

(No Model.)

E. J. BROOKS.

HAIR CRIMPER.

No. 332,483.

Patented Dec. 15, 1885.

Fig. 1.

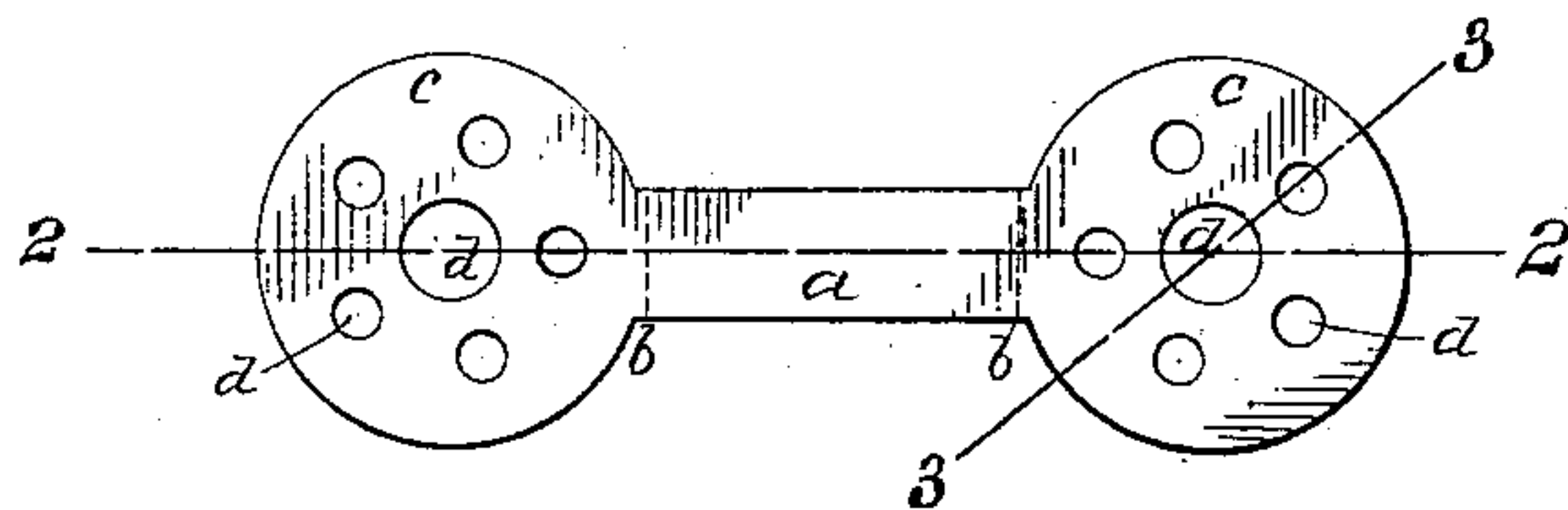


Fig. 2.

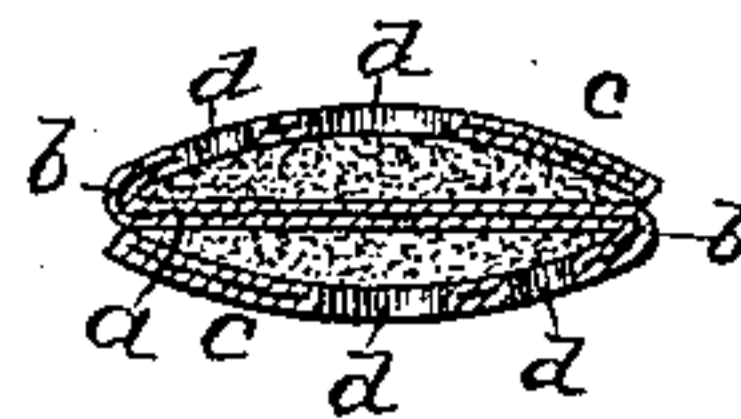


Fig. 3.



Fig. 4.

