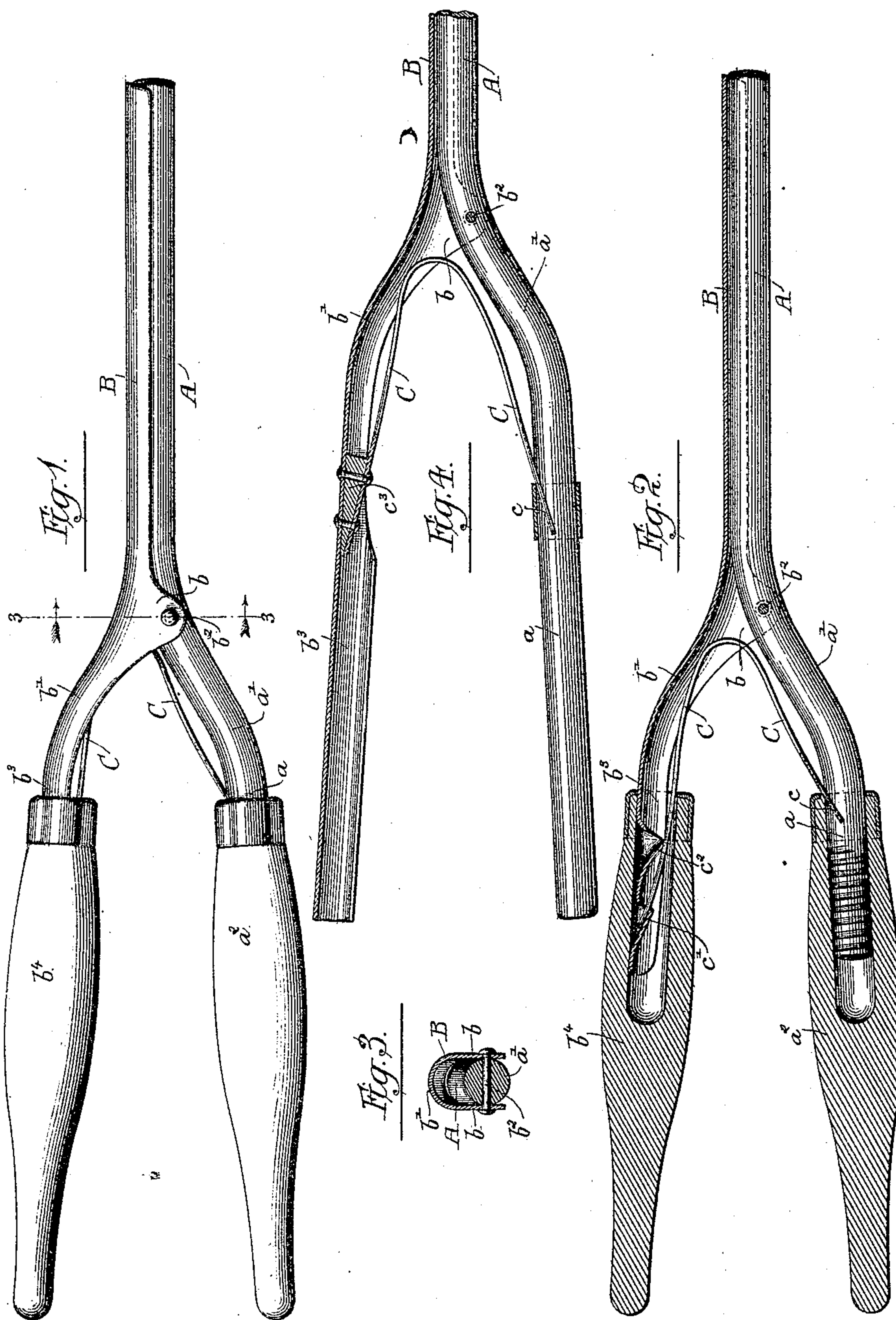


(No Model.)

G. L. THOMPSON.  
CURLING IRON.

No. 460,709.

Patented Oct. 6, 1891.



*Witnesses:-*  
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# UNITED STATES PATENT OFFICE.

GEORGE L. THOMPSON, OF CHICAGO, ILLINOIS.

## CURLING-IRON.

SPECIFICATION forming part of Letters Patent No. 460,709, dated October 6, 1891.

Application filed June 24, 1889. Serial No. 315,336. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE L. THOMPSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Curling-Irons; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a novel construction in a curling-iron of the class embracing two parts or jaws, one of which consists of a solid cylindric jaw or mandrel and the other of a clasp pivoted thereto and adapted to fit against the convex surface of the same, said jaws being each provided with a handle and being closed and held together by the action of a spring and opened by pressure of the hand upon the handles.

The invention consists in the matters hereinafter fully described, and pointed out in the appended claims.

In the drawings, Figure 1 is a view in side elevation of an implement embodying my invention. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view of the same, taken on the line 3 3 of Fig. 1, looking in the direction of the arrows. Fig. 4 is a central vertical longitudinal sectional view of a modified form of curler embodying my invention.

In said drawings, A indicates a solid cylindric jaw or mandrel made of a cylindric steel rod, said rod having been drawn, rolled, or otherwise formed so as to present a smooth, even, and accurately-cylindrical surface. The said mandrel is formed with a rearwardly-extended shank  $a$ , bent, deflected, or offset, as shown at  $a'$ , and provided at one end with a handle  $a^2$ , which is preferably formed of wood.

