

F. M. HUNTINGTON.
Improvement in Machines for Punching and Stamping Metals.
No. 131,004. Patented Sep. 3, 1872.

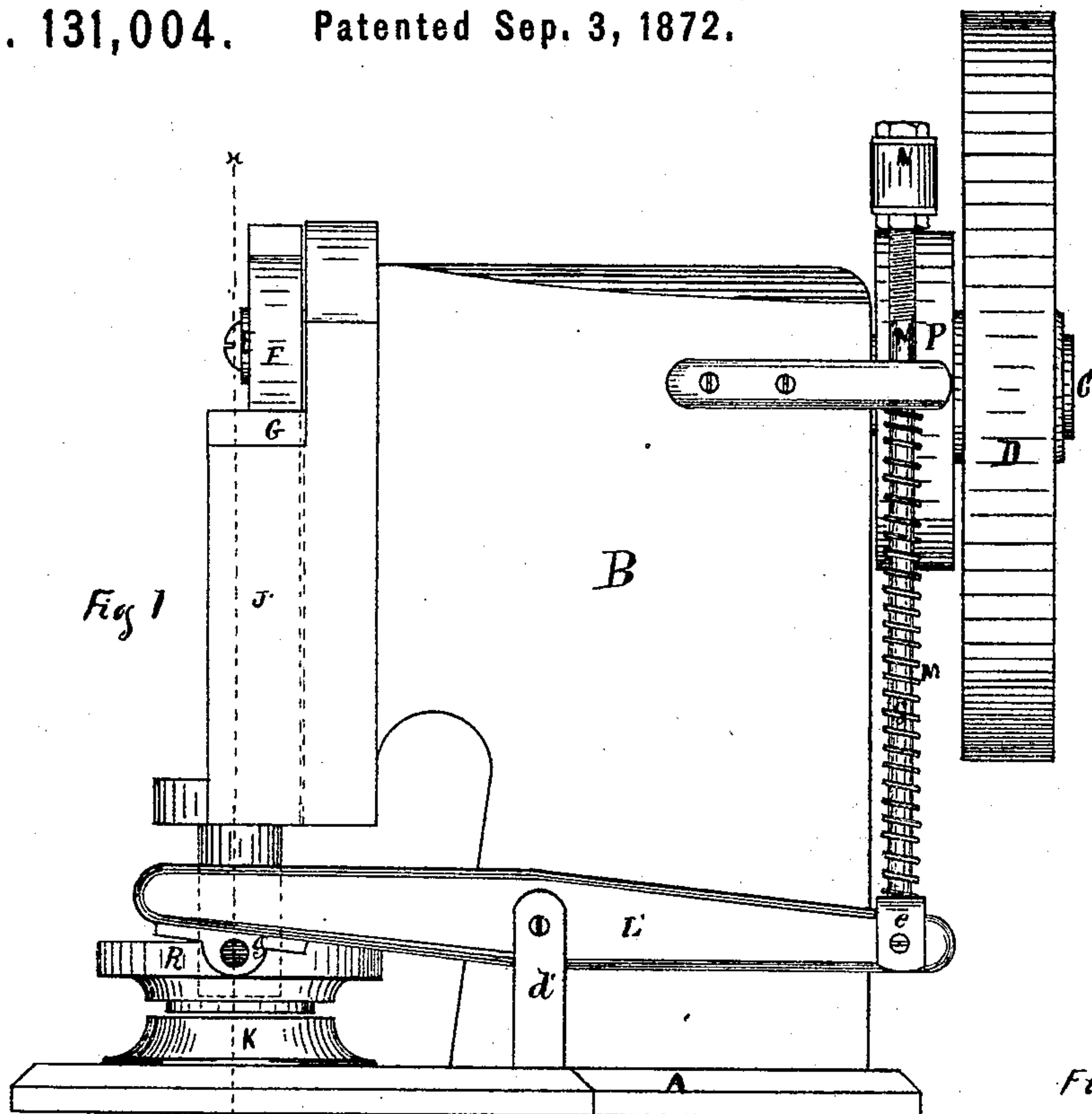
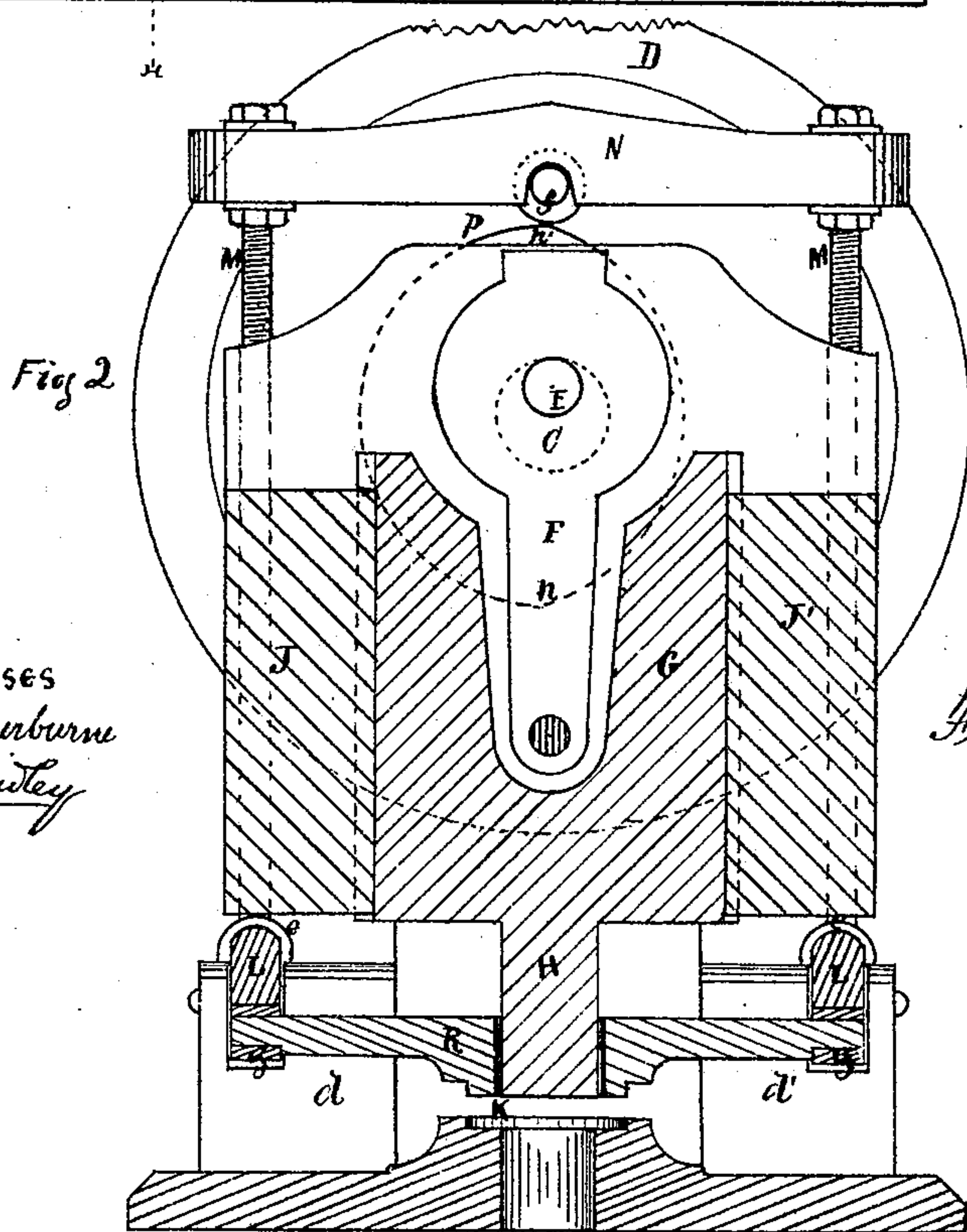


