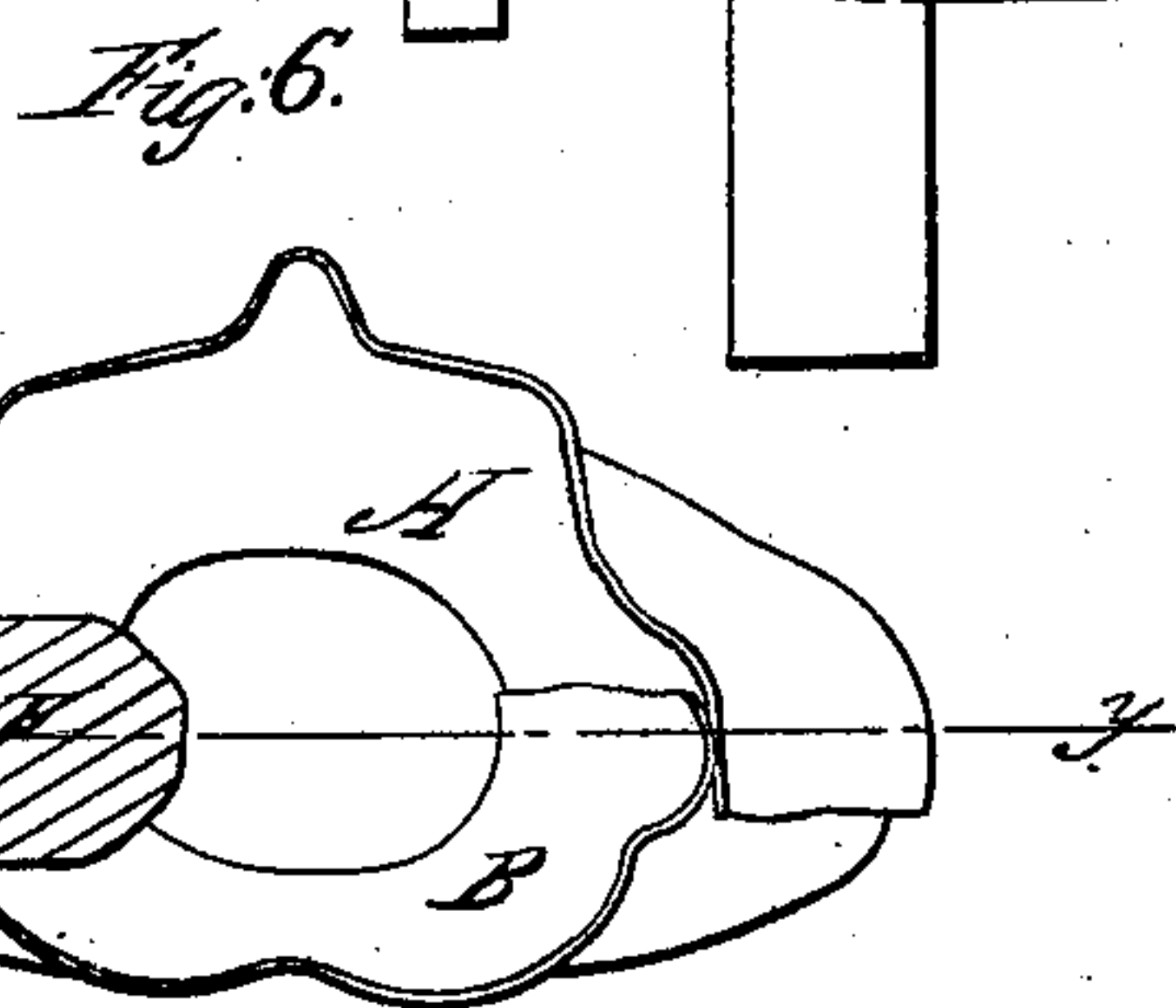
