P. W. Armstrong's

Impt in Dies for Tinners Swedging Machines

74481

PATENTED
FEB 18 1868

FIG: 1.

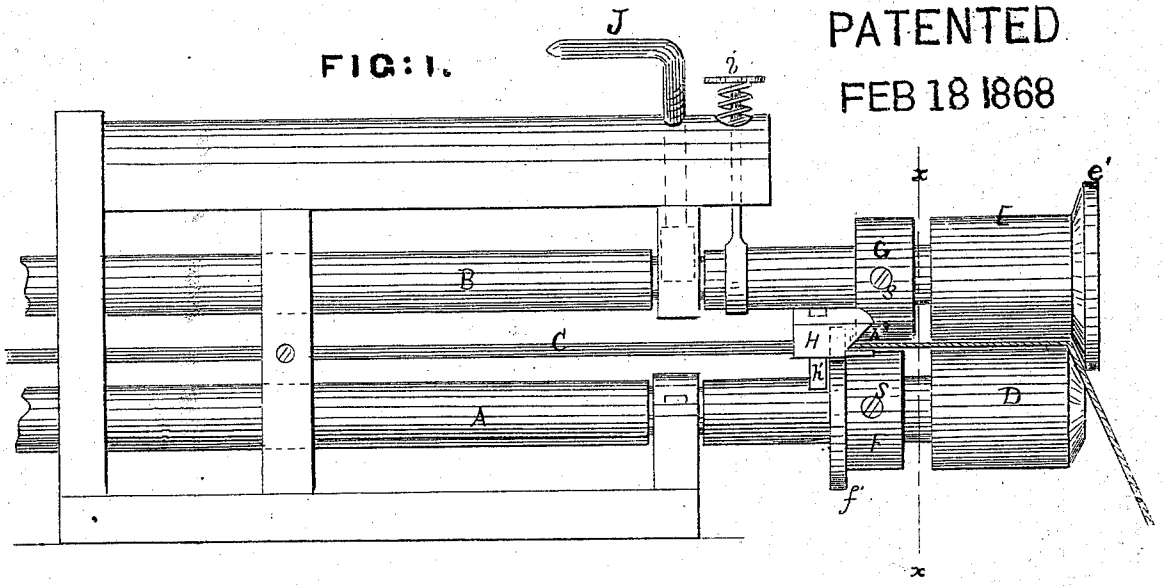


FIG: 2.

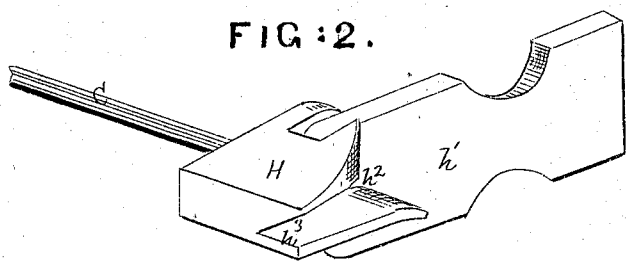
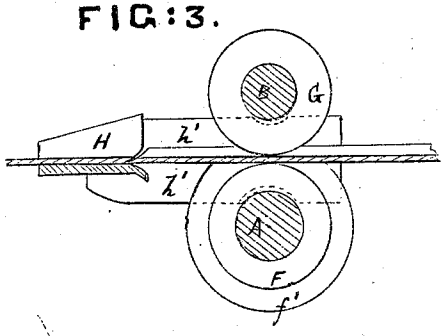


FIG: 3.



Witnesses
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P. W. ARMSTRONG, OF LOGAN, OHIO.

Letters Patent No. 74,481, *dated February* 18, 1868.

IMPROVEMENT IN TINNERS' DIES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, P. W. ARMSTRONG, of Logan, in the county of Hocking, and State of Ohio, have invented a new and useful Improvement in Dies for Tinners' Swaging-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my improved swaging-machine, arranged in working order, with my improved dies and folding-device in proper position.

Figure 2, a perspective view of gauge and folding-device detached, and

Figure 3, a transverse section through the line *x x* of fig. 1.

Similar letters of reference indicate like parts in all of the figures.

The nature of my invention consists in the adaptation and use of improved adjustable dies, in combination with the shafts of a tinman's ordinary swaging-machine for forming the sides of metallic pans, and of a folding-device for bending over the rims thereof for the reception and retention of a strengthening-wire.

In the accompanying drawings, A represents the lower shaft, B the upper shaft, and C the gauge-rod of a tinman's ordinary swaging-machine. The upper shaft is borne upwards by means of a spring, *i*, and depressed by means of an adjusting-screw, J. D is a cylindrical die, placed upon the end of the lower shaft A, having its face bevelled, so as to give the required slant to the side of the pan to be manufactured. E is a cylindrical die, on the end of the upper shaft B, having a flange, *e'*, formed around its forward end, and which is bevelled to correspond with the bevel of the face of the die D. The dies D and E are placed upon and secured to the ends of the shafts in the usual manner. F is an annular die, having a square-shouldered flange, *f'*, formed around its rear end, as shown in the drawings, which die is placed upon the lower shaft of the machine. G is a plain annular die, which is placed upon the upper shaft. These dies are designed to turn or fold over the edge of the pan to receive the wire. They are adjustable, and may be moved back or forth along the shafts, according to the required depth of the pan, being secured at any given point by means of screws, *s s*. H is the folder, which is attached to the end of the ordinary gauge-rod C. The part h^1, figs. 2 and 3, acts as a gauge, to prevent the sheet of metal from passing too far into the machine. As the sheet passes from between the dies F and G, the turned-up edge comes in contact with the inclined edge h^2 of the angular slot, by which it is bent and folded over further, so that, when it comes from the slot through which it is forced, it is doubled over into the proper position for receiving and embracing the strengthening-wire.

The operation of the machine is simple and effective. The upper shaft B with its attached dies E and G, being elevated, the edge of a suitable blank plate, K, is laid over and upon the dies D and F, and pushed back against the gauge h^1. The shaft B is then forced down, by means of its adjusting-screw, thus bending the blank, as illustrated in fig. 1, the dies D and E giving the angle of the side of the pan, whilst the annular dies F and G bend up the edge, preparatory to its passing into the folder, to be thereby fully doubled over. The shafts being then made to revolve, the blank is passed forward between the dies, and thereby bent its entire length, the edge bent up, by the inner dies F and G being forced into and through the angular notch h^3 of the folder, and thus prepared for the reception of the wire to strengthen the rim of the pan.

Having thus fully described my invention, and the operation thereof, I claim therein as new, and desire to secure by Letters Patent—

1. Adjustable annular dies F and G, in combination with the fixed dies D and E of a tinner's swaging-machine, substantially as and for the purpose herein set forth.

2. A folding-device, H, in combination with the dies F and G, and constructed and operating substantially in the manner and for the purpose herein set forth.

P. W. ARMSTRONG.

Witnesses:

WM. ARMSTRONG,

C. P. ARMSTRONG.