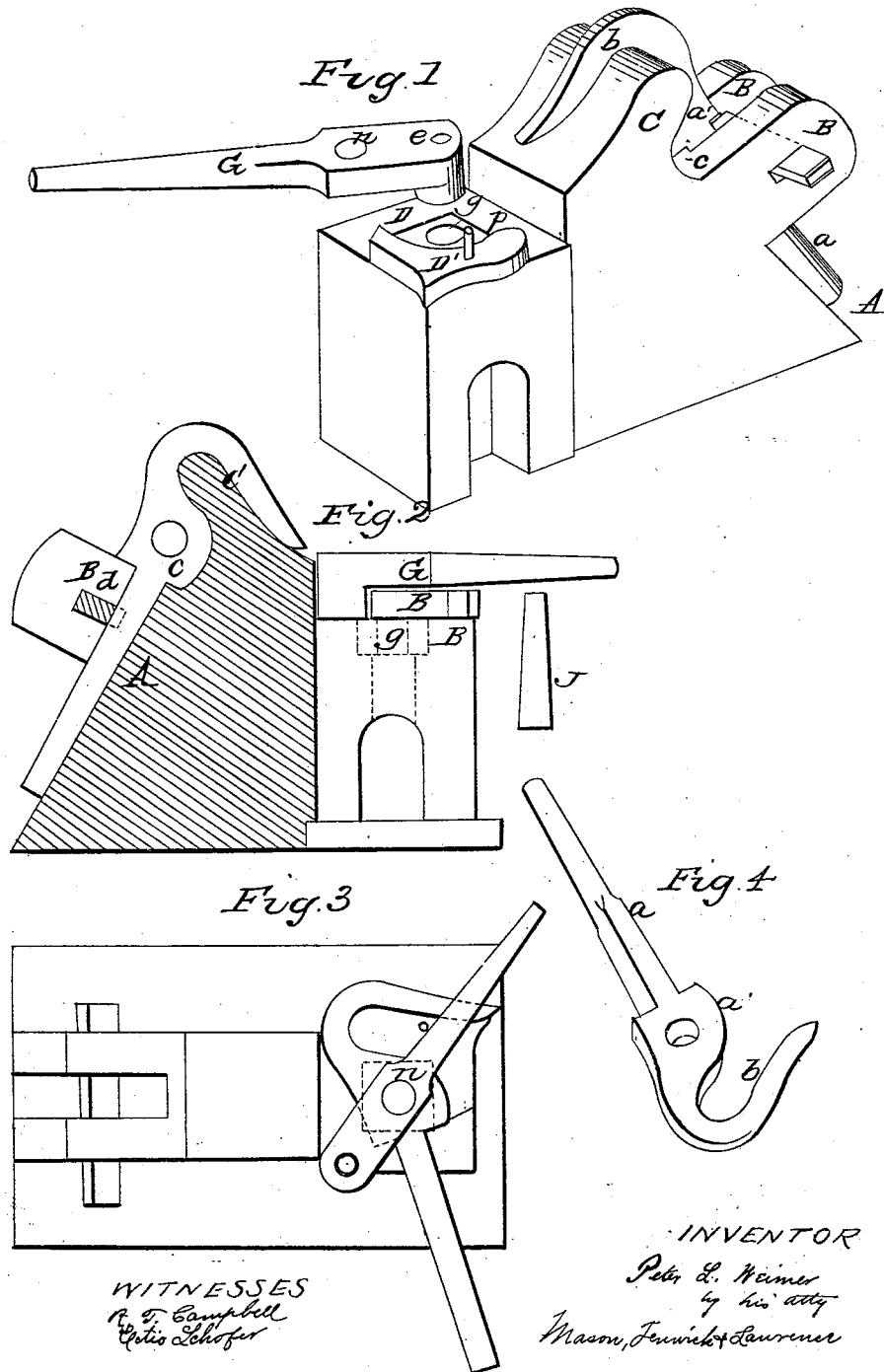


P. L. WEIMER.

Machine for Bending and Punching Car Hooks.