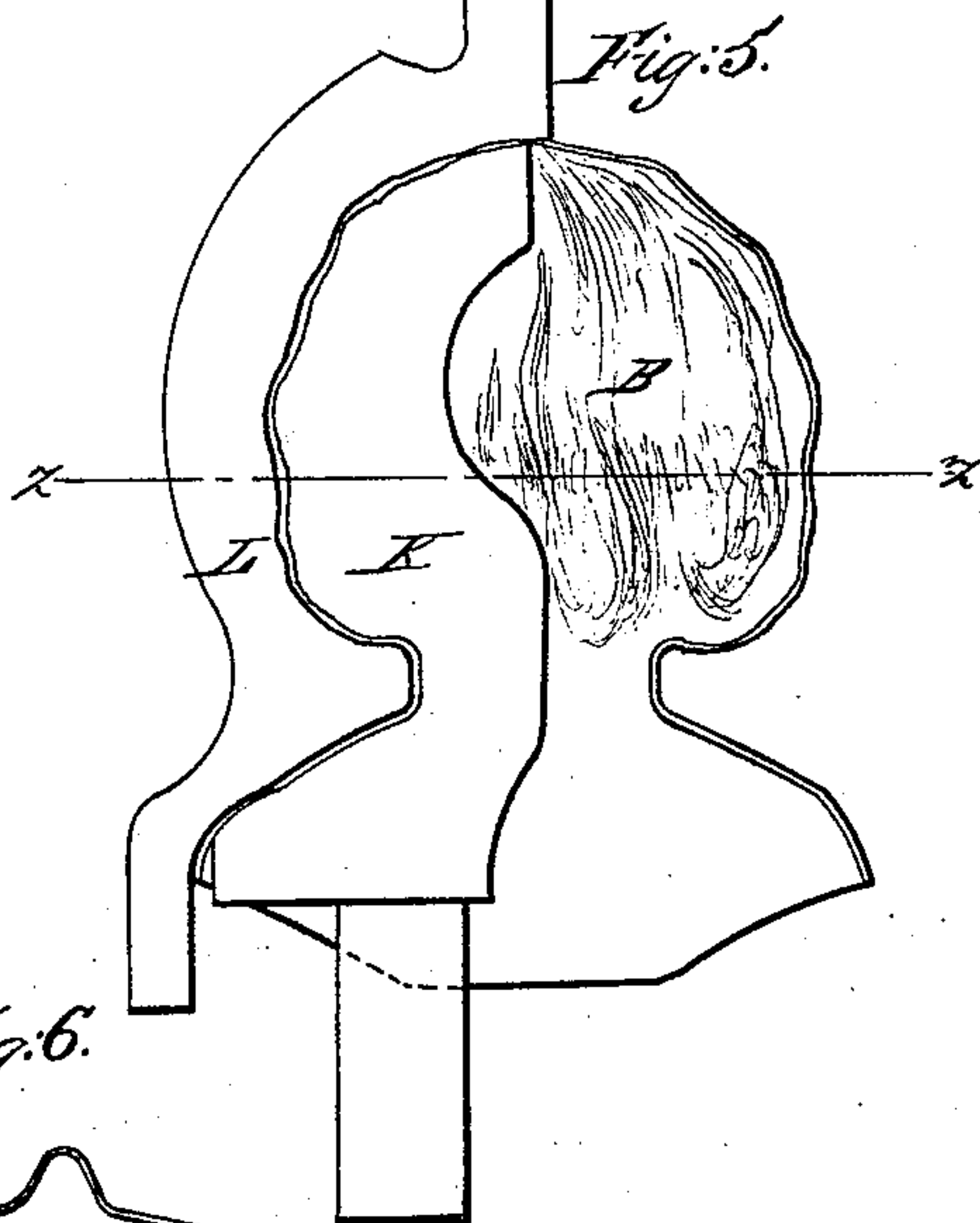
