

B. W. Healey. Iron Tender Frame.

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Fig. 1

PATENTED JUN 7 1870

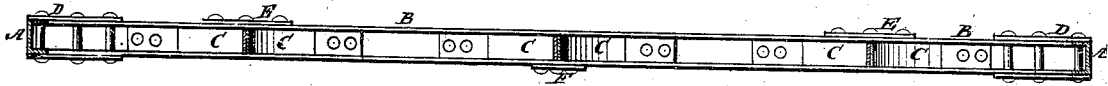


Fig. 2.

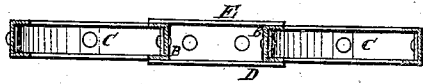
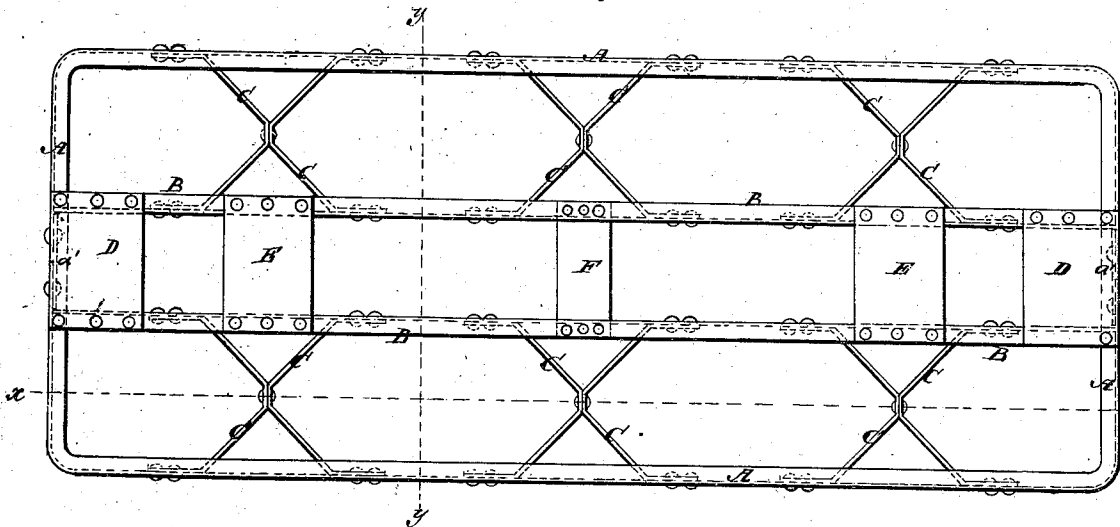


Fig. 3.



Witnesses:

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BENJAMIN W. HEALEY, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 103,878, dated June 7, 1870.

IMPROVED IRON TENDER-FRAME.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, BENJAMIN W. HEALEY, of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Iron Tender-Frame; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 is a vertical longitudinal section of my improved tender-frame, taken through the line $x x$, fig. 3.

Figure 2 is a vertical cross-section of the same, taken through the line $y y$, fig. 3.

Figure 3 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved iron tender-frame, which shall be lighter, stronger, and more durable than the frames constructed in the ordinary manner; and

It consists in the iron tender-frame, constructed of channel-iron and in the manner hereinafter more fully described.

A are the side bars of the frame, which are made of channel-iron, as shown in fig. 2.

The side bars A are bent at the corners of the frame, and extend inward at right angles, to form the ends of the frame.

The ends of the bars A meet at the center of the ends of the frame, and are secured in place by a short bar, a' , placed in the channel of the bars A, overlapping their joint, and is securely bolted or riveted to the body of the ends of the said bars, as shown in fig. 1.

B are the middle longitudinal bars, which are also made of channel-iron, placed with their channels toward the channels of the outer bars A.

The longitudinal bars A and B upon each side of the frame are connected to each other and strengthened by the V-shaped braces C, each pair of which is bolted or riveted to each other at their middle parts, and their ends are placed in the channels of the bars A B, and bolted or riveted to the body of the said bars A B.

These, more or less, pairs of braces, C, are used upon each side, according to the size of the frame.

The ends of the bars B are connected with the bars A at the ends of the frame, by the plates D, which plates D are securely bolted or riveted to the bars A and B, as shown in figs. 1 and 3, said bolts or rivets, passing through the flanges of the bars A B.

The bars B are also connected to each other, at different points of their length, by the plates E and F, bolted or riveted to the upper or lower sides of the said bars.

The plates D E F not only strengthen the frame, but also serve as supports for the attachments of the running-gearing and body of the car.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The tender-frame, formed of the outer and inner bars A B, of channel-iron, short bars a' , brace-bars C, and plates D E F, substantially in the manner and for the purpose herein set forth and described.

BENJAMIN W. HEALEY.

Witnesses:

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