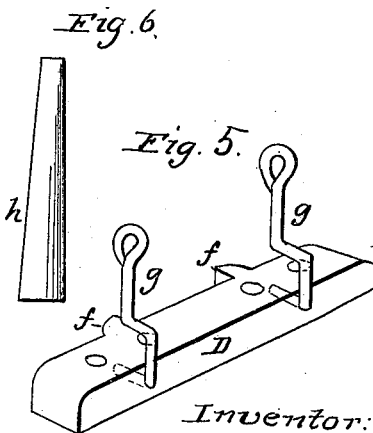
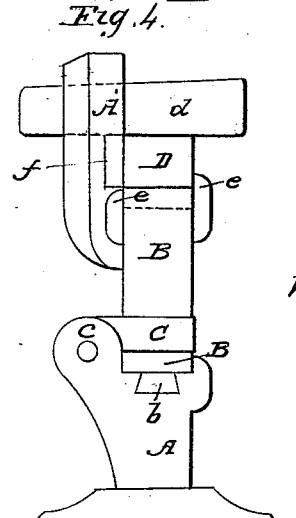
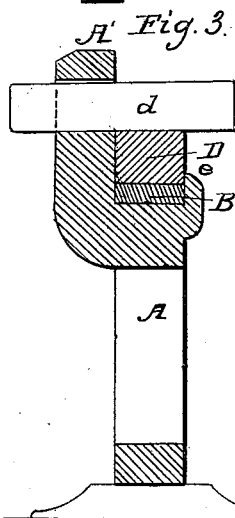
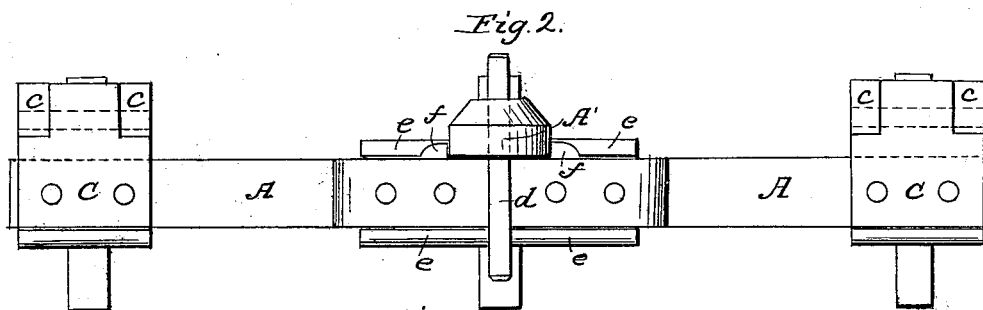
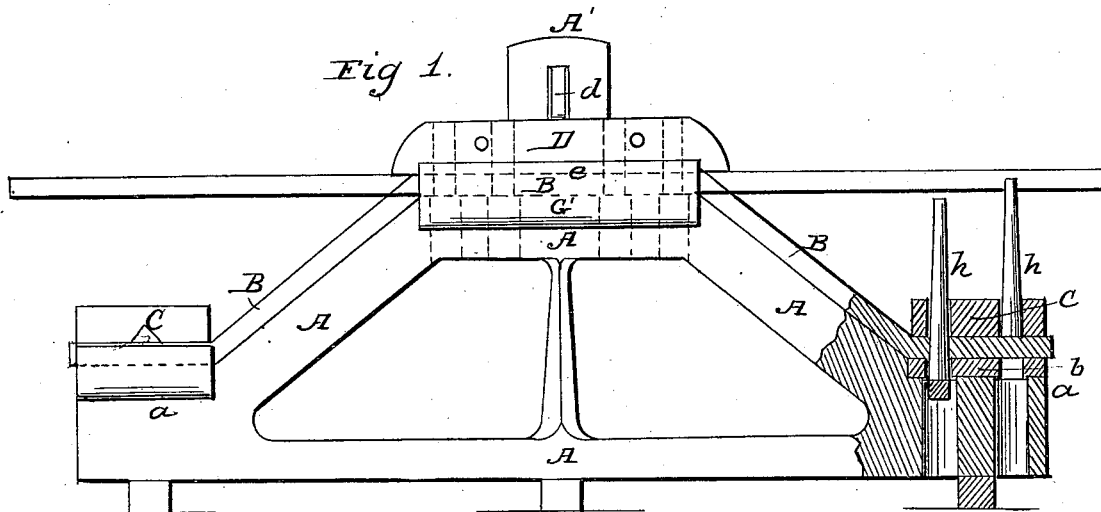


P. L. WEIMER.

Apparatus for Bending and Punching Truck Irons.