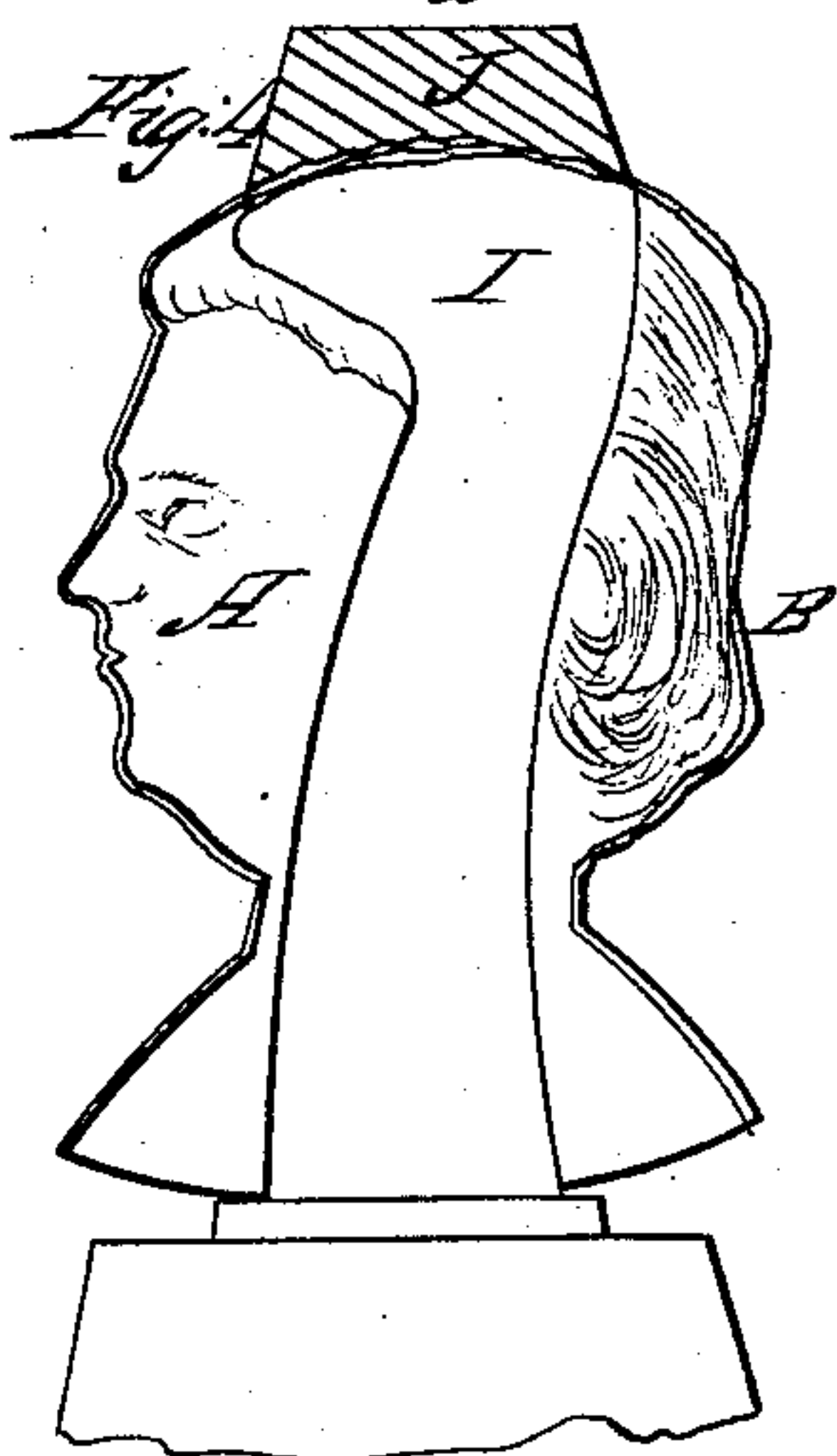