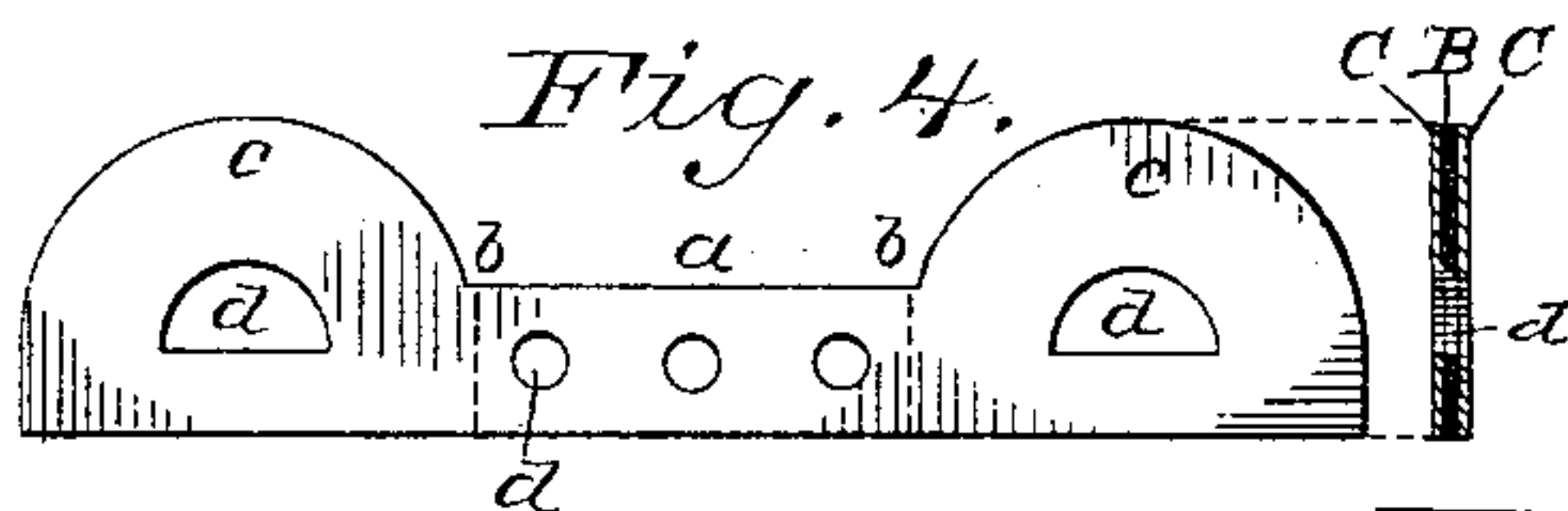


Fig. 5.

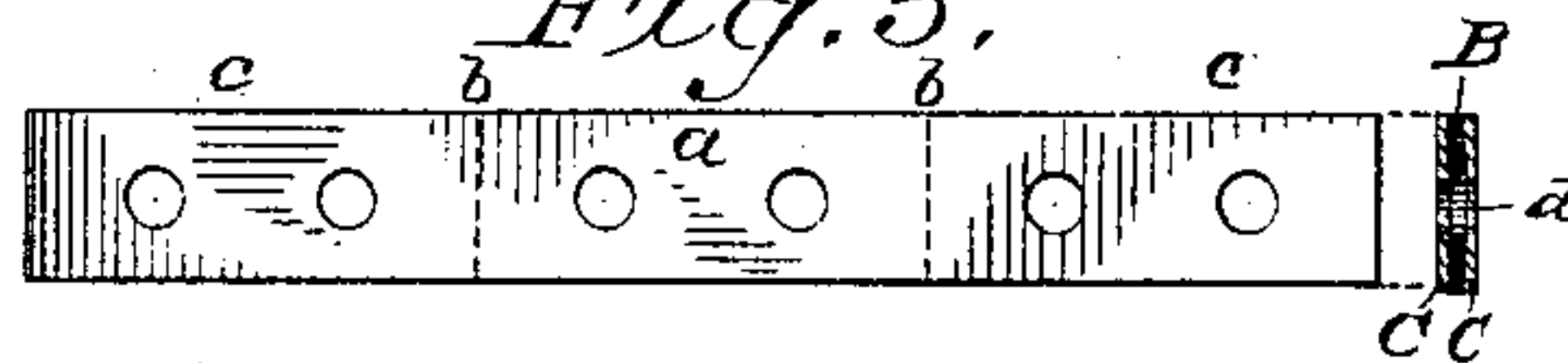


Fig. 6.

