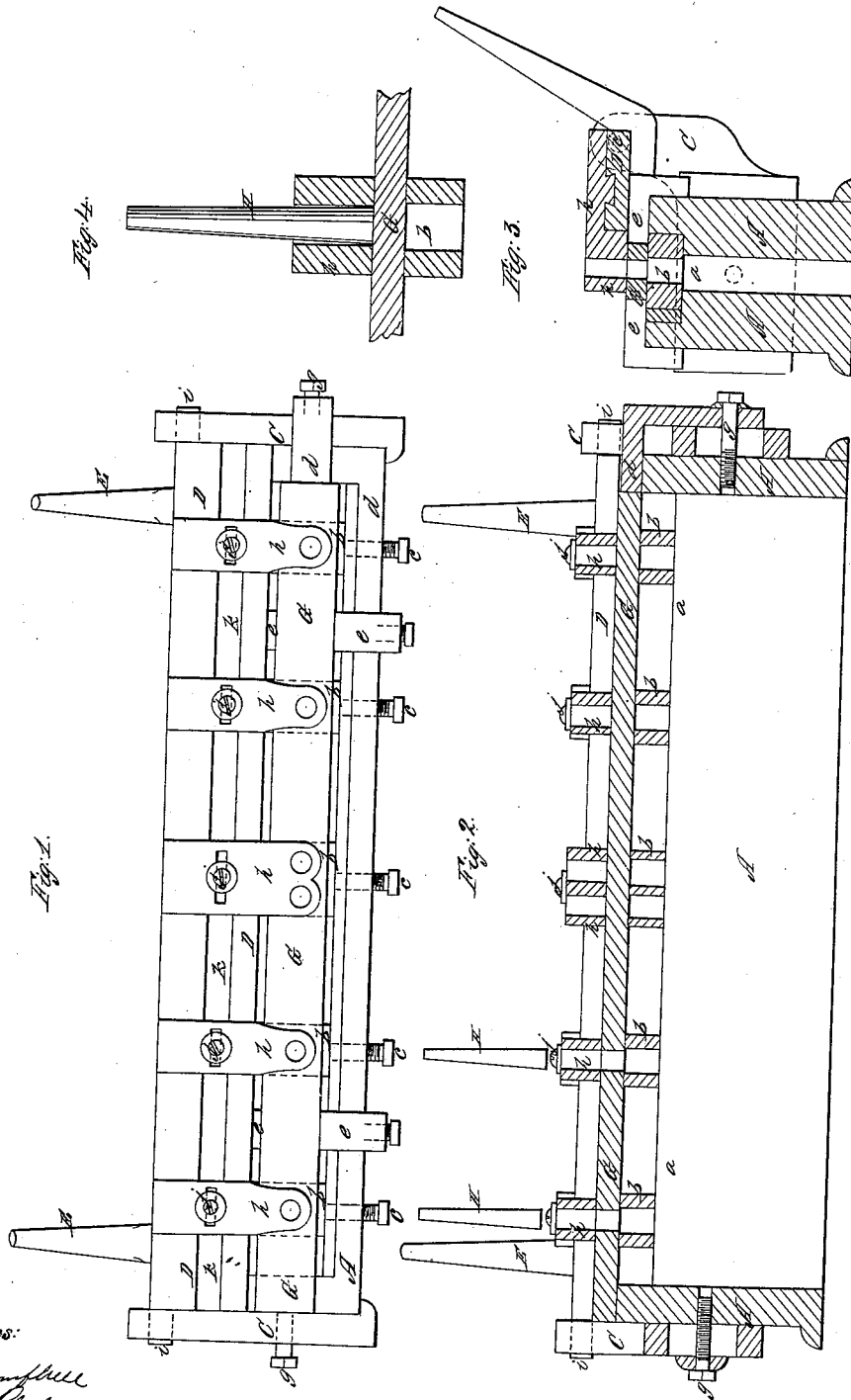


*P. L. Weimer.*

*Making Track Irons.*

*N<sup>o</sup> 50,754.*

*Patented Oct. 31, 1865.*



*Witnesses:*

*Wm. T. Campbell  
Edw. Schafer*

*Inventor:*

*Peter L. Weimer*

# UNITED STATES PATENT OFFICE.

PETER L. WEIMER, OF LEBANON, PENNSYLVANIA.

## APPARATUS FOR PUNCHING.

Specification forming part of Letters Patent No. 50,754, 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 Improved Machine for Punching Metal; 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 top view of the improved machine, having a bar which is to be punched adjusted upon it. Fig. 2 is a longitudinal section taken in a vertical plane through the center of the machine. Fig. 3 is a vertical transverse section through the machine. Fig. 4 is a view, in detail, showing the form of punch which I prefer to use.

