

(No Model.)

S. H. LEAVENWORTH.

MECHANISM FOR ORNAMENTING DUCTILE ARTICLES.

No. 562,309.

Patented June 16, 1896.

FIG. 1.

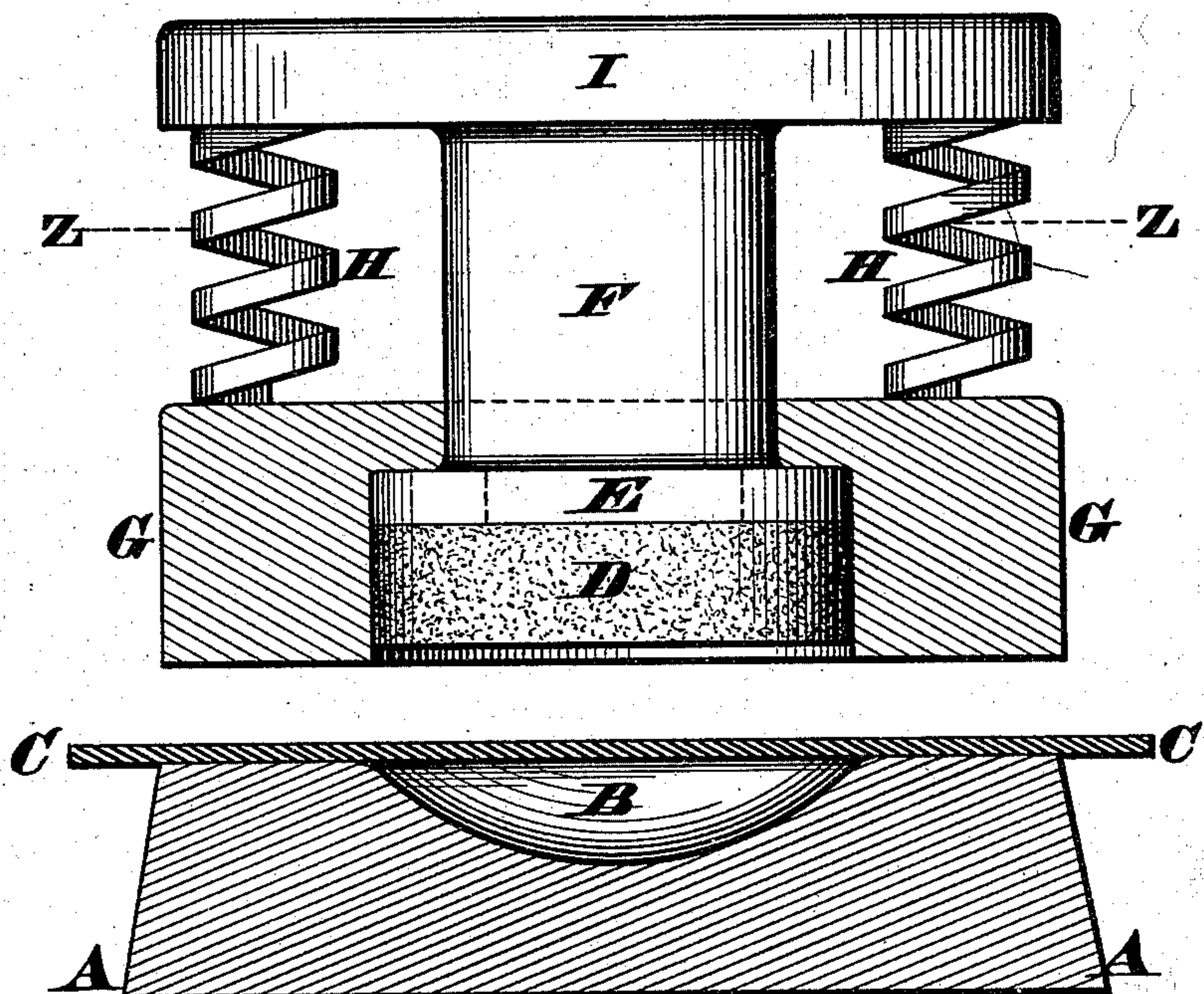
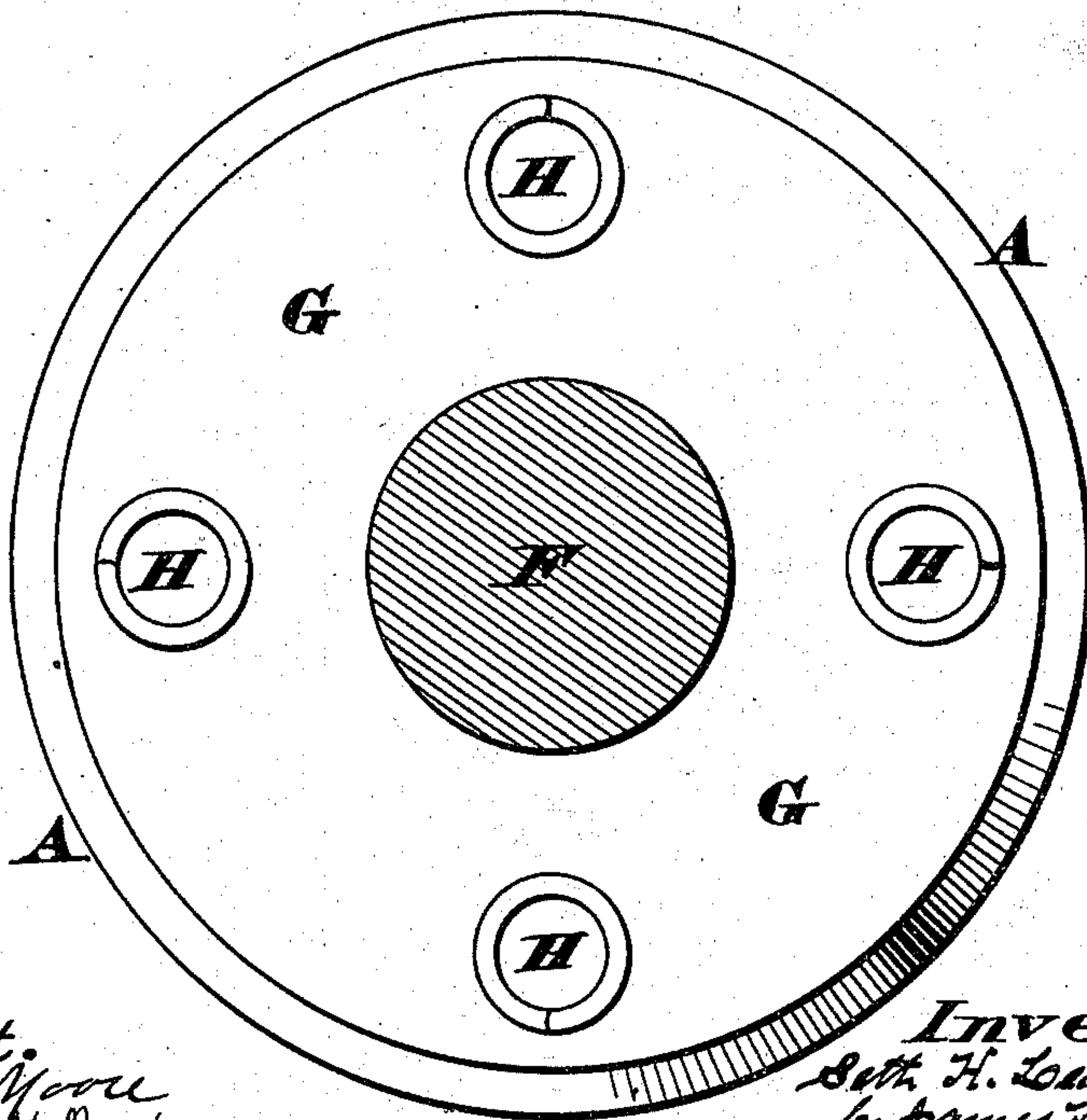