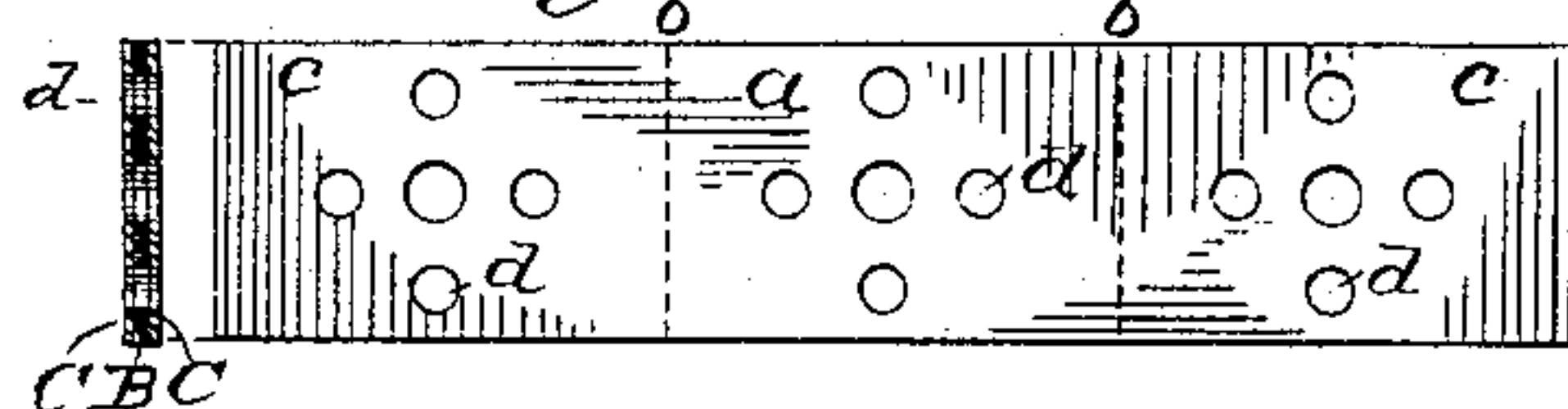


Fig. 7.

