A. H. GEMMELL.

CURLING IRON.

APPLICATION FILED JULY 3, 1908.

917,580.

Patented Apr. 6, 1909.

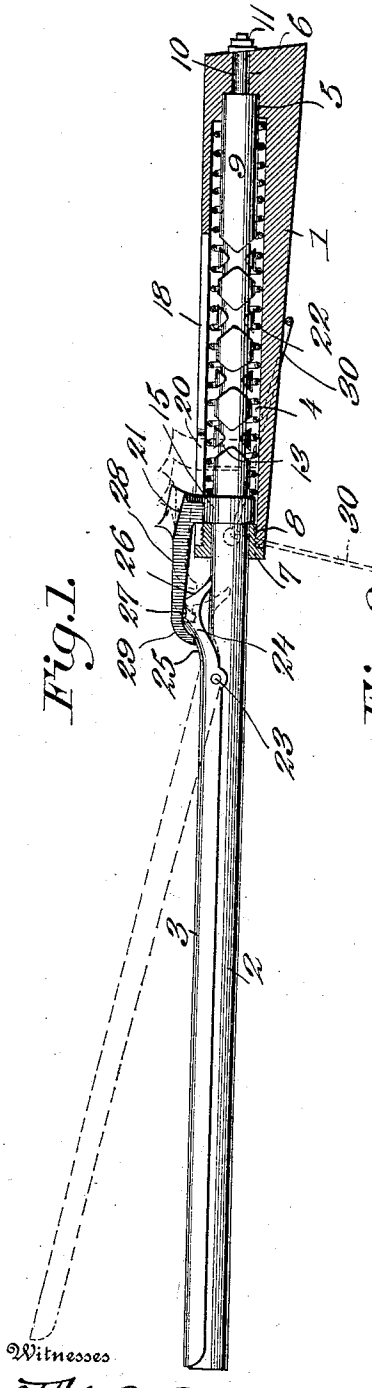


Fig. 1.

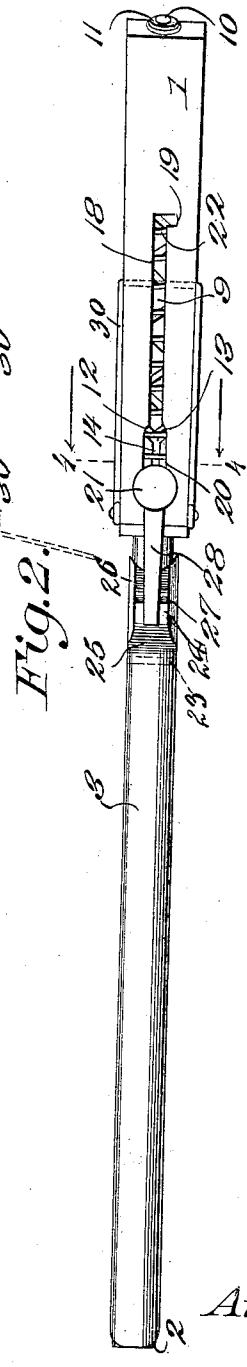


Fig. 2.

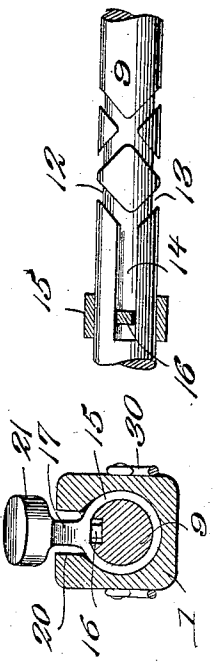


Fig. 5.

Fig. 4.

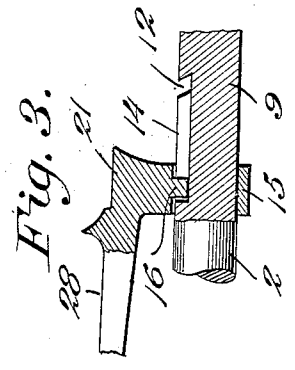


Fig. 3.

Witnesses

Phil G. Barnes

John F. Byrne.

Inventor

Andrew H. Gemmell

By Victor J. Evans

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANDREW H. GEMMELL, OF MONTEZUMA, NORTH CAROLINA.

CURLING-IRON.

No. 917,580. Specification of Letters Patent. Patented April 6, 1909.

