(No Model.)

D. STONE.

SHEET METAL STAMPING APPARATUS.

No. 444,861. Patented Jan. 20, 1891.

Fig. 1.

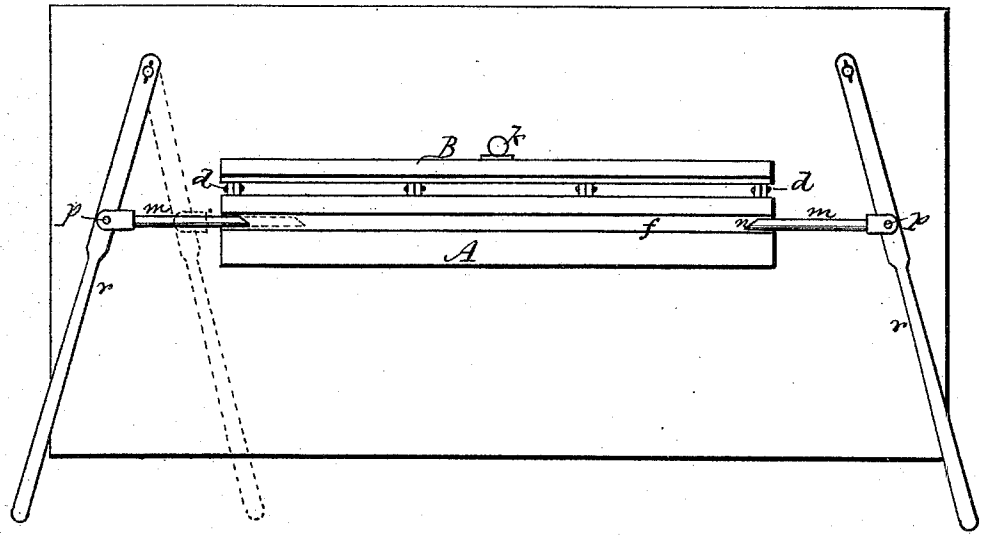


Fig. 2.

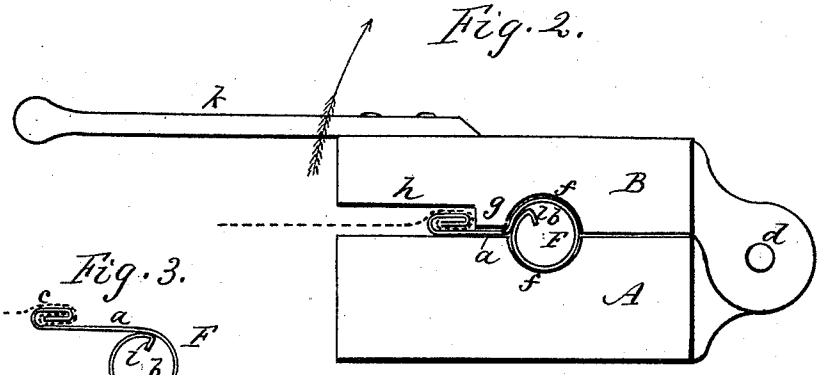


Fig. 3.

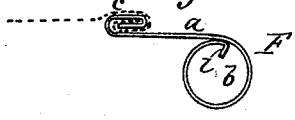
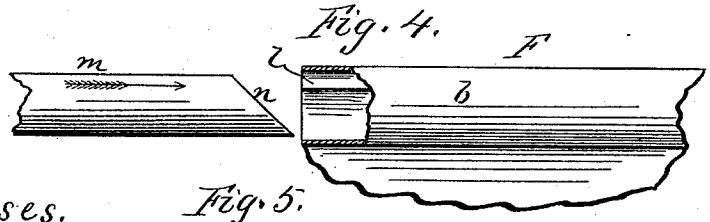


Fig. 4.



Witnesses.

Chas. De Vidaver

E. N. Adams

Fig. 5.

Inventor.

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Atty.

UNITED STATES PATENT OFFICE.

DRAPER STONE, OF ROCHESTER, NEW YORK.

SHEET-METAL-STAMPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 444,861, dated January 20, 1891.

Application filed May 15, 1890. Serial No. 351,977. (No model.)

To all whom it may concern:

Be it known that I, DRAPER STONE, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Apparatus for Stamping and Finishing Window-Screen Frames; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to apparatus for fashioning the frames of metallic window-screens, said frames having an outer tubular molding and an inner plain backing plate or margin to which the wire net is attached.

The invention consists of an apparatus constructed, arranged, and operating as hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of the apparatus, the jaw B being opened and turned to an upright position. Fig. 2 is an enlarged cross-section of the same, showing the parts closed and in the act of stamping the metal frame inserted therein. Fig. 3 is an end view of one of the sections of the metal frame before it is stamped. Fig. 4 is a diagram showing the end of one section of the metal frame, partially in section, and an elevation of the plunger that enters the same to straighten the inner projecting lip of the molding. Fig. 5 is a diagram showing a cross-section of the frame and the plunger inserted therein to straighten the lip.

The side sections F of the metal frame are coiled up on a roller in the manner described in an application for patent I have filed contemporaneously with this, Serial No. 351,978. Each section consists of a tubular molding *b* and a plain backing plate or flange *a*, to which the wire net is attached. When removed from the coiling-roller, the flange *a* projects tangentially from the roller, as shown in Fig. 3, and the wire-net seam *c* projects upward from the same, as shown in Fig. 3. In finishing the frame the flange *a* is to be pressed down, so as to stand centrally with the tube, as shown in Fig. 2, and in order to acccomplish this and not interfere with the projecting seam I employ the following mechanism:

A and B are two jaws forming a clamp, hinged at *d*, so as to be opened and closed, and each provided with a half-groove *f*, which receives the tube *b*. On the under side of jaw B is a die *g*, of a length equal to the space between the tube *b* and seam *c*, which die shuts down and presses the flange *a* into place centrally with the tube. Above and outside the die *g* is an offset *h*, forming a space over the seam *c* of sufficient height not to strike the seam. When the jaws are clamped together, the tube is clamped fast in the groove, the die *g* presses the flange *a* down centrally with the tube, and the seam remains intact, as it receives no pressure. By this means the frame-section is pressed into shape after the wire net has been attached. The jaw B is operated by a handle *k* or any other suitable means.

In the act of rolling the tube it is formed with an inwardly-projecting lip *l*, which has to be straightened out at the ends to lie flat against the tube, in order to insert the corner-pieces that attach the frame together. To accomplish this I employ plungers *m m*, which enter the ends of the tube while clamped in place. The inner ends of the plungers are inclined or wedge-shaped, as shown at *n*. These wedge-shaped ends strike under the lip and gradually force it up till it passes outside the full circle of the plunger, which presses it to place against the inner sides of the tube. The outer ends of the plungers are jointed at *p* to hand-levers *r r*, by which the plungers are operated.

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

1. In an apparatus for stamping window-screen frames, the combination of the two jaws A B, provided with half-grooves *f f*, the upper jaw being constructed with the die *g* and offset *h*, as shown and described, and for the purpose specified.

2. The combination, with the jaws A B, provided with half-grooves *f f*, of a plunger *m*,

provided with the wedge-shaped inner end *n*, and suitable means for operating the plunger, the whole arranged to operate in the manner and for the purpose specified.

3. The combination, with the jaws A B, provided with the half-grooves *f f*, of a plunger *m*, provided with the wedge-shaped inner end *n*, and the handle *r*, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DRAPER STONE.

Witnesses:
R. F. OSGOOD,
P. A. COSTICH.