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Patented Sept. 4, 1900.

P. LORD.

PUNCHING, SHEARING, AND SHAPING MACHINE.

(Application filed Mar. 16, 1900.)

(No Model.)

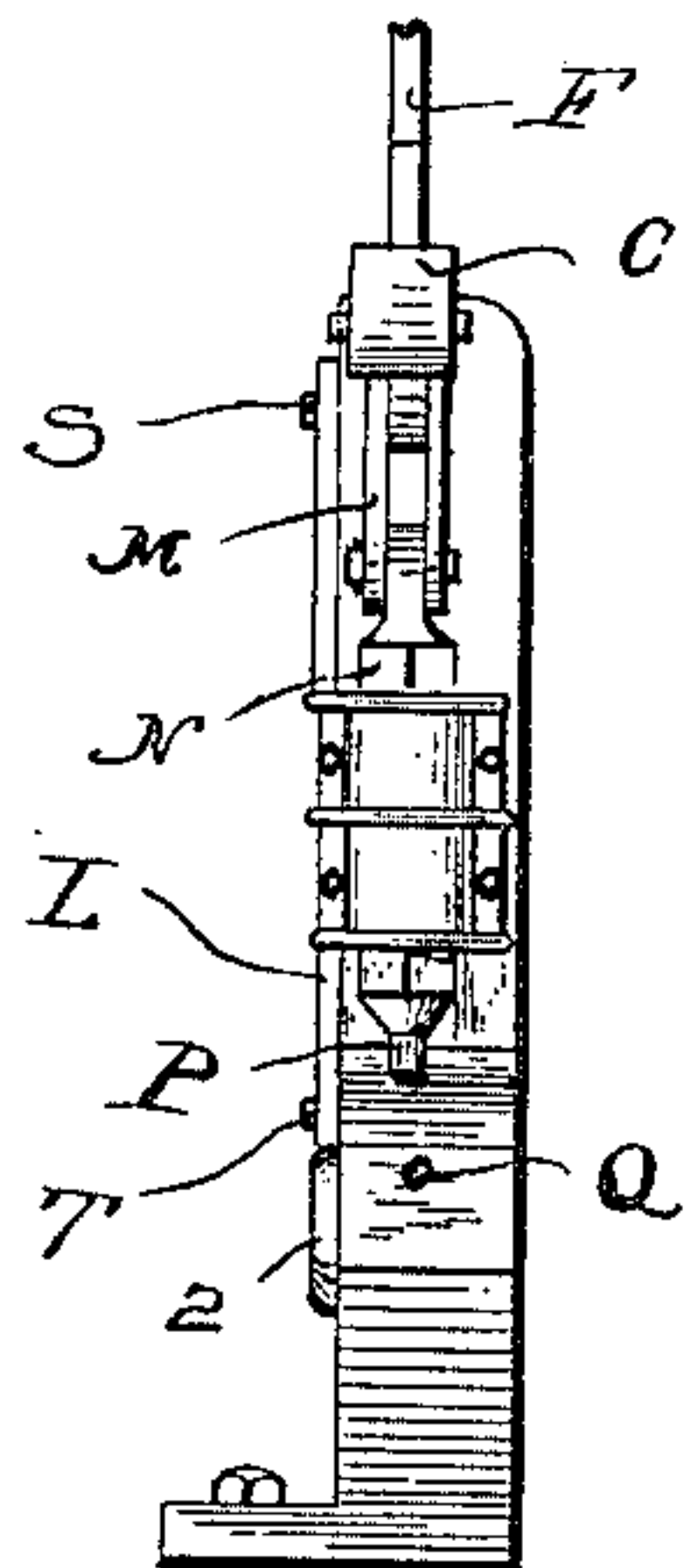


Fig. 1.

