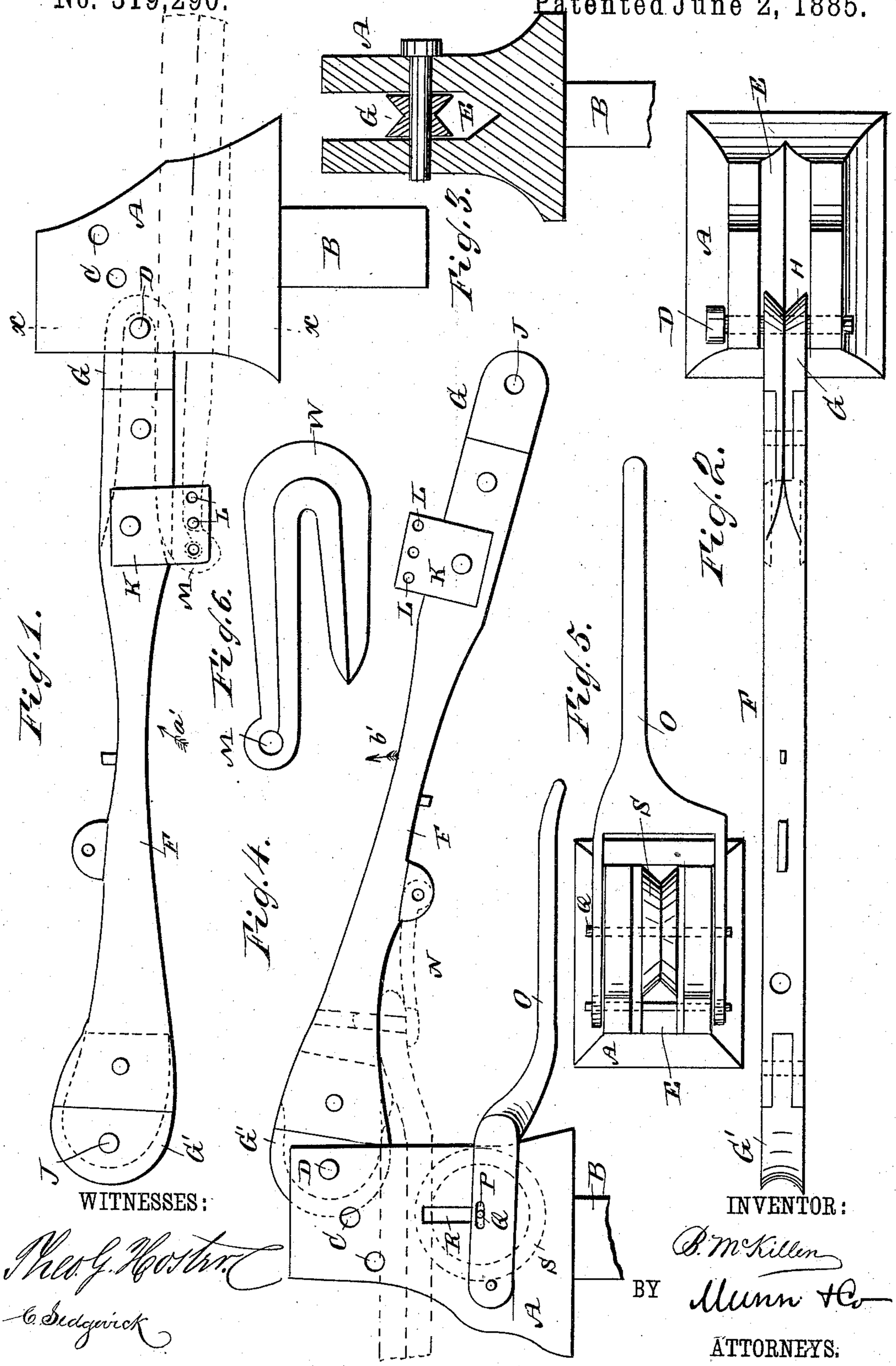
(No Model.)

B. McKILLEN.

MACHINE FOR SHAPING CHAIN HOOKS.

No. 319,290. Patented June 2, 1885.



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BENJAMIN McKILLEN, OF VERONA, MICHIGAN.

MACHINE FOR SHAPING CHAIN-HOOKS.

SPECIFICATION forming part of Letters Patent No. 319,290, dated June 2, 1885.

Application filed February 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN McKILLEN, of Verona, in the county of Huron and State of Michigan, have invented a new and Improved Machine for Shaping Chain-Hooks, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved machine for making and shaping chain-hooks of all shapes and sizes.

The invention consists in the combination, with a forked stock, of a lever pivoted in the same, and a die held on the forked end of the lever.