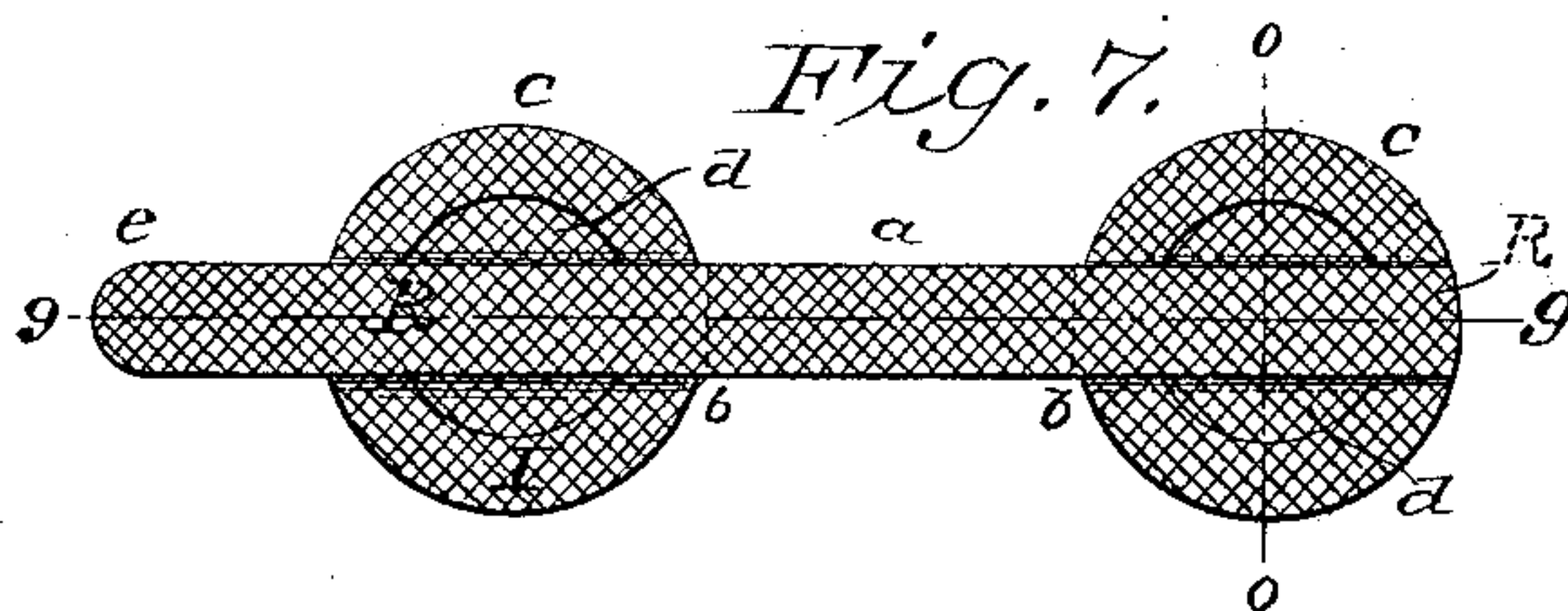


Fig. 8.

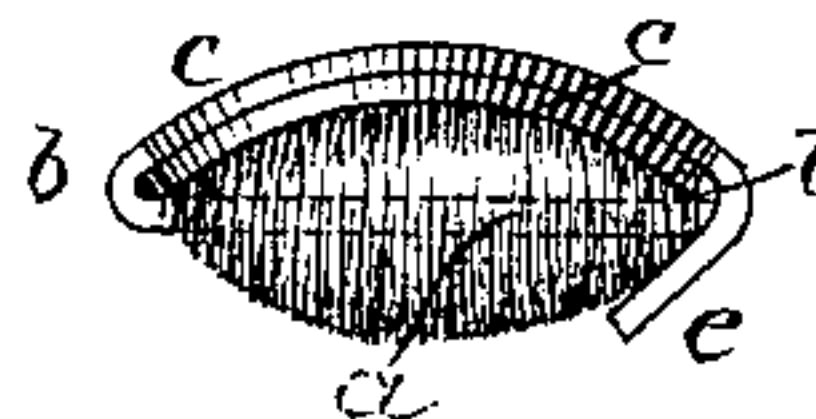


Fig. 9.

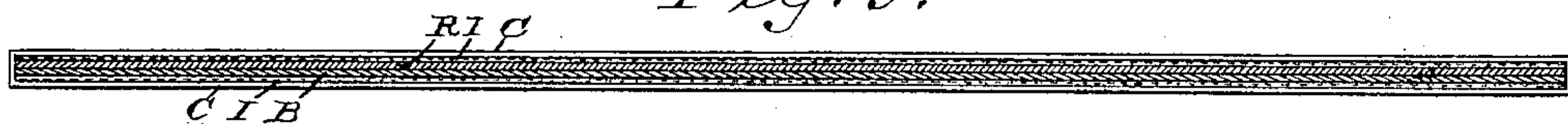
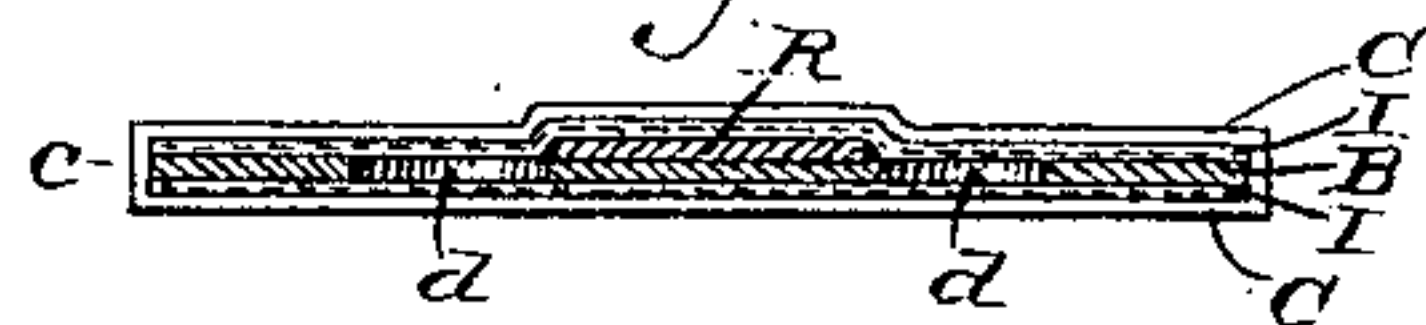


Fig. 10.



