J. A. SMART.

Stamp for Embossing or Printing.

No. 162,201. Patented April 20, 1875.

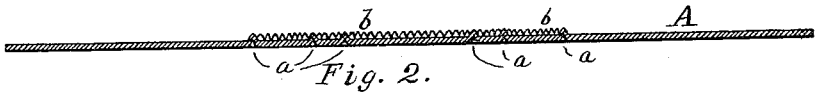

Fig. 2.

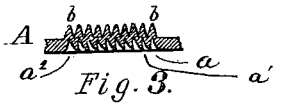

Fig. 3.

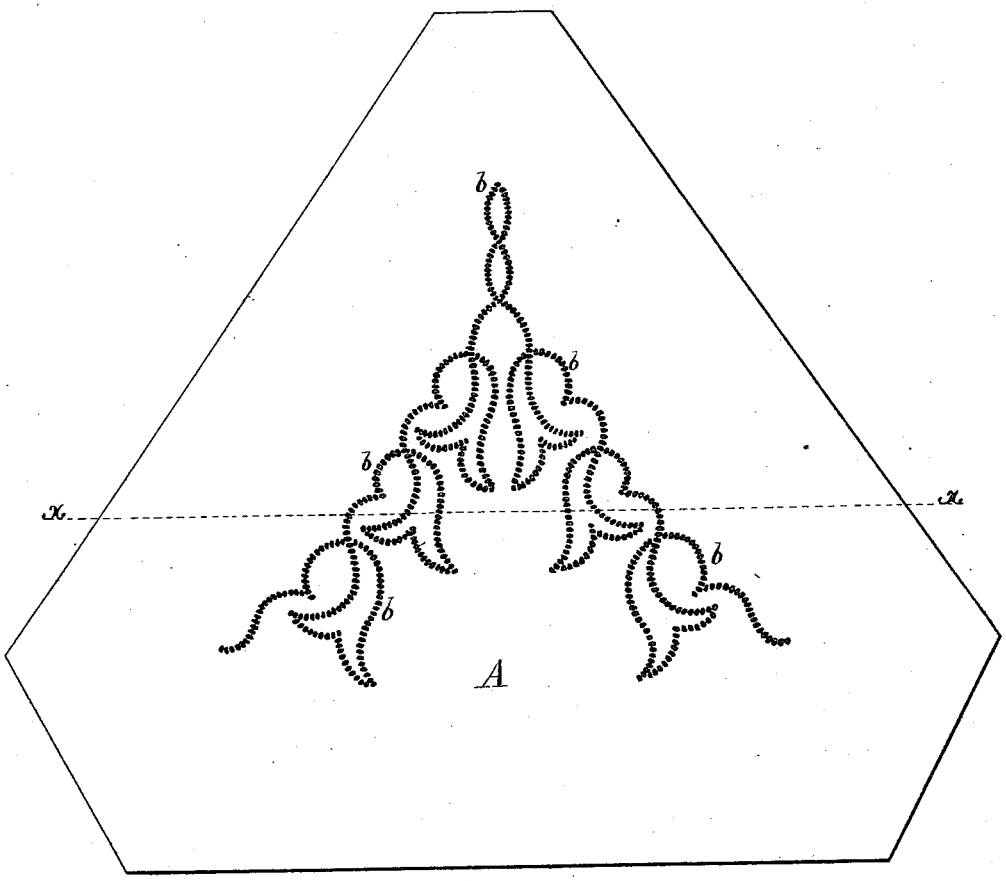

Fig. 1.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JASPER A. SMART, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN STAMPS FOR EMBOSSING OR PRINTING.

Specification forming part of Letters Patent No. **162,201**, dated April 20, 1875; application filed January 18, 1875.

To all whom it may concern:

Be it known that I, JASPER A. SMART, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Stamp for Embossing, Gilding, Printing, or otherwise transferring designs to leather, wood, cloth, or other fabric, of which the following, taken in connection with the accompanying drawings, is a specification:

My invention relates to the formation and construction of a stamp or die for embossing, printing, or otherwise transferring designs to leather, wood, paper, cloth, or other fabric, and has for its object the production of such stamps or dies at a much less cost than they can be produced by engraving or die-sinking as heretofore practiced; and it consists in making said stamps from sheet metal—such, for instance, as zinc, copper, or brass—by forming upon one side thereof the desired design in relief in the form of a series of raised points of uniform shape, said points being formed successively, one after the other, by means of a pointed punch applied to the opposite side of the plate, and in such a manner that part of the metal displaced in each operation will form a support under the point previously formed, as will hereafter appear.

In the drawings, Figure 1 is a plan of my improved stamp enlarged. Fig. 2 is a section on line *x x* on Fig. 1, and Fig. 3 is a section taken longitudinally through the center of a line of the projecting points or teeth drawn double the size of Figs. 1 and 2.

A is a plate of sheet metal, which may be zinc, copper, or brass, and of any desired form. This plate has secured to one side thereof a piece of thin paper, upon which is drawn or otherwise represented the design that it is desired to produce upon said plate in relief, said drawing or print consisting of a series of dots arranged to represent any desired design. The plate is then placed upon a female die, and between it and a male die, in a machine designed for the purpose, and the dies are made to approach each other, with their centers coinciding with one of the dots upon the paper, when an indentation or recess will be formed in the upper side of said plate, as seen at *a a* in Figs. 2 and 3, the metal displaced to form said recess being forced into the female die to form a projecting tooth or point, *b*, upon the other side of the plate. The plate is then moved along till the next dot of the design is directly in line with the center of the dies, when another recess and tooth are formed in the same manner as the previous ones, and so on till a recess and a tooth upon opposite sides of the plate have been formed for every dot of the design, when the stamp or die is completed, and it will be found that the teeth are all of uniform shape, size, and height.

It will also be observed that, in forming each tooth after the first one in a given line, the stock, or a portion of it, between the recess being formed and the one previously formed, will be forced over into the recess first made, in position to form a sort of bridge to support the tooth previously formed, as seen in Fig. 3, where *a* is the first hole or recess made, a^1 the second, and a^2 the last, which, it will be seen, is symmetrical in form, while all the other recesses are one-sided or unsymmetrical.

These stamps may be used for a great variety of purposes, among which may be mentioned embossing upon leather, wood, paper, cloth, or other fabric, printing, gilding, or otherwise transferring designs.

Designs embossed by these stamps may be used for ornamenting leather-work and other goods in imitation of stitching, or the designs thus embossed may be used as guides for stitching.

What I claim as new, and desire to secure by Letters Patent of the United States, is as follows:

1. The process herein set forth of forming sheet-metal stamps for embossing, &c., having the design thereon made up of a series of separate and detached raised points, by forming said raised points successively, one after the other, by means of a male and female die adapted to form a single point upon one side and a corresponding recess upon the other side, and to force a portion of the metal between the recess being formed and the one next previously formed into said previously-formed recess, to serve as a bridge or brace to support the raised point upon the other side, substantially as described.

2. A stamp made from sheet metal, having a figure or design formed in relief upon one side thereof, consisting of a series of separate and detached points or teeth of uniform shape, size, and height, and formed by punching a series of recesses in the opposite side of said plate when said points are supported by a bridge or brace beneath the same formed by punching said recesses singly and in succession, substantially as described.

Executed at Boston, Massachusetts, this 13th day of January, 1875.

JASPER A. SMART.

Witnesses:

WM. P. EDWARDS,

E. A. HEMMENWAY.