Fig 3



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK M. HUNTINGTON, OF CHICAGO, ILLINOIS, ASSIGNOR TO FRANK STURGES & CO., OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR PUNCHING AND STAMPING METAL.

Specification forming part of Letters Patent No. 131,004, dated September 3, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, FREDERICK M. HUNTINGTON, of Chicago, in the county of Cook and State of Illinois, have invented a new, useful, and Improved Machine for Punching, Stamping, and Pressing Sheet Metal; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation of a machine for punching, stamping, and pressing sheet metal, embodying my improvements. Fig. 2 is a vertical transverse section of the same, showing those parts of the machine which are at the right hand of the line *x x*, drawn vertically through Fig. 1; and Fig. 3 is an inverted section of one of the levers carrying the blank-holding device, showing the manner of adjusting the same.

Similar letters of reference indicate like parts in the several figures of the drawing.

My invention relates to that class of machines employed in punching, stamping, and pressing sheet metals; and the improvement consists in the mechanism for holding the blanks, which is so arranged as to be self-adjusting and self-guiding when in operation.

It will be understood that in pressing ware from round blanks of tin or other sheet metal the part which is denominated the hoop or side is necessary to be held firmly upon the die to prevent wrinkles from forming therein, while the punch is performing its function of pressing the article through the die. The blanks vary in thickness, not only in uniformity of thickness, but one edge may be thicker than the other; consequently the blank-holder, to fully answer the purpose, must be both adjustable and yielding, otherwise the blank is liable to be drawn out of shape or broken.

In the drawing, A represents the base or foundation, and B the frame-work which supports the operating parts of the machine. C is the main shaft, which is secured horizontally within and extending through the upper portion of the frame. Upon the rear end of

said shaft is mounted the driving-wheel D, by which the requisite rotary motion is imparted to the said shaft by means of a suitable belt communicating with the proper machinery, (not shown.) The said shaft C is provided at its forward extremity with an eccentric or crank-pin, E, to which is secured a pitman, F, which is pivoted at its lower end to the central portion of a plunger, G, carrying the punch H, said plunger being secured in and moving upon guides or ways J J', affixed to the front side of the frame, whereby, as said shaft is rotated, a vertical-reciprocating motion is imparted to the punch. K is the die, which is affixed to the base or foundation A, immediately under the punch.

The several parts aforesaid constitute no part of my invention, and are not claimed as new; but the same are referred to to fully show the operation of my improvement in connection therewith.

L and L' are horizontal levers, which are pivoted to uprights *d d'* affixed to the side of the frame, which levers are so arranged as to admit of a free and easy tilting movement. Pivoted to the rear ends of the said levers are stirrups *e e*, to which are attached vertical connecting-rods M M, extending upward to and connecting with a yoke, N, extending transversely across the upper portion of the frame. This yoke is provided at its center with an anti-friction wheel, *f*, resting upon and traversing the periphery of a cam-wheel, P, affixed upon shaft C, whereby as said shaft is rotated a reciprocating tilting movement is imparted to the said levers. Affixed to the lower side of the front extremity of said levers are boxes *g g*, through which pass the journals of the blank-holder R, as shown in Fig. 2, said blank-holder being so arranged as to admit of a slight rocking movement, so as to allow the blank-holder to lie flat upon the sheet-metal blank should one edge of the latter be thinner than other parts thereof. The said boxes *g g* are secured to the lower side of the lever by means of bolts *h h* passing through slots *i i* formed therein, as shown in Fig. 3, so as to admit of a slight longitudinal movement of the boxes, thereby allowing the blank-holder to always occupy the same position relative to the punch and die, notwith-

standing the rocking movement of the levers, this construction being such that when the part *n* of the cam *P* is turned upward the blank-holder is forced downward upon the die; and so that when the part *n'* of the cam is turned upward the coiled springs *S S* on the connecting-rods will raise the blank-holder upward to admit of removing the pressed ware; the said blank-holder striking the blank sheet before the punch has performed its function.

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

1. The blank-holder *R*, made self-adjusting and self-yielding by journals hung in boxes *g g*, which are slotted at *i i* to have a longitudi-

nal movement, as and for the purpose described.

2. The blank-holder *R*, constructed as described, and combined with levers *L L* or their equivalents, placed above the level of the bed-press, substantially as and for the purpose described.

3. The combination of the blank-holder *R* with levers *L L* provided with slotted boxes *g g*, with punch *H*, cam *P*, rods *M M*, springs *S S*, and yoke *N*, substantially as shown and described.

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Witnesses:

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