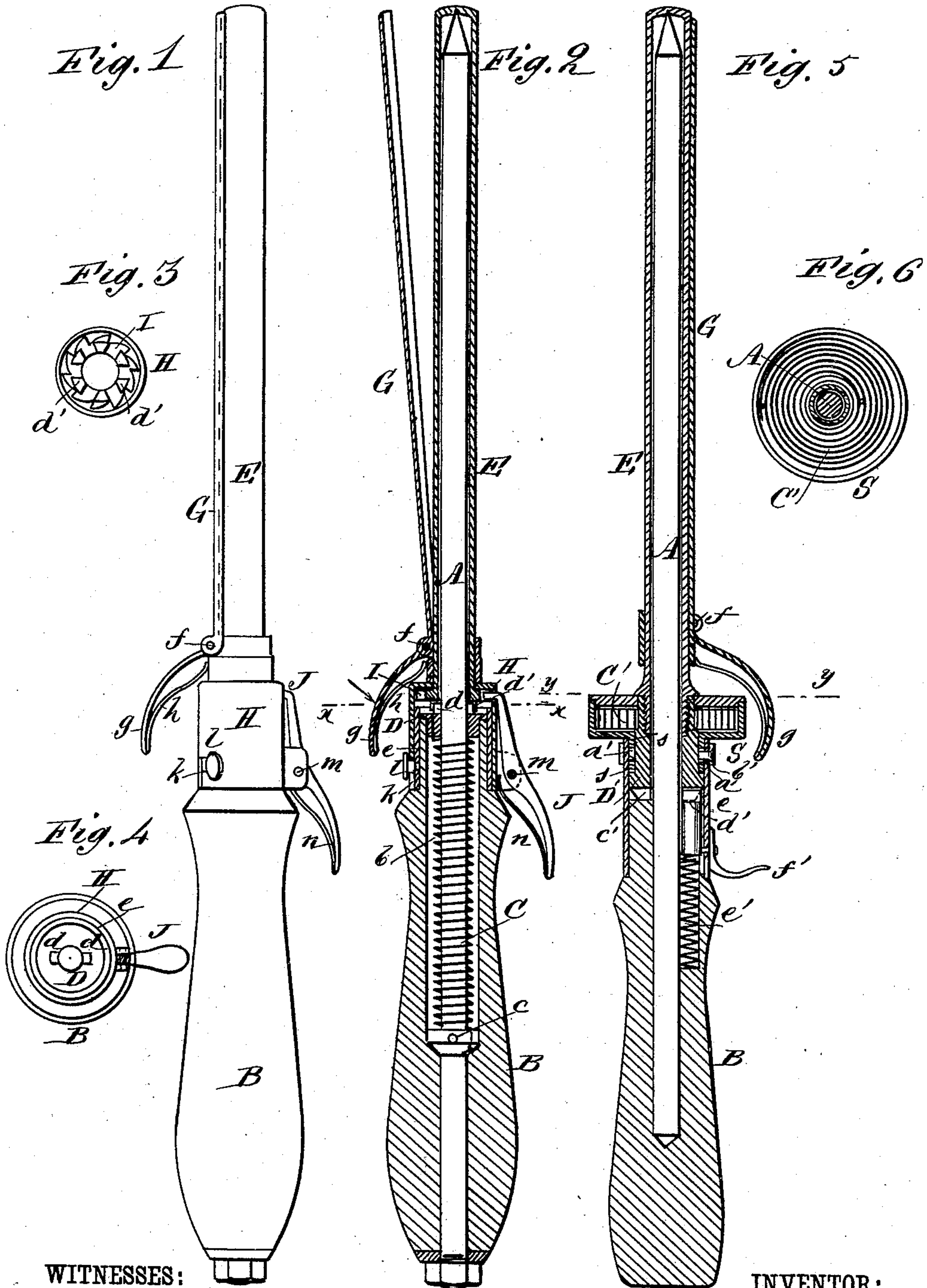


(No Model.)

J. T. STANSBURY.
HAIR CURLER.

No. 372,092.

Patented Oct. 25, 1887.



WITNESSES:

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JOHN T. STANSBURY, OF ELKHART, INDIANA.

HAIR-CURLER.

SPECIFICATION forming part of Letters Patent No. 372,092, dated October 25, 1887.

Application filed April 12, 1887. Serial No. 234,511. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. STANSBURY, of Elkhart, in the county of Elkhart and State of Indiana, have invented a new and useful Improvement in Hair-Curlers, of which the following is a full, clear, and exact description.

