

H. G. WILLIAMS.
DIE AND PLUNGER.

No. 80,042.

Patented July 14, 1868.

Fig. 1.

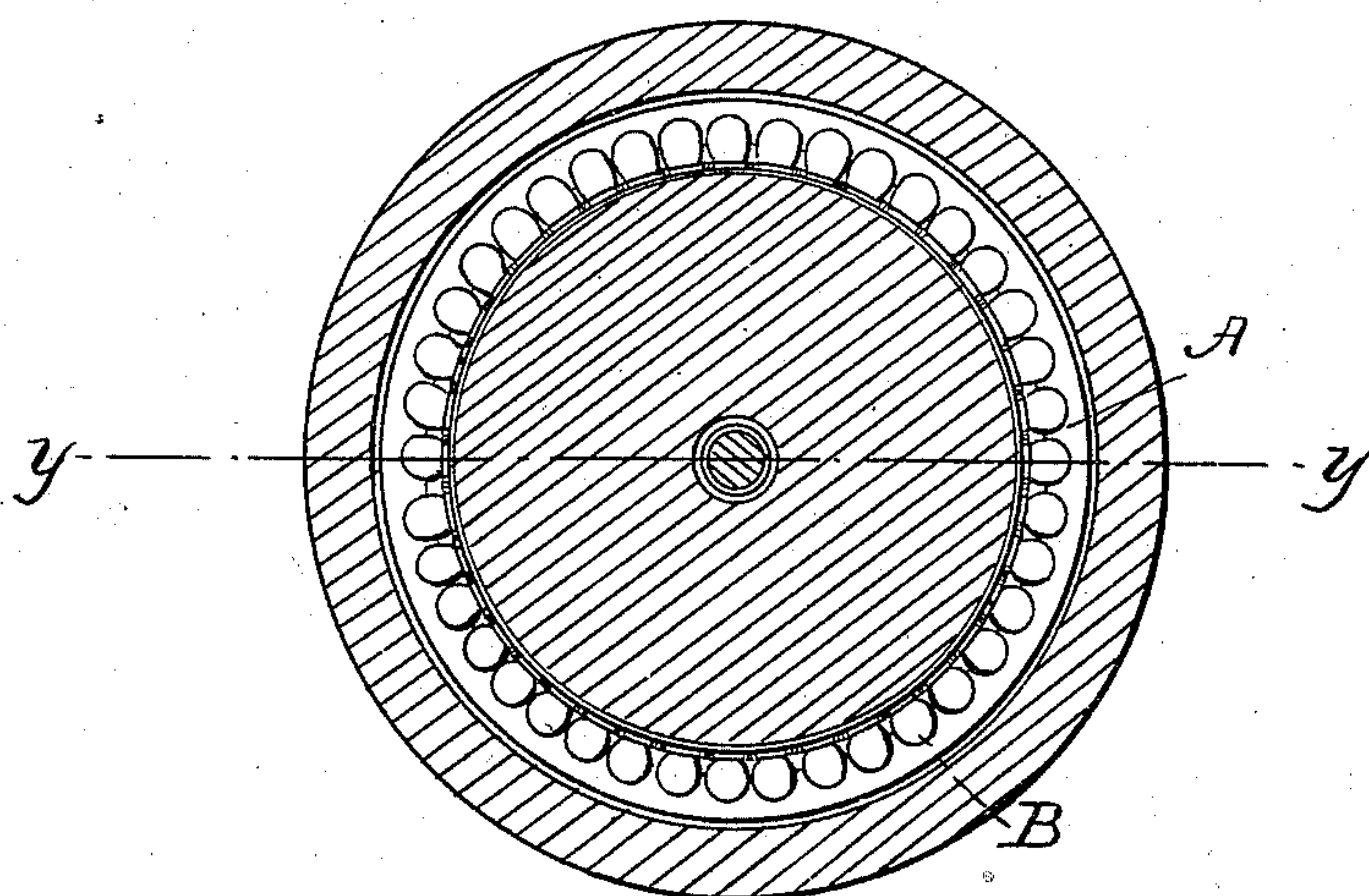
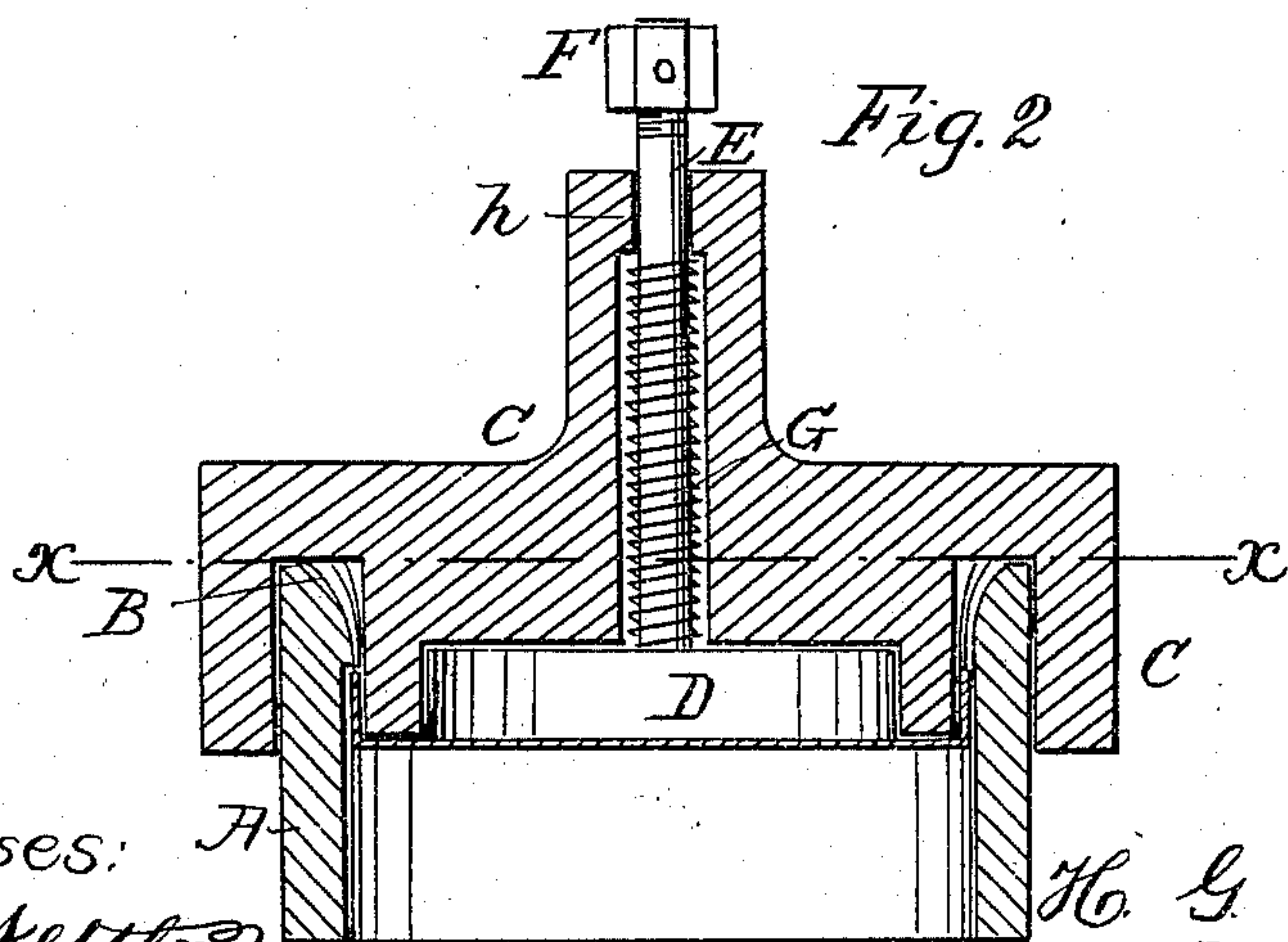