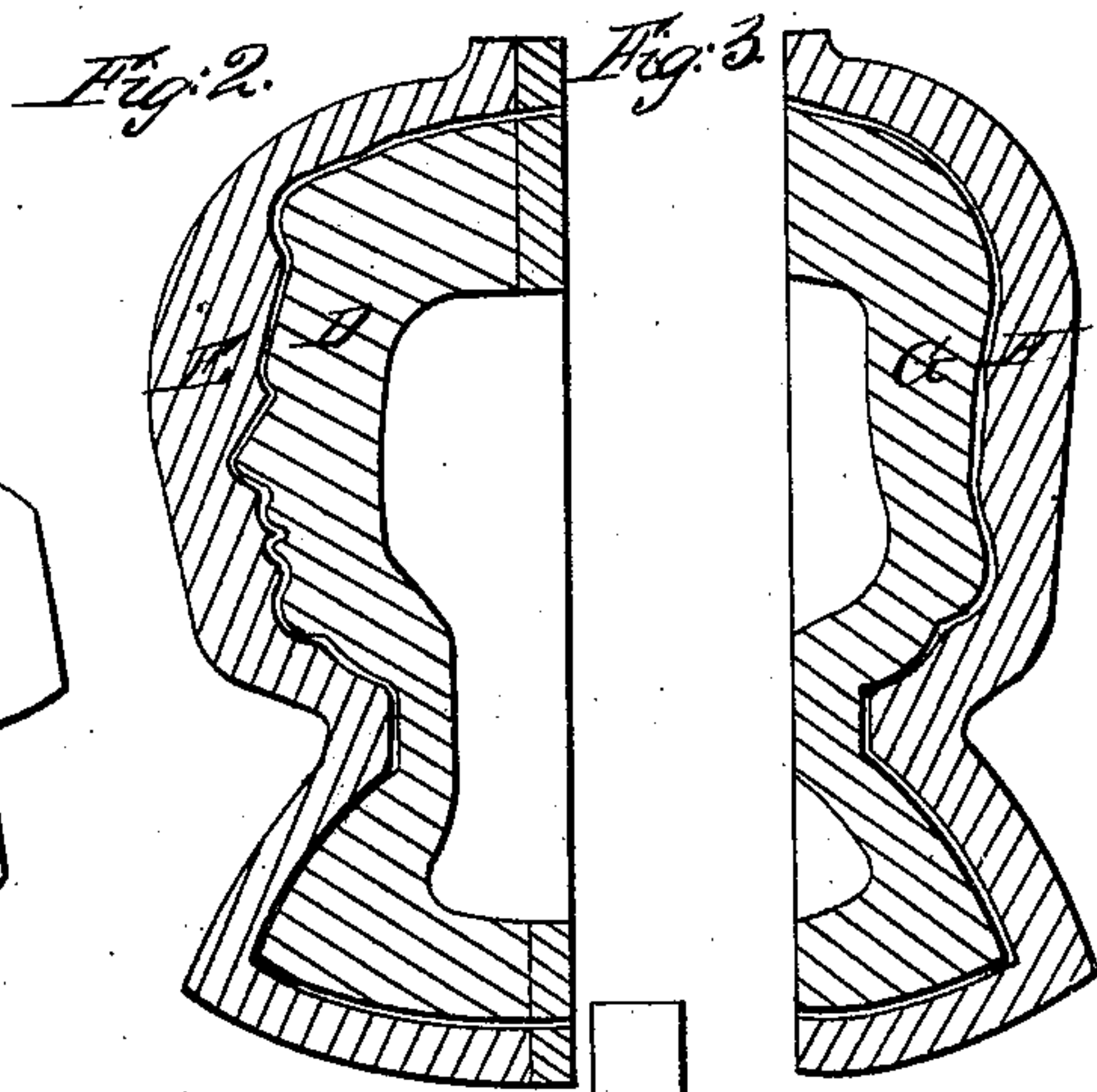