WITNESSES

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EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO E. J. BROOKS & CO., OF NEW YORK, N. Y.

## HAIR-CRIMPER.

SPECIFICATION forming part of Letters Patent No. 332,483, dated December 15, 1885.

Application filed October 24, 1884. Serial No. 146,404. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. BROOKS, a citizen of the United States, residing at East Orange, in the State of New Jersey, have invented a new and useful Improvement in Hair-Crimpers, (B,) of which the following is a specification.

This invention is in part additional to the improvement in hair-crimpers described and claimed in my specification forming part of application No. 138,438, for Letters Patent of the United States, filed July 22, 1884, (Patent No. 314,100, dated March 17, 1885.)

In common with some of those described and claimed in said previous specification, the main part or body of each of my improved hair-crimpers, hereinafter described and claimed, is composed, mainly or wholly, of lead, and is normally flat, and it may have distinct leaves united by a flexible connection or hinge portion, and provided with a flexible clasp integral therewith, and may have large ventilating-holes bridged by a covering of textile fabric, and may be re-enforced, as described in said previous specification.

The present invention consists, primarily, in normally-flat flexible hair-crimpers, each having a thin leaden body provided with a smooth protective coating of india-rubber or the like, forming a highly-efficient flexible and self attached envelope, whereby the desirable crimping qualities of lead are fully utilized, while discoloration thereby of the hair, scalp, fingers, or linen, and chemical injury to the hair or scalp, are most effectively prevented.

This invention consists, further, in a normally-flat hair-crimper having a flexible leaden body provided with a very thin re-enforcing strip of stronger flexible metal extending continuously from end to end, and so as to re-enforce its several bends; also, in normally-flat metallic hair-crimpers, each having two folding-points, between which the hair may be wrapped around a waist portion of the crimper preparatory to clamping the hair by or between the two leaves or end portions, and perforated for the ventilation of the confined hair, as hereinafter more fully set forth.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of these drawings is a face view of a hair-crimper as yet unbent, illustrating the several parts of the present invention. Fig. 2 represents the same wrapped with hair, and bent so as to clamp and crimp the hair, the crimper being shown in section on the line 2 2, Fig. 1. Fig. 3 represents a magnified cross-section on the line 3 3, Fig. 1. Figs. 4, 5, and 6 are face views with appended cross-sections of hair-crimpers embodying the same invention in part, illustrating modifications in shape and proportions. Fig. 7 is a face view of a hair-crimper, illustrating the association of the several features of the present invention, with additional features of the crimpers described in my previous specification aforesaid. Fig. 8 is an edge view of the same wrapped with hair and bent and clasped. Fig. 9 represents a magnified longitudinal section on the line 9 9, Fig. 7, and Fig. 10 represents a magnified cross-section on the line 0 0, Fig. 7.

Like letters of reference indicate corresponding parts in the several figures.

Each of the improved hair-crimpers represented by the drawings has one or more of the following features, viz: first, a thin leaden body, B, Figs. 3, 9, and 10, provided with a smooth protective coating, C, of india-rubber, japanning, or the like; second, a re-enforcing strip, R, Figs. 3, 9, and 10, of very thin sheet metal—such as brass or tin, or it may be of tin-foil—extending continuously from end to end of the crimper, so as to strengthen all its several bends; and, third, a waist portion, *a*, in each crimper between a pair of bending-points, *b*, (the latter indicated by dotted lines in Figs. 1, 4, 5, 6, and 7,) whereby the crimper is adapted to have the hair for a curl or ringlet wrapped tightly around said waist portion preparatory to clamping it by or between the perforated leaves or end portions, *c c*, of the crimper, as illustrated by Figs. 2 and 8, which show crimpers in use.