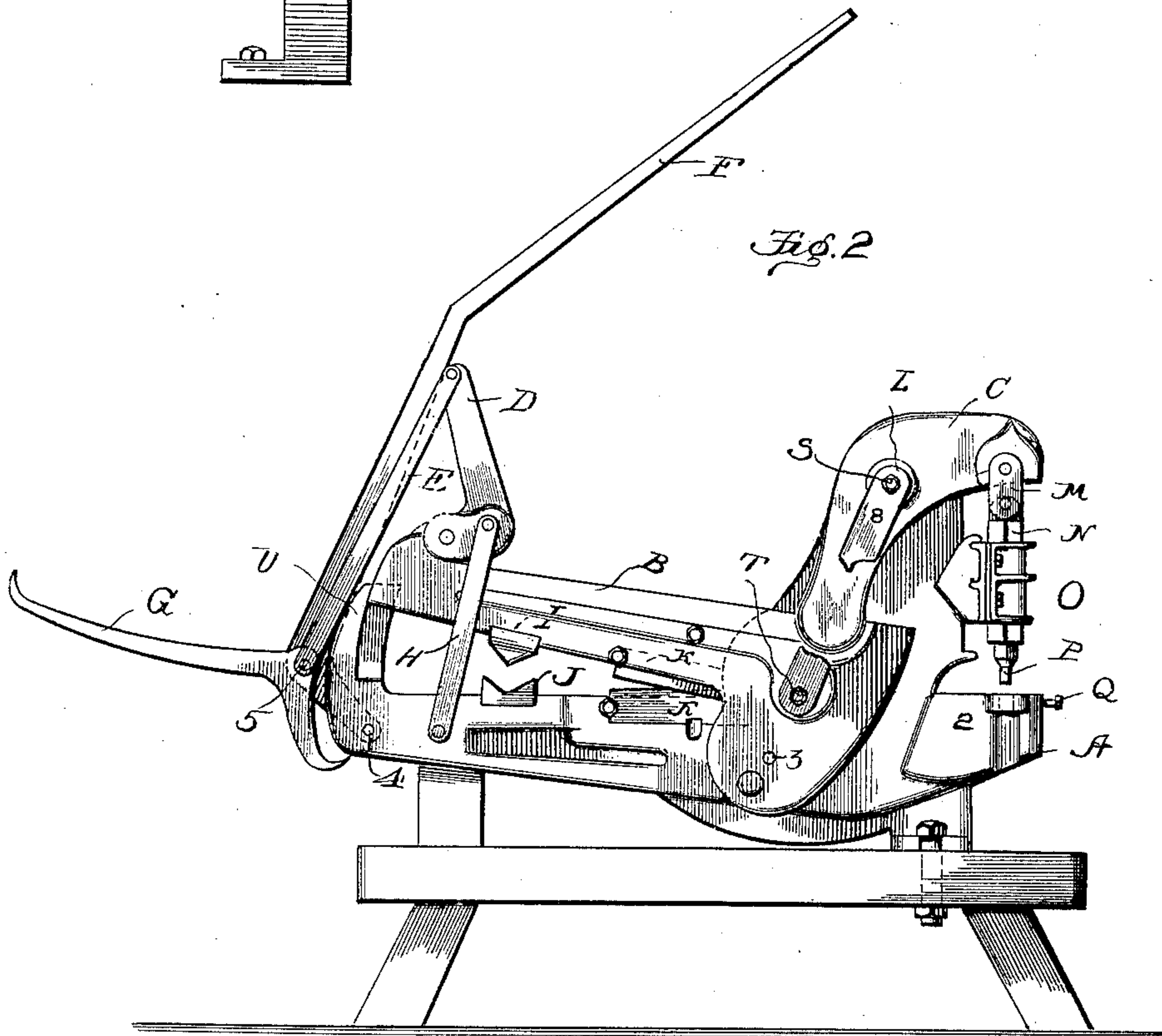


Fig. 2.

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# UNITED STATES PATENT OFFICE

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## PUNCHING, SHEARING, AND SHAPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 657,272, dated September 4, 1900.

Application filed March 16, 1900. Serial No. 8,910. (No model.)

*To all whom it may concern:*

Be it known that I, PETER LORD, a citizen of the United States, and a resident of New Bedford, Massachusetts, have invented certain new and useful Improvements in Shearing, Punching, and Shaping Machines, of which the following is a specification.