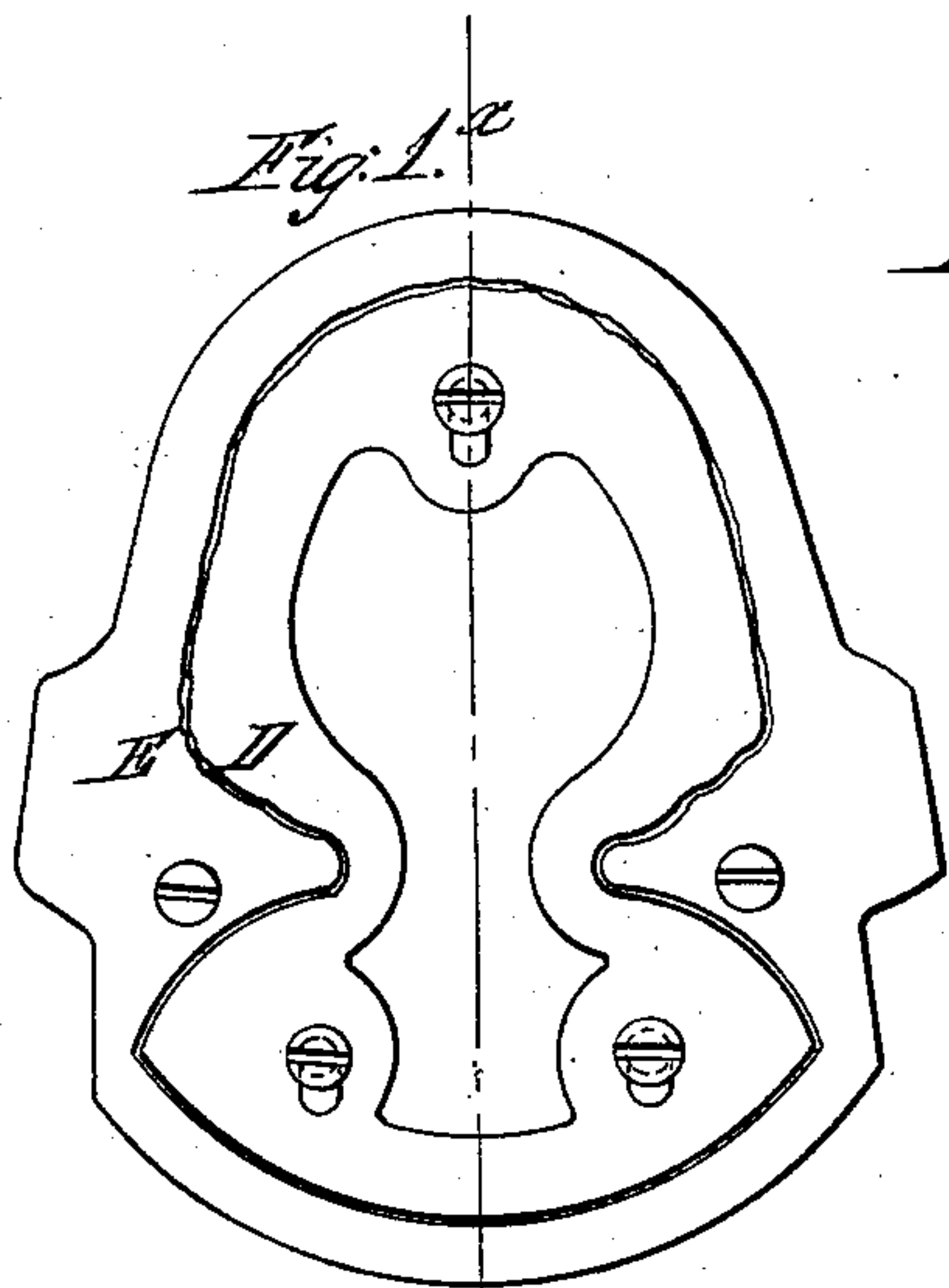