Application filed July 3, 1908. Serial No. 441,867.

To all whom it may concern:

Be it known that I, ANDREW H. GEMMELL, a citizen of the United States of America, residing at Montezuma, in the county of Mitchell and State of North Carolina, have invented new and useful Improvements in Curling-Irons, of which the following is a specification.

My invention relates to improvements in curling irons, and its primary object is to provide a device of this character having means by which the mandrel may be rotated in a direction to curl the hair about the same, or in a direction to free the same from the hair.

A further object of my invention is the provision of a curling iron wherein certain movements of the mandrel rotating member swings the mandrel into inoperative position, that is, in position to permit the hair to be initially curled about the mandrel, a further operation of the rotating member permitting the clamp to be returned to inoperative position, that is, in position to prevent the uncoiling of the hair from the mandrel.

A still further object of my invention is the provision of a curling iron which is simple, durable and efficient, and which may be manufactured and sold at a comparatively low cost.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter fully described, claimed and illustrated in the accompanying drawing, wherein:

Figure 1 is a view in side elevation of a curling iron constructed in accordance with my invention, the handle being in longitudinal section. Fig. 2 is a top plan view thereof. Fig. 3 is a sectional view taken on a plane extending through portions of the shank of the mandrel and the mandrel rotating member. Fig. 4 is a sectional view taken on the plane indicated by the line 4—4 of Fig. 2, and Fig. 5 is a view in elevation of a portion of the mandrel shank, the mandrel rotating member being in section.

Referring to the drawing by reference numerals, 1 designates the handle, 2 the mandrel, and 3 the clamp of my improved curling iron.

The handle 1 may be constructed of wood, metal or any other material suitable for the purpose, and is provided with a bore 4 which extends longitudinally thereof. The bore 4 extends through the inner end of the handle 1 and communicates with a reduced socket 5 formed in the outer closed end of the handle, an opening 6 extending from the socket 5 through the outer end of the handle. The inner end of the bore 4 is closed by means of a plug 7, which has threaded engagement with the wall of the bore and which is provided with an opening 8. The opening 8 and the socket 5 form bearings for the reception of the shank 9 of the mandrel 2, whereby the mandrel is rotatably mounted on the handle. The mandrel is prevented from longitudinal displacement by means of an extension 10 which passes through the opening 6, and a nut 11 which has threaded engagement with the projecting end of the extension.

The shank 9 is preferably formed integrally with the mandrel 2, and is provided for a portion of its length with a spiral screw comprising left grooves 12 and right grooves 13. The grooves of the spiral screw communicate with an elongated groove 14 formed in the upper surface of the shank 9 at a point adjacent its union with the mandrel 2. An annular member 15 encompasses the shank 9 of the member and is mounted in the bore 4 for longitudinal movement. This member is provided with a lug 16 which fits and moves in the grooves of the spiral screw, whereby the reciprocation of said member will impart rotary movements to the mandrel.

The member 15 is provided with a shank 17 which passes through an elongated slot 18 formed in the handle 1, said slot opening out through the inner end of the handle to permit the application or removal of the member. The opposite end of the slot is provided with a lateral branch 19, and said slot is increased laterally in both directions at a point adjacent the inner end of the handle, as at 20. The shank 17 is provided with a head 21 which is disposed above the handle 1 and which provides means by which the member 15 may be reciprocated. The movement of the member outwardly, that is, in the direction of the outer end of the handle 1, with the lug 16 in the right groove of the spiral screw, will rotate the mandrel 2 in a direction to coil the hair located on one side of the head about the same, and the movement of the member in the same direction

with the lug in the left groove of the spiral screw will rotate the mandrel in a direction to coil the hair located on the opposite side of the head about the same. The inward movement of the member 15 will rotate the mandrel 2 in a direction to free the same from the coiled hair. The member 15 is held in the extremities of its inward movement, which is its normal position, by means of an expansible coiled spring 22, which is mounted within the bore 4 about the shank 9 of the mandrel, and which is interposed between the closed end of the bore and the member. As the spring is compressed during the movement of the member to rotate the mandrel 2 in hair curling direction, the member will be automatically returned to its normal position when released. It should be thus apparent that the mandrel 2 will be automatically rotated in hair uncurling direction, thus rendering it only necessary to manually operate the member when it is desired to rotate the mandrel in hair curling direction. When the member 15 is in its normal position, the lug 16 occupies the groove 14, and the movements of the member to carry the lug out of this groove into one of the grooves of the spiral screw or to return the lug fully into the groove 14 from one of the grooves of the spiral screw, are inoperative, that is to say, such movements do not rotate the mandrel 2. In other words, the initial movement of the member 15 in a direction to rotate the mandrel in hair curling direction and the final movement of the member in the direction to rotate the mandrel 2 in hair curling direction, are inoperative. The lateral enlargement 20 of the slot 18 permits the lug 16 to be directed into the right or left groove of the spiral screw, and the lateral branch 19 in said slot permits the member to be held in position to secure the iron against hair uncurling motion, the shank 17 of said member being adapted to be directed into said branch when it is desired to secure the member against such movement.