The crimper represented by Figs. 1, 2, and 3 embodies all said features, as aforesaid, being provided with said envelope or coating C, and having said re-enforcing strip R located within its leaden body B, as shown in Fig. 3, by coating the former with lead, and having circular end portions, *c c*, Fig. 1, adapted to embrace between them the hair wound on said



waist portion *a*, as shown in Fig. 2, said end portions being provided with ventilating-holes *d* in each. The shape of the end portions, *c c*, is considered immaterial, and I propose making them in the form of half-circles, or approximately of this shape, as represented by Fig. 4, jointly with the manufacture of the form first described, so as to economize stock at the edges of the sheets of metal, and also to make the crimpers in the form of perforated strips having parallel edges and more or less wide, as represented by Figs. 5 and 6; and in some cases said re-enforcing strip *R*, Fig. 3, may be omitted, as represented by said Figs. 4, 5, and 6, the leaden body *B* being in this case wholly of lead and formed by stamping or cutting it from sheet-lead rolled very thin.

The modified crimper represented by Figs. 7 to 10, inclusive, has a body, *B*, of sheet-lead, provided with large perforations *d d* in its respective end portions, *c c*, bridged by an inner covering, *I*, of textile fabric. Its re-enforcing strip *R*, extending from end to end, is held between this covering *I* and the leaden body *B*, as clearly shown in Figs. 9 and 10, the whole being inclosed within a self-attached and impermeable envelope formed by a coating, *C*, of india-rubber, japanning, or the like, as aforesaid, and a clasp, *e*, integral with one leaf or end portion, provides for fastening the crimper when folded, as shown in Fig. 8.

The sheet-metal portion of the body *B* of either of the crimpers is stamped with its perforations, as aforesaid. If this be of other than lead, as illustrated by Figs. 1, 2, and 3, it is next dipped in molten lead, and thus given a leaden surface, and at the same time thoroughly annealed; or, if it be of lead, it may be provided with a longitudinal re-enforcing strip, *R*, and with an inner covering, *I*, of textile fabric, as shown in Figs. 7 to 10, inclusive, the latter secured by a suitable paste or cement. Finally, in the preferred process of manufacture, the otherwise-finished article is dipped into "rubber cement" or a suitable solution of india-rubber, and this is vulcanized thereon, to give it said impermeable outer envelope or coating, *C*, whereby the latter is caused to embrace and protect the cut edges of the crimper, as well as its faces. For cheaper styles the lead may be coated in the sheet before the crimpers are stamped therefrom, as illustrated by Figs. 4, 5, and 6, and japanning and other like coatings may be substituted for the preferred coating of india-rubber.

In use the hair for a curl or ringlet is wrapped tightly around the waist portion *a* of a crimper, between its two bending-points, *b b*, and its end portions, *c c*, are then bent over in one and the same or in opposite directions, and if it has a fastening-clip, *e*, the latter is bent around the leaf-edge, with which it coincides, and the crimper may be readily tightened (more or less) by compressing the respective bends between the finger and thumb. During these operations, and while the crimper is worn, the impermeable coating *C* and re-enforcing strip *R* perform their functions, as aforesaid, and with the former of rubber it is so flexible as to be unaffected by repeated bends.

I do not claim herein uniting a pair of crimping-leaves by a hinge portion integral with the frame of both leaves, nor providing a hair-crimper mainly of lead with a re-enforcing strip, broadly considered, nor with a covering of textile fabric, nor with a fastening clip integral with the frame of one of the leaves, as these features of some of the hair-crimpers hereinbefore described are set forth in my previous specification aforesaid.

Having thus described my said improvement in hair-crimpers, (B,) I claim as my invention and desire to patent under this specification—

1. As a new article of manufacture, a hair-crimper having a leaden body provided with an impermeable self-attached envelope or protective coating of rubber or the like, substantially as herein specified, for the purposes set forth.

2. In a hair-crimper, a normally-flat leaden body provided with a very thin re-enforcing strip of stronger metal extending from end to end thereof, so as to strengthen its several bends, as herein set forth.

3. The combination, in a normally-flat hair-crimper having a flexible leaden body, of a waist portion adapted to have the hair for a curl or ringlet wound thereon, and having a bending-point at each end thereof, and a pair of perforated leaves or end portions adapted to be bent toward said waist portion, so as to clamp said hair by or between them, substantially as herein set forth.

EDWARD J. BROOKS.

Witnesses:

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