G. H. Hawkins.

Doll Heads.

N^o 85,589.

Patented Jan. 5, 1869.



Witnesses:

*Custave Dietrich
Wm. A. Morgan*

Inventor:

*G. H. Hawkins
per Wm. A. Morgan
Attorney*

United States Patent Office.

GEORGE H. HAWKINS, OF NEW YORK, N. Y.

Letters Patent No. 85,589, dated January 5, 1869.

IMPROVEMENT IN THE MANUFACTURE OF DOLLS' HEADS.

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, GEORGE H. HAWKINS, of the city, county, and State of New York, have invented a new and useful Improvement in the Manufacture of Dolls' Heads; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a back view of the dies in which the front part, or part A, of the head and bust is formed;

Figure 2 is profile section of the same through the line *z z*, fig. 1;

Figure 3 is profile section of the dies in which the back part, or part B, of the head and bust is formed;

Figure 4 is a sectional view, showing the counterpart tools employed in uniting the lapped edges of the two parts, A and B, at the crown or top of the head;

Figure 5 is a side view of the counterpart tools employed in uniting the lapped edges of the sides of the parts A and B; and

Figure 6 is a section of the same through the line *z z*, fig. 5.

Similar letters of reference indicate corresponding parts.

This invention relates to the dies and tools employed in forming and uniting the two parts or halves of hollow doll-heads, formed of textile material, when such doll-heads are obtained according to the process set forth in the subject-matter of Letters Patent granted to me therefor.

The parts A and B, which, when united, compose the head and bust of a doll, are formed by two pairs of dies, D and E, and G and H.

The first of these dies, D and E, are metallic blocks, bearing respectively a convex or alto-relief form or configuration of the human face and bust; and a concave or a hollow counterpart of the same, as shown in figs. 1 and 2.

The male or convex die D fits with sufficient looseness or freedom within its counterpart, or female die, E, to permit the compression between them of the piece of sized or starched buckram, muslin, or other suitable textile material which forms the front or part A of the doll-head.

The dies G and H are formed to produce the proper form or configuration of the back of the human head and bust, in precisely the same manner as in the dies D and E, and in both of these pairs of dies the hair and head-appendages or ornaments, and also the bust and neck, must correspond, each to each, so that when the halves or parts A and B, formed by them, are brought together, and their edges slightly lapped and united, an entire doll-head, neck, and bust, will be produced, with the front hair or the ornaments thereof, or the ears, if shown, or other parts common to both the parts A and B, and which are impressed or formed partially in each, continuing into

each other, and thus forming a general symmetrical whole.

By means of these dies, the sized fabric, being dampened, is made to partake of the form of the die-surfaces, and the said dies being heated for the operation, the moisture is expelled from the fabric, and the latter left rigid, retaining permanently the impression it acquired in the dies.

In order to unite the parts A and B, I employ three separate pairs of metallic reaming or counterpart tools, only two pairs of which, however, are necessary to be shown, as will be obvious from further description.

The first pair, I and J, are for uniting the seam at the crown of the head.

The convex tool I is formed, as to its upper surface, to correspond and fit the interior configuration of the parts A and B, at the crown or upper part thereof, when the said parts are brought together and their edges lapped beyond each other a short distance.

The counterpart tool J is formed with a corresponding concavity, which fits the external configuration of the head at the crown-seam.

The width of the face of these tools need be only sufficient to take in the lapped edges and extend a short distance beyond.

The lapped edges are moistened at the crown, and set upon the tool I, previously heated.

The external tool J, also heated, is then brought down upon the tool I, with the moistened edges of the parts A and B pressed between them, as shown at fig. 4.

The moisture is thus expelled, and lapped edges firmly and permanently united, by cementation or adhesion of the sizing in the fabric.

These tools are, in practice, fixed with suitable stability by means of shanks, or other device, to some fixed frame, stand, or bench, and may be provided with accessory mechanism for operating them easily and rapidly.

After the lapped edges of the crown are united, the lateral edges of the parts A and B still remain to be joined.

This junction I accomplish by heat and pressure in a similar manner, and a second and third pair of counterpart tools are employed. These are shown at K and L, figs. 5 and 6.

The proximate or impinging surfaces of the tools of each pair are formed to correspond, and fit against the side of the head and bust in the line of the seaming or lapped edges, and extend from the crown, along the head, neck, and bust, to the lower edge of the latter, and when brought together against the moistened lapped edges, expel the moisture therefrom, and accomplish the permanent union of the said edges.

The internal tool K must be of the proper size for insertion and withdrawal through the contracted opening occasioned by the neck of the doll-head, and it is due to the contracted character of the said opening that the above combination of tools is requisite.

The pair of tools for the remaining side is formed to correspond to that side, as the right and left sides will require, respectively, right and left-hand tools.

These latter tools are provided with shanks, *a a* and *b*, for affixing them to any suitable frame, stand, or bench.

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

The combination of the crown-seaming tools I J with

side, neck, and bust-seaming tools K L, substantially as and for the purpose herein shown and described.

The above specification of my invention signed by me, this 5th day of October, 1868.

GEO. H. HAWKINS.

Witnesses:

WM. DEAN OVERELL,
E. GREENE COLLINS.