Fig. 2



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United States Patent Office.

HENRY G. WILLIAMS. OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 80,042, dated July 14, 1868.

IMPROVEMENT IN DIES AND PLUNGERS.

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, HENRY G. WILLIAMS, of Providence, in the county of Providence, and State of Rhode Island, have invented a new and improved Combined Die and Plunger; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a method of forming tin and metallic boxes and covers for the same.

And the invention consists in the application of a double plunger, one of which is actuated by a spring, and a fluted die, as will be hereinafter described.

Figure 1 represents a section of the die and plungers combined, the section being through the line *xx* of fig. 2.

Figure 2 is a vertical section of fig. 1 through the line *yy*.

Similar letters of reference indicate corresponding parts.

A is the die, the upper inside corner of which is fluted or serrated, as seen in the drawing at B, so as to allow the tin or other metal to crimp evenly, and thereby prevent lapping in such a manner as to render the box or cover liable to injury from use.

C C' is the main plunger, which sets over the die, as seen in the drawing, the inner portion, C', being the size of the inside of the box made in the die, and the outer portion, C, being a cutter on the outside of the die A for cutting the metal to size.

D is an inner plunger on the end of the stem E.

Upon the top end of the stem E there is a nut, F, by which the tension of the spring may be increased or diminished.

G is a spiral spring around the stem, which bears against a shoulder, *h*, in the main plunger and upon the plunger D with a constant pressure, so that it is forced thereby below the face of the main plunger when pressure or power is removed.

This action of the spring-plunger is for the purpose of clearing the box or cover from the dies and main plunger.

The box or piece of metal which has been struck up is seen represented in red in fig. 2.

The tin or other metal in being forced into the die is evenly crimped and drawn by the fluting B, and forced into permanent shape.

Without the fluting the metal is liable to lap unevenly, so that the laps in the corners become loosened or drawn apart when placed upon the box, and the cover is rendered useless thereby.

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

The die A, when its upper inside edge is fluted or serrated as described, whereby the tin or other metal to be struck up is crimped evenly to prevent the uneven lapping and consequent breaking of the metal as herein set forth.

HENRY G. WILLIAMS.

Witnesses:

HENRY MARTIN,
CHARLES SELDEN.