast-steel, the beam being so arranged that all of its parts are comprised in one integral casting, to which the various parts of the engine may be directly attached.

This specification is the disclosure of one form of the invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the beam. Fig. 2 is a front elevation thereof with the parts at the rear omitted. Fig. 3 is a section on the line 3 3 of Fig. 2. Fig. 4 is a section on the line 4 4 of Fig. 2. Fig. 5 is a section on the line 5 5 of Fig. 2, and Fig. 6 is a sectional plan on the line 6 6 of Fig. 2.

The beam is cast hollow in one integral structure and is formed with lugs *a*, extending downward therefrom to carry the heel *b* of the pilot. Strengthening stanchions or braces *c* are provided for the beam and extend between the top and bottom walls of the beam and are located at the front and rear thereof. The beam is also provided with a number of properly-situated bolt-holes *d* to facilitate bolting the cap *b'* of the pilot to the buffer-beam, as shown in Fig. 4. The buffer-frame beams *e* are formed at their front ends with forward extensions *e'* and with upward extensions *e''*. The beam has two transverse passages *e³* therein, in which the extensions *e'* are fitted, while the extensions *e''* bear snugly against the rear face of the beam, as shown in Fig. 4. The beam is also provided with two pairs of rearwardly-extended integral lugs *f*, between which the frame-beams *e* are fitted and secured by bolts *f'*. The diagonal boiler-braces *g* have their feet bearing on top of the buffer-beam, such feet being secured

rigidly by bolts *g'*, which pass downward through the buffer-beam and also through the extensions *e'* of the engine frame-beams *e*. The buffer-beam is also provided with an integral rearwardly-projecting rib *h*, extending between the two inner lugs *f*. This rib *h* is arranged in the middle of the beam, so as to resist the buffing strain exerted thereon. Smaller strengthening-ribs *l'* are formed at the rear of the beam and near its ends, respectively, outside of the lugs *f* to resist the buffing strains on the ends of the beam. If desired, a deck *i* may be mounted on the frame-beams *e*, (see Fig. 4,) and for the purpose of properly supporting the deck wooden filling-blocks *i'* may be placed on the frame-beams, as shown in Fig. 4.

The two central pairs of strengthening-ribs *c* are arranged in the middle of the beam just forward of the rib *h*, so that the coupler may be fastened to the buffer-beam at this point. It will therefore be seen that the strain of the coupler is communicated directly to the rib *h* and thence to the engine frame-beams. This produces an exceedingly-strong yet light construction. The buffer-beam is preferably formed with imperforate top and bottom walls *k*, the side edges of which have inwardly-turned flanges *k'*, and at the end of the beam rounding end walls *l* are formed, these walls extending between the top and bottom walls of the beams and strengthening the ends thereof. By means of the peculiar arrangement of the frame-beams *e* in the sockets or passages *e³* of the beam the frame-beams are fastened securely in place, and the boiler-braces *g* may be fastened down on top of the buffer-beam directly adjacent to the frame-beams.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a locomotive buffer-beam having a transverse passage therein, an engine frame-beam having a forward and upward extension at its front end, the forward extension being fitted in the passage of the buffer-beam and the upward extension bearing against the rear face of the buffer-beam, and means for holding the engine frame-beam in position.

2. The combination of a locomotive buffer-

beam adapted to have the coupler fastened to approximately the middle thereof, frame-beams fastened to the buffer-beam at opposite sides of the center thereof, and a strengthening-rib on the buffer-beam and extending longitudinally thereof from near one engine frame-beam to near the other.

3. A locomotive buffer-beam adapted to have the coupler fastened to approximately the middle of its front face, the beam having means at its rear side for fastening the engine frame-beams, such means being situated at opposite sides of the center of the beam, a rib formed on the beam and running longitudinally thereof between the said means for fastening the engine frame-beams, and additional or end ribs formed on the beam respectively outside of the said means for fastening the frame-beams.

4. The combination of a buffer-beam, engine frame-beams fastened thereto, boiler-braces bearing on top of the buffer-beam, and fastening devices extending through the boiler-braces, the buffer-beam, and the engine frame-beams.

5. A locomotive buffer-beam having transverse passages formed therein adapted to receive the engine frame-beams, and lugs formed on the beam respectively adjacent to the transverse passages, the lugs being adapted

to lie against the sides of the frame-beams and be fastened thereto.

6. The combination of a locomotive buffer-beam having a transverse passage therein, and an engine frame-beam having a front extension and an upward extension adjacent thereto, the front extension projecting into the transverse passage of the buffer-beam, and the upward extension lying against the rear face of the buffer-beam.

7. A locomotive buffer-beam formed of an integral mass of cast metal, having its middle rear portion provided with a longitudinally-disposed rib to receive the buffing strain on the beam at such point.

8. A locomotive buffer-beam formed of an integral mass of cast metal and adapted to have a coupler fastened to the front thereof at approximately its middle, and a longitudinally-disposed rib formed integrally with the beam and extending toward the ends thereof from the middle, such ribs serving to receive the strain exerted by the coupler.

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

JAMES FRANCIS DUNN.

Witnesses:

L. A. THOMAS,
J. H. AVERY.