B indicates a clasp or concave opposing jaw, which is formed so as to closely and accurately fit upon the adjacent convex surface of the mandrel and bear upon the same throughout its entire length. The said clasp is made from a piece of sheet metal, which is preferably struck up by dies, but which may be given shape by other convenient or preferred means. The clasp B is bent, offset, or deflected at  $b'$  to give it approximately the same shape as that of the mandrel, and is provided

at its rear end with two integral lugs or ears  $b b$ , which are formed by bending the sheet metal composing the clasp, and which are located on either side of the mandrel A, near the point at which the latter is bent or deflected. A pivot-pin  $b^2$ , inserted through said lugs and the mandrel, serves to pivotally connect said parts. The clasp is extended rearwardly of said lugs to form a shank  $b^3$ , upon which a handle  $b^4$  is placed, the bent or deflected part  $b'$  being arranged oppositely to the bend of the mandrel, so that the handles stand apart from each other in the manner illustrated.

C indicates a plate or leaf spring, which is bent near its central portion so that it approximates a U shape. Said spring is located between the separated shanks of the mandrel and clasp, with its bent portion adjacent to their point of pivotal connection, and is attached at its ends to the said shanks. As a novel means of connecting the spring with the solid shank  $a$  of the mandrel one end of the spring is inserted into an inclined notch or recess  $c$ , cut into the inner side of the said shank  $a$ , the metal at the sides of the slot being closed down against the spring to hold the same in place. The other end of the spring is attached to the sheet-metal shank  $b^3$  by engagement at its end with a lip  $c'$ , formed on the inner side thereof, and by resting at a point near its end upon an inwardly-projecting part or lug  $c^2$ , adjacent to said lip  $c'$ . The lip  $c'$  and lug  $c^2$  are preferably formed by suitably striking up the same from the sheet-metal shank. In arranging the said spring between the shanks care is taken in bending and locating the same that it will only touch the same shanks at the points where it is connected with them, which point is so remote from the jaws themselves and so far back of the pivoted point that heat is not likely to reach the spring through the shanks to an extent sufficient to impair the efficiency of the spring. The handles  $a^2$  and  $b^4$  are connected with the respective shanks by any suitable means. In the drawings the said handle  $a^2$  is shown connected therewith by means of a screw-threaded joint, and the handle  $b^4$  is shown as being provided with a recess into which the end of the sheet-metal shank is driven. In both cases the handles are pref-



erably made of wood and cover or reach to the point of connection of the spring with the respective shanks.

In Fig. 4 I have shown a modified form of construction embodying my invention, in which the handles are formed by extensions of the respective shanks, so that one of said handles has the form of a solid metallic rod and the other is tubular and forms a continuation of the sheet-metal shank. The spring C is connected, as before described, to the solid shank; but when said tubular metallic handle is employed, to obviate the necessity of striking up the lip and inclined surface, which would detract from the appearance of said implement, a block  $c^3$  is desirably placed against the inner surface of the said tubular handle, said block having an inclined surface, against which the end of the spring is connected by means of rivets, which also serve to secure the said block to the shank. In other respects the arrangement of said spring is similar to that heretofore described, so that it only comes in contact with the said shanks at its point of attachment thereto.

Heretofore curling-irons having a solid cylindric jaw or mandrel and a concave jaw or clasp to fit it have been made of cast-iron, and the jaws have been finished by grinding and polishing. It has been found impracticable to make at any reasonable expense a cast-iron curler of this kind in which the adjacent surfaces of the jaws will bear accurately upon each other throughout their entire length, and as a consequence they commonly fail to properly grasp the hair, especially when a thin body of the same is placed between them. Moreover, the curling-irons of this class heretofore made have been provided with coiled or other springs set near the pivot of the jaws, so that the springs became highly heated, thereby taking the temper out of the same and rendering the implement useless.

In the curling-irons herein shown not only is the entire implement given a form and finish of superior accuracy and finish, but the clasp is adapted to strongly grasp the hair

in all its parts, while the spring is so located as to be affected by the heat to little or no extent.

I claim as my invention—

1. A curling-iron comprising a mandrel, a clasp pivoted thereto, said mandrel and clasp being each provided with a relatively-long outwardly-deflected shank, a plate-spring bent upon itself and secured at its ends near the rear ends of said shanks, said spring being suitably bent so as to come into contact with the said shanks only at their points of connection with the same, and handles arranged upon said shanks, substantially as described.

2. A curling-iron comprising a mandrel, a clasp pivoted thereto, said mandrel and clasp being each provided with relatively-long outwardly-deflected shanks, wooden handles attached to said shanks by means of holes in the handles in which the ends of the shanks are inserted, and a plate-spring bent upon itself and inserted at its ends into the handles with the shanks, said spring being suitably bent so as to come into contact with the shanks only at their parts which are inserted in the handles, substantially as described.

3. A curling-iron comprising a solid metallic mandrel, a clasp pivoted thereto, said mandrel and handle both being provided with outwardly-deflected shanks and handles attached thereto, and a bent plate-spring interposed between said shanks, having one end inserted into an inclined notch formed near the rear end of the mandrel-shank and its other end connected with the clasp-shank by inserting it under a lip formed thereon and having its body portion resting upon an inclined surface formed thereon adjacent to the lip, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

GEORGE L. THOMPSON.

Witnesses:

A. N. JESBERA,  
F. L. HATCH.