The object of my invention is to provide a suitable mechanism by means of which pieces of iron may be shaped, sheared, or punched, and which machine is easily operated by both hand and foot power.

My invention consists in a suitable body or lower portion of the machine, to which is pivoted the top part or lever and which carries one of the shears and one of the parts of the die for shaping metals, and to which lever and the frame is secured a suitable operating mechanism combined with a punching mechanism which is connected to the inner end of this top part or lever, whereby the punching, shearing, and shaping parts are all operated simultaneously, as will be more fully described hereinafter.

In the accompanying drawings, illustrating my invention, Figure 1 is an end view. Fig. 2 is a side elevation.

A represents the lower part or body of the machine, which is secured in any suitable manner to a bench or other suitable support. Upon one end of this body is formed an anvil 2, in the face of which is secured an adjustable guide-plate Q, which is used in connection with the punch P. The opposite end of this body A is provided with the upturned portion U, which forms a guide. Pivoted to this body A at 3 is the lever B, to which one of the shears K is secured and to which a portion I of the shaping-die is secured. The free end of the lever B is grooved, so as to fit over the guide U, and thus hold the lever B always in line with the body A and the parts in operative connection. The second shear K is secured to the top edge of the body A, and the other half J of the shaping-die is also secured to the top edge of the body, as shown.

Pivoted upon the top of the free end of the lever B is a cam-lever D, and which lever is connected to the body A by a pair of links H, which extend downwardly upon opposite sides of the lever B and body A, and which links are connected to the body A at 4. Connected

to the upper end of the lever B are the two flat connecting-rods E, which are pivoted at their lower ends to the hand-lever F. This hand-lever F is preferably shaped as shown and is pivoted at its lower end to the body A, and to this lever at 5 is pivoted a foot-lever G, which is preferably shaped as shown and which has its inner end extending down and catching under the end of the body A, so as to form a leverage at this point. When the hand-lever is forced backwardly, either by itself or in connection with the foot-lever G, the cam-lever D is made to force the lever B down upon the body A, so as to operate both the shears K and the shaping-die at the same time.

Rising from the punch end of the body A is the extension 6, and pivoted to this extension 6 at S is the lever C, which has its lower end rounded and fits in a corresponding socket formed in the inner end of the lever B. This lever C is also connected to the lever B by means of a guard-plate 8, which is intended to hold the bent lever C in position, and which guard-plate is pivoted to the lever C at S and to the lever B at T.

Secured to the vertical extension 6, upon the body A, is a suitable guide O, and connected to the upper end of the lever C by two flat connecting-links N is the plunger U', which is provided at its lower end with an adjustable punch P. When the lever B is moved by either the lever F or foot-lever G, or both together, the lever C is made to turn upon its pivot S and the punch is depressed upon the adjustable die-plate P in the usual manner. Thus it will be seen that all of the parts of the machine are operated simultaneously and any one of them can be brought into use, as may be desired.

Having thus described my invention, I claim—

1. A body, a lever B pivoted thereto and provided with suitable operating mechanism, a cam-lever pivoted upon the outer free end of the lever B, and the operating hand-lever to which the cam-lever is connected by suitable connecting-links, combined with a lever C which has its lower end bearing upon the lever B, the die Q upon the body and a suitable punch connected to the lever C, whereby all of the operating parts of the machine



are moved simultaneously, substantially as shown.

2. In a combined shearing, shaping and punching mechanism, the body A provided  
5 with an anvil, and a vertical extension at one end, a suitable guiding means at the other, a lever B pivoted to the body A, a cam-lever pivoted upon the outer free end of the lever D, connecting-links connected to the  
10 cam-lever D at one end and to the body A at the other, the connecting-links E pivoted to the cam-lever D, the hand-lever F pivoted

upon the body A, and to which the lower ends of the connecting-links are pivoted, and the lever C pivoted to the extension 6, and 15 having its lower end bearing upon the inner end of the lever B, combined with a suitable punching mechanism which is connected to the lever C, substantially as described.

PETER LORD.

Witnesses:

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