J. BLISS.

Die for Forming Articles of Plastic Materials.

No. 196,420. Patented Oct. 23, 1877.

Fig. 1.

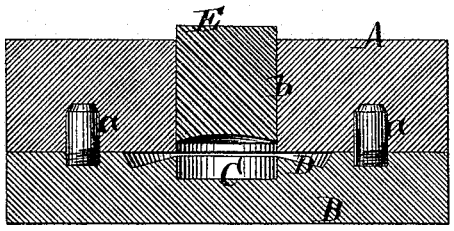

Fig. 2.

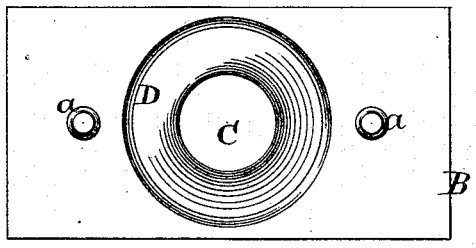

Fig. 3.

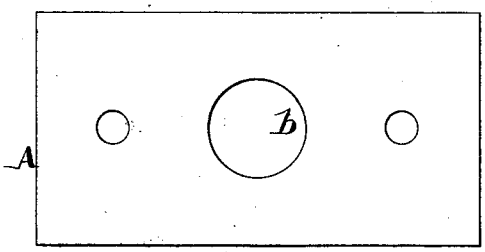

Fig. 4.

Witnesses.

Otto Hufeland.

Chas. Wahlers.

Inventor:

Jonathan Bliss by

Van Santvoord & Hauff

his attorneys

UNITED STATES PATENT OFFICE.

JONATHAN BLISS, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO WILFORD L. PALMER, OF NEW YORK, N. Y.

IMPROVEMENT IN DIES FOR FORMING ARTICLES OF PLASTIC MATERIALS.

Specification forming part of Letters Patent No. **196,420**, dated October 23, 1877; application filed September 8, 1877.

To all whom it may concern:

Be it known that I, JONATHAN BLISS, of Jersey city, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Dies for Forming Articles of Plastic Materials, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a longitudinal vertical section of a die containing my improvement. Fig. 2 is a plan view of the lower section thereof. Fig. 3 is an inverted plan view of the upper section of the same. Fig. 4 is a side elevation of the plunger.

Similar letters indicate corresponding parts.

My improvement relates to a die which is designed for producing articles of use and ornament of plastic materials or compositions; and it consists in a lower part or section having a matrix, and a recess surrounding said matrix, and communicating therewith over the top edge thereof, in combination with an upper part or section carrying a plunger or punch, which is fitted to said matrix, and is so arranged that, when the two parts or sections of the die are brought together, said plunger or punch can be made to enter the matrix, and thus, if the matrix is previously filled with a plastic material or composition, the same is pressed into shape by the plunger, while the surplus material escapes into the recess surrounding and communicating with the matrix, the upper edge of said matrix and the lower edge of the plunger being sharp, so that a clean edge or finish is given to the article produced.

In the drawing, the letters A B designate the upper and lower sections of my die, the same being kept in place, when brought together, by dowel-pins *a*, projecting from one of said sections and entering sockets in the other, or by any other suitable means. In the lower section B is formed a matrix, C, and a recess, D, which latter surrounds said matrix and communicates therewith over the top edge thereof when the sections A B are brought together, the top edge of the matrix being sunken below the top edge of the lower section B of the die, as seen in Fig. 1. In the upper section A is formed a hole, *b*, of equal diameter to the matrix C, and into this hole is fitted a plunger or punch, E, the latter being thus also fitted to the matrix C.

The material or composition to be compressed can be introduced into the matrix C either before the upper and lower sections A B are brought together, or through the hole occupied by the plunger E after the sections are brought together. After the matrix C is filled the plunger E is subjected to pressure, and thus brought to bear on the material or composition, which thus assumes the shape of the matrix and of the lower end of the plunger, while the surplus or waste material escapes into the recess D. The upper edge of the matrix C, as well as the lower edge of the plunger E, is sharp, and thus the surplus material is cut off when the plunger descends into the matrix, and the article produced has a clean edge or finish.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, in a die for forming articles of plastic materials or compositions, of a lower part or section, B, having a matrix, C, and a recess, D, surrounding said matrix, and communicating therewith over the top edge thereof, with an upper part or section, A, carrying a plunger or punch, E, which is fitted to said matrix, both the matrix and said plunger being constructed with sharp edges, and the whole being adapted to operate substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 6th day of September, 1877.

JONATHAN BLISS. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.