No. 50,757.

Patented Oct. 31, 1865.



UNITED STATES PATENT OFFICE.

PETER L. WEIMER, OF LEBANON, PENNSYLVANIA.

BENDING AND PUNCHING HOOKS.

Specification forming part of Letters Patent No. 50,757, dated October 31, 1865.

To all whom it may concern:

Be it known that I, PETER L. WEIMER, of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a Machine for Finishing Car-Hooks; 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 perspective view of the machine having a hook applied to it and bent into proper shape. Fig. 2 is an elevation of the machine and a vertical section through that portion of it upon which the hook is bent into shape. Fig. 3 is a top view of the machine, showing the hook in a position for being punched. Fig. 4 is a perspective view of the hook completed.

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

This invention is intended to facilitate the work of finishing the ordinary car-hooks after the blanks have been properly forged by bending the tongues into the desired shape and punching the shanks.

It consists in combining upon a single bed a means for locking the blanks upon a pattern-block of the required form to give the peculiar curve to the hook when hammered down upon said pattern; and also a means for confining the hook and its shank upon a die-block during the operation of punching the shank, as will be hereinafter described.

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

In the accompanying drawings I have represented one of the ordinary car-hooks which my machine is adapted for making. This hook consists of a shank, *a*, terminating at one end in an enlargement, *a'*, having a hole through it, and also in a hook, *b*, which has a peculiar curve adapted to the uses required of this hook.

The machine upon which this form of hook is made consists of an inclined plane, *A*, having two perforated key-posts, *B B*, and terminating at its upper end in an inclined shoulder, *c*, and a hook-pattern, *C*, which latter should be of the exact form of the hook when it is finished, as shown in Figs. 1 and 2.

The hook-blank is applied to the machine

as shown in Figs. 1 and 2, and secured in place by means of a wedge-key, *d*, which is driven through the posts *B B* over the shank of the hook-blank. The tongue *b* is now hammered down upon the pattern *C*, and thus made to conform to it. The hooks thus formed are then laid flatwise upon a horizontal bed, *D*, which has an elevated pattern, *D'*, formed on or applied to it, as shown in Fig. 3, which pattern exactly corresponds in shape and size with the pattern *C*. The pattern *D'* is intended to preserve the shape of the hook while it is punched in a heated state. This hook being confined upon the bed *D*, as above described, it is further held down upon it by means of a lever, *G*, which is pivoted to a vertical post, *e*, so that it will swing freely over the hook, as shown in Figs. 1, 2, and 3. The lever *G* has a vertical hole through it, which corresponds in diameter to the diameter of the hole which is through the die-block *g*. This die-block is fitted into a recess in the bed *D*, and it has an opening beneath it for allowing the punch *J* to fall through, so that it can be removed from the side openings shown in Figs. 1 and 2.

A stop-pin, *p*, projects from the pattern *D'* and checks the lever *G* when it is brought over the hook in such position that its hole *n* will be directly over the hole which is through the die-block when the hook and lever are properly adjusted upon the bed *D*, as above described. A tapering punch, *J*, is inserted into the hole *n* of lever *G* and driven through the shank of the hook.

The punch *J* is made of a tapering form, the largest end being the cutting-end, for the purpose of cutting or punching the full-sized hole at one operation and then falling freely through the hole thus punched.

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

1. The construction of the pattern *C*, shoulder *c*, and key-posts *B B*, with the supporting-bed *A*, for the shank of the hook-blank, and forming the hook *b* thereon, substantially as described.

2. The construction of the punching-bed *D* with a pattern, *D'*, and die-block *g*, substantially as described.

3. The perforated lever *G*, in combination

with the die-block *g* and punching-bed D and the hook - pattern D', substantially as described.

4. The combination of the shaping and punching contrivances for finishing car-hooks, substantially as described.

5. The combination of a tapering punch, J,

with the perforated lever G and a punching-bed having an open space beneath it, substantially as described.

P. L. WEIMER.

Witnesses:

D. M. KARMANY,
ANTHONY S. ELY.