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

This invention relates to a novel machine which is adapted for supporting bars of metal during the operation of punching a series of holes through them with loose punches.

The object of my invention is to so construct such a machine that it can be readily adapted for receiving and holding in place bars of metal of different widths, thickness, and length, so that such bars can be accurately and quickly punched, thus avoiding the necessity of frequently heating the bars. Another object of my invention is to provide the machine with adjustable die-blocks and adjustable perforated guide-blocks, the latter being applied to a hinged frame and used for the purpose of guiding the punches to their work, and also for preventing the bars from springing up during the operation of punching, all 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, A represents the bed or frame of the machine, which may be made of any desirable length and width. It should be supported upon a solid foundation and constructed with a longitudinal central channel, *a*, with vertical and parallel sides. Within this channel a number of perforated die-blocks, *b b*, are placed so that they can be moved backward or forward in a direction with the length of the machine and secured in any desired position by means of set-screws *c c*,

which are tapped through the front side of the frame A, as shown in Fig. 1. The top surfaces of these blocks are flush with the top surface of the frame A, so that a bar of metal placed upon this frame, as shown in Fig. 2, will be supported by each one of said blocks.

At one end of frame A is an abutment, *d*, against which the end of the bar to be punched is pressed, and on each side of the frame A are guides, *e e*, which are used for centering the bar to be punched upon the machine.

C C are adjustable supports placed at the extremities of frame A, and secured thereto by means of set-screws *g g*, which pass through vertical slots in the supports, as shown in Fig. 2. The back portions of the supports C C project upward a suitable distance to receive the pivots *i i* of a swinging frame, D, which carries a series of perforated guide-blocks, *h h*. This frame D is hinged or pivoted to the adjustable supports C C in such manner that it can be thrown back by means of handles E E, so as to be out of the way when it is desired to adjust a bar upon the frame, after which the frame D can be brought over and held down upon said bar, so as to prevent it from springing up during the punching operation. By means of the adjustable end supports, C C, said frame can be raised or lowered for bars of different thickness by loosening the set-screws *g g*.

The frame D may be made quite narrow, so that its front edge shall not interfere with the bar to be punched when placed upon the machine. The perforated guide-pieces *h h* are secured upon said frame, so that their front ends project therefrom a suitable distance, by means of set-screws *jj*, and tenons which fit into a longitudinal slot, *k*. The set-screws *jj* pass through slots which are made through the pieces *h h*, as shown in Fig. 1, and by loosening these screws the pieces *h* can be adjusted backward or forward in a direction with the length of the frame. By removing said screws the guides *h* can be moved a greater distance and again fixed in the desired position, supplemental holes being made through the frame D to receive said screws.

The lower surfaces of the guides *h* are flush with the bottom surface of the swinging frame, so that these guides will press snugly upon the bar G, which is to be punched, as clearly shown in Figs. 2, 3, and 4.

The operation of my machine is as follows: The die-blocks *b b* are adjusted to the places required, to conform with the holes required in the bar which is to be punched; the perforated guides *h* on the hinged frame *D* are next set to correspond with the dies, after which the side guides, *e e*, for holding the bar to be punched in its proper position, are suitably adjusted. The bar which is to be operated on is now heated in a suitable furnace and placed on the machine, when the hinged frame, with its guide-blocks, are brought over it and the punches *H* driven through it by means of a sledge.

By using a number of sets of guides and die-blocks having holes of different sizes various sized holes can be punched through bars.

The punches which I prefer to use with my machine are tapering pieces of steel which are driven with their largest ends downward, so that immediately the bar is perforated the punches will drop through freely. When the guides *h h* are used these tapering punches are very essential, in consequence of their not

being liable to remain attached to the bar after their largest ends pass through it, which would involve the necessity of using other punches to drive out the first.

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

1. The combination of adjustable die-blocks *b b*, with adjustable perforated guide-blocks *h h*, and a movable frame, *D*, substantially as described.

2. The vertically-adjustable end supports, *C*, *C*, and guide-frame *D*, in combination with the die-blocks *b b*, substantially as described.

3. The combination of the side guides, *e e*, abutment *d*, and guide and pressure blocks *h h*, with the lower supporting die-blocks, *b*, substantially as described.

P. L. WEIMER.

Witnesses:

D. M. KARMANY,  
ANTHONY S. ELY.