FIG. 2.



Attest.

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Att'y.

UNITED STATES PATENT OFFICE.

SETH H. LEAVENWORTH, OF CINCINNATI, OHIO, ASSIGNOR TO THE HOMAN SILVER-PLATING COMPANY, OF SAME PLACE.

MECHANISM FOR ORNAMENTING DUCTILE ARTICLES.

SPECIFICATION forming part of Letters Patent No. 562,309, dated June 16, 1896.

Application filed February 11, 1895. Serial No. 538,008. (No model.)

To all whom it may concern:

Be it known that I, SETH H. LEAVENWORTH, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Mechanism for Ornamenting Ductile Articles; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

This invention relates to that art of ornamenting hollow sheet-metal articles, which consists in placing them within sectional dies having chased inner surfaces, and then forcing the blank articles outwardly, by means of flexible expanders, so as to reproduce such chasings on the exteriors of said blanks; and my improvement comprises a specific construction of pressing mechanism or die that greatly facilitates the carrying out of the art referred to, the details of said mechanism being hereinafter more fully described, and then pointed out in the claim.

In the annexed drawings, Figure 1 is a sectioned elevation of my pressing mechanism. Fig. 2 is a horizontal section of the same, taken at the line *z z*, the blank seen in Fig. 1 being omitted.

A is a heavy die-block having an ornamented matrix B in its upper end, and C is a sheet-metal disk or blank to be forced into said matrix, for the purpose of reproducing any designs chased within the latter.

D is an india-rubber expander secured to the under side of a collar E of plunger F. Furthermore, this collar carries a clamp-ring G, which is normally depressed by a set of heavy spiral springs H, interposed between said ring and the head I of the plunger.

It will be noticed that the clamp-ring G projects somewhat below the disk D, and when the plunger E F I descends the blank C is first gripped between said ring and the upper

end of the die-block A. Consequently, the blank is now clamped very firmly in place, and the continued descent of the plunger brings the disk-expander into service, and causes it to press the sheet metal down into the matrix B with sufficient force to reproduce any ornaments or designs with which said matrix is embellished. As this disk is confined within the bore or chamber of the clamp-ring, it is evident there can be no lateral spread or distention of said flexible device D, and for this reason the full force of the descending plunger is utilized in taking off an impression from the ornamented portion B of the die-block.

When the plunger ascends, the expander is first liberated from the ornamented blank, and the still farther ascent of said plunger causes its collar E to lift the clamp-ring G, and thereby liberate said blank and permit its bodily removal from the die-block.

The above-described mechanism is used with any approved form of press capable of exerting the necessary power, and enabling the ready handling of the work.

I claim as my invention—

The combination, in a mechanism for ornamenting ductile blanks, of the die-block A, having an ornamented matrix B; the plunger F I, having a collar E; the chambered clamp-ring G, carried by said collar, and normally depressed by a set of springs H interposed between said ring and the plunger-head I; and a flexible disk D inserted within said chamber, whereby lateral expansion of said disk is prevented when pressure is applied to said plunger, all as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

SETH H. LEAVENWORTH.

Witnesses:

JAMES H. LAYMAN,
ARTHUR MOORE.