The invention further consists in the combination, with the stock-die and lever, of a die held movably in the stock; and it also consists in parts and details and combinations of the same, as will be set forth hereinafter.

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

Figure 1 is a side view of my improved machine adjusted for making straight hooks. Fig. 2 is a plan view of the under side of the same. Fig. 3 is a cross-sectional elevation of the same on the line *x x*, Fig. 1. Fig. 4 is a side view of the machine adjusted for making round hooks. Fig. 5 is a plan view of the stock and bottom die, and Fig. 6 is a view of a straight hook.

The forked stock or standard A is provided with a downward projection or lug, B, adapted to be passed into an aperture in the anvil, to hold the stock in place. The said stock is provided with a series of apertures, C, arranged at different elevations, and serving to receive a pivot or pin, D.

The bottom of the recess E, between the prongs of the stock A, is V-shaped if the hook is to be made of square iron, or semicircular if the hook is to be made of round iron, or otherwise shaped, as required.

In one forked end of a lever, F, a die, G, is held by a suitable pin, the end of which die is rounded, and the width of which die is equal to the distance between the inner edges of the hook to be produced. For larger hooks a larger die is required, and for smaller hooks a smaller die is used.

The dies G can easily be removed and replaced by others.

In the edges and end of the die a V-shaped groove, H, is produced for making hooks from square iron; but for hooks made from round iron the groove is made semicircular. Each die is provided with an aperture, J, through which the pin D is passed.

Two jaws, K, project from the bottom edge of the lever near the die G, and each jaw is provided with a series of apertures, L, near the bottom edge.

The eye M, formed on the end of the bar from which the hook is to be formed, is placed between the jaws, and held in place by a pin passed through apertures L and the said eye, the bar resting on the bottom of the recess E, and against the bottom grooved edge of the die, and projecting from the stock, as shown in dotted lines in Fig. 1. The lever F is then swung over in the direction of the arrow *a'*, either by hand or power, and thus bends the bar around and against the die G, whereby the hook is shaped.

According to the different sizes of the die, the pins for holding the lever F and for holding the eye of the hook are adjusted in different apertures.

For making round hooks the die G' in the other end of the lever F is used, the said die G' having more of a circular shape than the die G.

The bar from which the hook is to be formed is held on the bottom edge of the lever F by a bolt passed through the eye and through a hole in the lever F, and held in place by a spring-catch, N, or any other suitable device. The lever F is pivoted adjustably in the stock A in the manner set forth.

A forked lever, O, is pivoted on the outside of the stock, and in its prongs longitudinal slots P are formed, into which the ends of a shaft, Q, are passed, which shaft passes through vertical slots R in the prongs of the stock, as shown in Fig. 4.

A circular die, S, is mounted on the shaft Q between the prongs of the stock, which die S, as well as the die G', are provided each with a V-shaped or other groove, according to the cross-section of the bar from which the hook is to be made. The bar is held on the bottom

edge of the lever F, and rests upon the circular die S, and the lever F is swung over in the direction of the arrow *b'*, whereby the bar is pressed on the die G' and is given the shape of a round hook. Then the lever Q is pressed upward to compress the end of the hook between the dies G' and S, whereby the pointed or tapered end of the hook is made to conform to the shape of the die G.

The die G' can also be changed for different sizes of hooks, and the lever F can be pivoted in different positions for different sizes of hooks.

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

1. In a machine for making chain-hooks, the combination, with a forked stock, of a lever pivoted between the prongs of the stock, and of a die held on the pivoted end of the lever, substantially as herein shown and described.

2. In a machine for making chain-hooks, the combination, with a forked stock, of a lever pivoted on the same, a die on the pivoted end of the lever, and devices for holding the eye of the hook on the lever, substantially as herein shown and described.

3. In a machine for making chain-hooks, the combination, with a forked stock having the bottom of the recess shaped to conform to the shape of the bar from which the hook is to be made, of a lever pivoted on the stock, and a die on the lever, the rim of the die being grooved to conform to the shape of the bar, substantially as herein shown and described.

4. In a machine for making chain-hooks, the combination, with a forked stock, of a movable die in the same, a lever pivoted in the stock, and a die held on the pivoted end of the lever, substantially as herein shown and described.

5. In a machine for making chain-hooks, the combination, with the forked stock A, of the pivoted fork O, the die S, held on the same within the stock, the lever F, pivoted on the stock, and the die G', held on the end of the lever, substantially as herein shown and described.

6. In a machine for making chain-hooks, the combination, with a forked stock, of a circular die held in the said stock, substantially as herein shown and described.

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Witnesses:
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