This invention consists in a hand tool or device for curling or frizzing the hair automatically, and in which a heating iron or core is combined with an outer curling shell or sheath provided with means for taking hold of the hair, and adapted to revolve about its longitudinal axis, and with a spring and engaging and disengaging mechanism, whereby the curling shell or sheath may be wound up and held under tension by the spring, and, after the tool has been made to grip the hair, the lock on the spring be liberated to permit of the rapid rotation of the sheath under the action of the spring, and thereby caused to automatically curl the hair.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents an exterior longitudinal view of an automatic curling iron or tool embodying my invention. Fig. 2 is a longitudinal section of the same with the opening and closing hair-holding device in its open position. Fig. 3 is an end view of a ferrule used on the tool, showing certain ratchet and clutch devices within it for controlling the motion of the curling shell, sheath, or sleeve, said view being taken as looking forward relatively to the line *xx* in Fig. 2. Fig. 4 is an end view looking backward from said line. Fig. 5 is a longitudinal section showing a modified construction of the tool; and Fig. 6 is a transverse section of the same in part, upon the line *yy* in Fig. 5, with the lid or cover of the box which contains the spring that controls the motion of the shell removed.

Referring in the first instance to Figs. 1, 2, 3, and 4 of the drawings, A is the heating iron or core of the curler, and B the handle of the tool, to which said core in its rear is attached. Said handle B may be of wood or any other suitable material and of any desired construction, with a longitudinal chamber, *b*, in its forward portion for the reception of a spiral spring, C, arranged around the entering

portion of the core within the handle. This spring C is attached at its rear end, as at *c*, to the shank portion of the core A, and at its forward end to a clutch piece or head, D, provided with one or more engaging teeth or projections, *d*, on its outer face. This clutch piece or head D is free to revolve around the core A within the chamber *b* of the handle, and, by a retaining-flange on its outer face, to rotate against or upon the marginal portion of the forward portion of said chamber and within the front end of a ferrule, *e*, secured upon the forward end of the handle B.

E is the revolving curling shell or sheath, arranged to encircle the heating iron or core A in front of the handle B. The core A is reduced or pointed at its forward end, so as to enter and have a bearing within a recess in the inner face of the outer end of the shell E, to steady the shell in its rotation around the core and to prevent contact of the sides of the heating iron or core A with the inner walls of the shell E, whereby friction of the rotating shell will be reduced, and the hair being curled upon and by said shell will be kept from being burned by the heat as derived from the core A, which, before inserting it within the shell, is heated to the required degree to effect the curling.

The shell or sleeve E has pivoted to it, as at *f*, a clamping bar or strip, G, provided with a rear finger-piece, *g*, and controlled by a spring, *h*, which serves to keep the clamping bar G down upon the shell E and to pinch or hold the hair to be curled in between it and the shell, the finger being pressed upon the piece *g* when required to open the clamp to receive the hair between it and the shell or to release the hair after being curled. Such a hair clamp or clamping bar G, which in its transverse section conforms to the rotundity of the curling-shell, I am aware has before been applied directly to the heating-iron of a curler, but not, that I am aware of, to a rotatable curling shell or sleeve which receives an independent heating-iron within it.

Soldered or otherwise made fast upon the back end of the curling shell or sleeve E within a loose cylinder or outer ferrule, H, is a ratchet-wheel, I, provided with a series of indentations formed by projections *d'* on its inner face, with which the teeth or projections

d on the clutch piece or head D are adapted to engage. This makes the ratchet-wheel I virtually form the other head of the clutch.

The cylinder or outer ferrule, H, is fitted loose upon the inner end of the curling-shell E, which admits of said end of said shell, with its attached ratchet-wheel I, rotating within it as a bearing. This cylinder or ferrule H fits snugly but freely over the ferrule *e* of the handle, and is provided with a bayonet locking notch or slot, *k*, for a button or stud, *l*, on the ferrule *e* to engage with when the several parts of the curler are in place; or the ferrules *e* and H may be otherwise detachably connected. Pivoted to said cylinder or ferrule H, as at *m*, is a spring finger-piece or trigger, J, which in its normal position, as controlled by its spring *n*, engages with the ratchet-wheel I.

Supposing the parts to be in the position shown in Fig. 1, then, by holding on to the shell or revolving part of the curler with the one hand and turning the handle portion of the implement by the other hand, and manipulating these two leading parts so as to disengage the ferrule H from the ferrule *e*, and drawing out the heating iron or core A from the shell or sleeve E, said iron or core may be placed in the fire or otherwise heated to the required degree, after which it is replaced within the shell or sleeve and the lock re-established between the ferrules H and *e*, which again puts the parts into the position shown in Fig. 1. The implement is then ready for use. The curler or its spring C is then wound up, which may be done either by rotating the shell part E in a suitable direction or the handle portion B, with its attached heated core, in a reverse direction, or by both movements combined. The clamp G is then opened, as shown in Fig. 2, by pressing on the finger piece *g*, to receive the hair to be curled between it and the curling-shell, and so that on releasing the finger from the piece *g* the clamp G will close and hold the hair. After this the spring catch or trigger J is touched or moved to release its hold upon the ratchet-wheel I, which will liberate the free end of the spring C, connected through the rotatable clutch-head D with the ratchet-wheel, which in its turn is attached to the shell or sleeve E, whereby said curling-sleeve will be rapidly rotated with the unwinding of the spring and automatically wind up the hair free from that trouble and annoyance which attaches to the use of other curlers.

