

I. VAN HAGEN.

Pressing Machine.

No. 114,068.

Patented April 25, 1871.

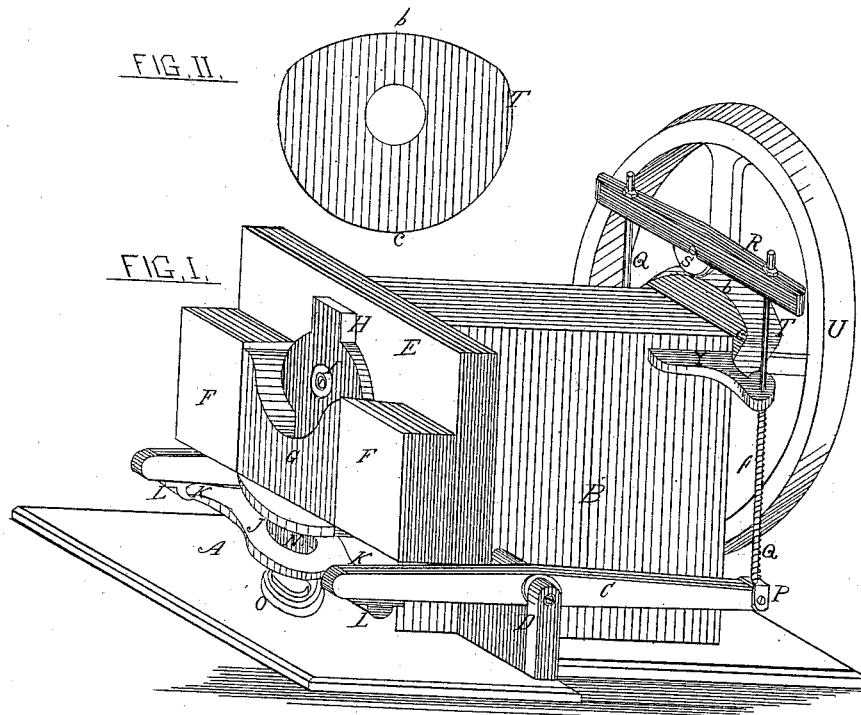


FIG. II.

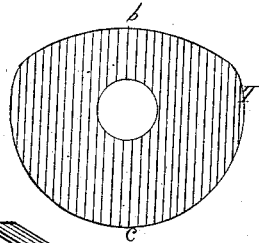


FIG. I.

FIG. V.

FIG. IV.

FIG. III.

FIG. VI.

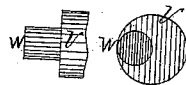
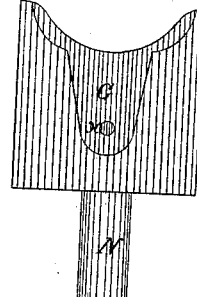
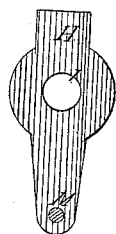
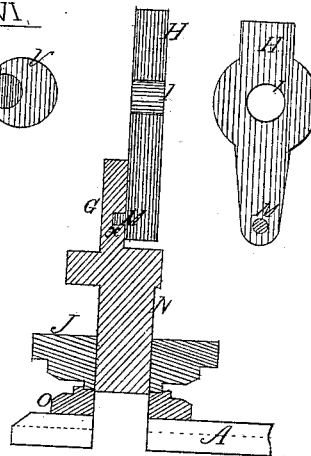
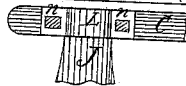


FIG. VII.



WITNESSES.

*N. A. Powell*  
*Sam. E. Ward*

INVENTOR.

*Isaac Van Hagen*  
*By his Attorney*  
*G. L. Chapin*

# United States Patent Office.

ISAAC VAN HAGEN, OF CHICAGO, ILLINOIS.

Letters Patent No. 114,068, dated April 25, 1871.

## IMPROVEMENT IN MACHINES FOR PUNCHING AND STAMPING METAL.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom this may concern:

Be it known that I, ISAAC VAN HAGEN, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Pressing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing and letters marked thereon, in which—

Figure 1 is a perspective representation of my improved pressing-machine.

Figure 2, an elevation of a cam used therein.

Figure 3, the punch and slide.

Figure 4, the pitman.

Figure 5, a vertical section of the blank-holder and other parts appertaining thereto.

Figure 6, the end of the main shaft.

Figure 7, the under side of one of the levers and one end of the blank-holder.

The present invention relates to an improved blank-holder and novel mechanism, which is operated on a line above the level of the bed of press, and which, at small expense, may be attached to any ordinary power-press such as now used in tin or sheet-metal pressing establishments.

Its merits consist in its being self-adjusting and self-guiding when in operation.

In pressing deep ware from round blanks of tin or other sheet metal the part which is denominated the hoop or side (as, for instance, the lower part of a blacking-box) is necessary to be held down upon the die so as not to allow any wrinkle to form therein while the punch is performing its work of pressing the article through the die. These blanks vary in thickness, and not only in uniformity of thickness, but one edge will be thicker than the other; consequently the blank-holder, to fully answer the purpose, must be both adjustable and yielding, otherwise the blank will be drawn out of shape or broken.

A represents a substantial foundation, and

E B the frame-work which supports the working-parts of the improved machine.

U is a drive-wheel, which is provided with a shaft, V, projecting horizontally through that part of the frame shown at B, and driving a pitman, H.

Said shaft, having a wrist, W, fig. 6, on its end, is enabled to give said pitman H a vertical reciprocating motion by means of a pin, M, projecting into a hole, X, figs. 3 and 5.

These parts, however, thus far enumerated, are not claimed to be new, but reference has been made to

them to show how my improvement operates in conjunction therewith.

C represents levers pivoted to the sides of the frame part B by means of bridges D.

The forward ends of these levers support and operate a blank-holder, J, and their rear ends are operated upon by connecting-rods Q, so as to raise and lower said blank-holder, which is provided with journals having bearings in boxes L attached to the ends of levers C, and the boxes are held to said levers by means of bolts put through slots *n n*, by means of which slots the boxes may slide a little distance longitudinally on the levers, so that the blank-holder J may always occupy the same position relative to the punch N notwithstanding the rocking movement of the levers. The said blank-holder, being hung by journals as aforesaid, is always brought flat upon the sheet metal or blank, even if one edge of the latter be thinner than the other parts.

To the shaft V, fig. 6, and to the rear end of the machine, is attached a cam, T, more clearly shown at fig. 2, which operates a yoke, R, and thus causes the rods Q to operate the levers C.

This yoke is provided with a friction-roller, S, and it is held in its place by means of the rods Q passing through bridges Y.

This construction being such that when the part *c* of the cam T is turned upward the blank-holder J is forced down on the bed O, fig. 5, and so that when that part *b* of cam T is turned up the coil-springs *f*, fig. 1, will raise the blank-holder up to remove the pressed ware, said blank-holder striking the blank sheet before the punch does its work.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The blank-holder J, made self-adjusting and self-yielding by journals hung in boxes L, which are slotted at *n n* to have a longitudinal movement, as and for the purpose set forth.

2. The blank-holder J, constructed as described, and combined with levers C or their equivalents, placed above the level of bed of press, substantially as and for the purpose set forth.

3. The combination of the blank-holder J with levers C provided with slotted boxes L, with punch N, cam T, rods Q, springs *f*, and yoke R, substantially as described and shown.

ISAAC VAN HAGEN.

Witnesses:

G. L. CHAPIN,  
M. A. POWELL.