Patented Oct. 31, 1865.

No. 50,753.



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UNITED STATES PATENT OFFICE.

PETER L. WEIMER, OF LEBANON, PENNSYLVANIA.

APPARATUS FOR BENDING AND PUNCHING TRUCK-IRONS.

Specification forming part of Letters Patent No. 50,753, dated October 31, 1865.

To all whom it may concern:

Be it known that I, PETER L. WEIMER, of Lebanon, county of Lebanon, and State of Pennsylvania, have invented a new and useful Machine for Bending and Punching Truck-Irons for Railway-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of the machine, showing a section through one end thereof and a bar of iron bent in the required form. Fig. 2 is a top view of the new machine. Fig. 3 is a vertical cross-section through the same, taken through the central punching-bed. Fig. 4 is an elevation of one end of the machine. Fig. 5 is a perspective view of the removable top block and its handles by which it is lifted into and out of its place. Fig. 6 shows the punch which is used.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to bend bars of iron into the required shape for the truck-frames of railroad cars, and also to punch the bars at one operation by means of a machine which is so constructed that the work of bending and punching can be performed with great facility and by once heating the bars, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The frame A of the machine may be constructed of one piece, or of several pieces suitably bolted together. The horizontal portions *a a'* of this frame are adapted for receiving die-blocks *b*, through which are holes to allow the punch to force holes into the truck-iron B, as shown in Fig. 1, the bits of metal falling through the vertical holes which are made through the die-beds.

The die-blocks *b* can be removed at pleasure and others substituted through which the perforations may be larger or smaller than what I have represented in the drawings.

Above the perforated beds *a a'*, at the extremities of the frame A, are hinged guide-blocks C C, which are pivoted to offsets *c c* of said frame in such manner that they can be

thrown up out of the way in adjusting the bar B in a position and bending it in proper form to lie snugly upon the frame and in removing said bar from the machine. When used, the hinged blocks C C are brought over and pressed down upon the bent end of the bar, as shown in Figs. 1, 2, and 4. The intermediate die-bed, *a'*, is provided with elevations *ee* on each side, between which the bar B is received. The die-beds *a a'* are similarly provided with side abutments for preventing the bar B from spreading laterally during the operation of punching it.

The bar B is held down firmly upon the central bed, *a'*, by means of a key, *d*, acting on top of a block D. This block is provided with tongues *ff*, which come on each side of the key-post A' when the block is adjusted in its place, as shown in Fig. 2, and prevent it from slipping endwise out of place. Block D is also provided with movable handles *g g* for lifting it into and out of place, as shown in Fig. 5. The object of the block D is to hold the bar B down firmly upon its bed *a'*, so that this bar will not spring up during the operation of bending; and another object of this block is to guide the punch to the bar B, holes being made through the block for this purpose.

The mode of operation is as follows: The bar which is to be formed and punched is heated in a suitable furnace. It is then laid on the machine, as indicated in red lines, Fig. 1, and the top block, D, is lifted into its place by means of the handles *g g* and the key *d* driven over it tightly. The handles *g g* are removed and the punches driven through by means of heavy sledges, the punches dropping out beneath the machine. This operation requires but a few seconds to be performed. The projecting ends of the bar B are next bent down with sledges to fit the machine. The hinged blocks C C are then thrown over the iron, and the punches driven through it in the same manner as described for punching the middle of the bar. The most common way of manipulating these irons is to take a separate heat at every bend, making four distinct operations, after which the holes are drilled.

By my improved machine once heating the bars is all that is required to perform all the work of bending and punching.

One very important feature of my invention is the use of tapering punches for punching the holes through the truck-iron during its confinement upon the machine.

By employing tapering punches *h*, as shown in Figs. 1 and 6, and using the largest ends for penetrating the bar *B*, it will be seen that the heated metal can be punched and the punches readily driven through the bar so as to fall beneath the same. After the holes are tapped through the bar the punches will drop through it in consequence of their tapering form.

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

1. Providing the frame *A* with perforated

guide and holding-down blocks *C C D*, substantially as described.

2. The construction of the central bed, *a'*, of frame *A* with side guides, *e e*, and a key-post, *A'*, in combination with the movable block *D* and key *d*, substantially as described.

3. Constructing the movable guide-block *D* with lugs *f f*, and adapting it to receive handles *g g*, substantially as described.

4. The combination of the punch with the machine, substantially as described, for the purpose set forth.

P. L. WEIMER.

Witnesses:

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