The invention is not restricted to any particular shape in the construction of the curler and frizzer, nor yet to any particular materials of which its different parts are composed; and the form or arrangement of the spring and the means used for connecting the spring with the curling-shell and for liberating it, as well as the means for clamping the hair upon said shell, may be variously modified without changing the characteristic feature or features of my invention.

Figs. 5 and 6 show a coiled spring as used

instead of a spiral one, as hereinbefore described; but the principle of action is the same. In these Figs. 5 and 6, S indicates a spring barrel or cylinder similar to the spring barrel or cylinder of a watch and large enough to contain a coiled spring, C', of sufficient length and strength to perform the duty required of it. This spring C' is attached at its one end to a center piece, D', which may be shaped like the spud-cone of a lathe, the attachment being made, for instance, by a small pin on the center piece fitting a hole in the inner end of the spring. The other or outer end of the coiled spring C' is riveted or otherwise suitably attached to the inner circumferential portion of the barrel or cylinder S. The curling-shell E is made to screw into the center piece, D', and has a collar at the outer termination of the screw-thread on it for the purpose of holding the cap of the spring-barrel S in position. The back of the spring box or barrel S is provided with an externally-projecting collar, *s*, having suitably-formed apertures *a' a'* in and around its sides. Upon the ferrule *e* of the handle is a spring, *b'*, the free end of which passes through an aperture in said ferrule and engages with the apertured portions *a'* as a pawl does with a ratchet. This spring-catch *b'* forms the connection between the handle of the tool that carries the heating-iron A and the curling-shell E. The back or inner end of the center piece, D', passes through the collar on the spring-barrel S, and is constructed to form a ratchet, *c'*, with which a small sliding rod, *d'*, pressed outward by a spring, *e'*, and drawn back by a thumb-piece, *f'*, engages. This rod *d'*, with the spring *e'* at its back, serves to hold the ratchet *c'* during the winding up of the spring C'. After winding up said spring C', which may be done by suitably turning the box or barrel S, the thumb-piece *f'*, which has its connection through a slot in the ferrule *e*, is drawn back, which releases the rod or catch *d'* from the ratchet *c'*, when the curling-shell E will, by the unwinding of the spring C', be rapidly rotated to curl the hair, as hereinbefore described.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a hair-curling implement, the combination, with a detachable heating iron or core having an attached handle, of a rotatable curling shell or sleeve arranged to receive the heating iron or core within it, a winding and unwinding spring connecting said handle and core with said curling shell or sleeve, means for clamping the hair on said shell, and means adapted to hold and release the shell subject to the action of said spring, substantially as specified.

2. In a hair-curling implement, the combination, with the detachable heating iron or core having an attached handle, and the rotatable curling shell or sleeve adapted to receive the

heating iron or core within it, of a hair-clamp-
ing bar pivoted to said shell and adapted to
rotate in common with said shell about or
around the heating iron or core, essentially as
5 described.

3. In a hair-curling implement or frizzer;
the combination of the detachable heating iron
or core A with its attached handle B, the
rotatable curling shell or sleeve E, the hair-
10 clamping bar G, pivoted to said shell and pro-
vided with a thumb-piece, *g*, and a spring
closing said bar upon the shell, the spiral
spring C, a rotatable ratchet-connection be-
tween the free end of said spring and the curl-
15 ing-shell, and a movable finger-piece or trigger
applied to the handle portion of the implement
and adapted to engage and disengage with and
from the ratchet, substantially as shown and
described.

4. The combination of the detachable heat- 20
ing iron or core A, having an attached handle,
B, provided with a longitudinal chamber, *b*,
the spiral spring C, secured at its one end to
said handle and core portion A B, the clutch
piece or head D, having the free end of said 25
spring secured to it, the handle-ferrule *e*, the
rotatable curling shell or sleeve E, the clamp-
ing bar or strip G, the outer ferrule, H, de-
tachably connected with the inner ferrule, *e*,
the ratchet-wheel and clutch-head I, and the 30
spring finger-piece or trigger J, substantially
as shown and described, and for the purposes
specified.

JOHN T. STANSBURY.

Witnesses:

JOHN ZIESEL,
F. A. BUESCHER.