The clamp 3 is arcuate in cross-section and is pivotally secured to the mandrel 2 through the medium of a pivot 23. The clamp is provided in rear of the pivot 23 with an extension 24, presenting an upwardly inclined face 25 and a downwardly inclined spring 26. The free end of the spring 26 engages the mandrel 2 and normally holds the clamp 3 in closed position. The extension 24 is provided at a point intermediate its inclined face 25 and the spring 26 with a seat 27. The member 15 is provided with an arm 28 which projects therefrom in the direction of the extension 24 and which is provided with a downwardly curved lip 29 which normally overlies the inclined face 24 of said extension. Upon the initial movement of the member 15 in a direction to rotate the mandrel 2 in hair curling direction, the lip 29 moves in contact with the inclined face 24 and throws the clamp 3 into opened position, that is, in position to permit the hair to be initially coiled about the mandrel 2. Just previous to the member's reaching the limit of its initial movement, the lip 29 engages in the seat 27 and holds the clamp 3 in opened position. A further movement of the member withdraws the lip 29 from the seat 27 and moves the lug 16 into one of the grooves of the spiral screw, the withdrawal of the lip 29 from the seat 27 permitting the spring 26 to move the clamp into and hold it in its closed position, in which position it secures the initially coiled hair about the mandrel. A further movement of the member 15 will direct the lug 16 through the grooves of the spiral screw and rotate the mandrel 2 in hair curling direction, thereby curling the hair about the clamp 3 and the mandrel 2. When the member 15 is released, the spring returns it to its normal position. During the greater part of this movement of the member the mandrel is rotated in hair uncurling direction, thereby uncurling the hair from about the clamp and the mandrel. Just before the member reaches the limit of its movement, the lip 29 engages and moves over the spring 26, throwing the clamp into opened position. A further movement of the member will direct the lip into the seat 27, whereby to secure the clamp in opened position. When the clamp is in this position the iron may be readily withdrawn from the curled hair. When it is desired to permit the clamp 3 to be closed, the member 15 is operated to move the lip 29 out of the seat 27 and position it in advance of the inclined face 25, whereby the initial operation of this member will swing the clamp into its opened position.

A rest 30 of substantially U-form is pivotally secured at its ends to the handle 1 at a point adjacent its inner end, said rest providing means by which the curling iron may be supported above the flame of an alcohol lamp. When it is desired to support the iron above the flame of a lamp or gas bracket, the member 15 is moved to swing and hold the clamp 3 in its opened position, after which the iron is placed upon the upper edge of a lamp chimney or gas bracket globe, the angular relation of the clamp to the mandrel preventing the iron from rotating on the lamp chimney or gas bracket globe.

From the foregoing description taken in connection with the accompanying drawing, the construction and mode of operation of the invention should be understood without a further extended description.

Changes in the form, proportions and minor details of construction may be made

within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

Having fully described and illustrated my invention, what I claim is:

1. A curling iron comprising a handle, a mandrel rotatably mounted upon the handle and provided with a spiral screw, a member movably mounted upon the handle and provided with a lug adapted to be directed into one of the grooves of the screw, and a clamp pivotally mounted upon the mandrel.

2. A curling iron comprising a handle, a mandrel rotatably mounted upon the handle and provided with a spiral screw, a member movably mounted upon the handle and provided with a lug adapted to be directed into one of the grooves of the screw, means adapted to automatically move the member in one direction, and a clamp pivotally mounted upon the mandrel.

3. A curling iron comprising a handle, a mandrel rotatably mounted upon the handle and provided with a groove and a spiral screw, the grooves of the screw communicating with the first named groove, a member movably mounted upon the handle and provided with a lug engaging in said first named groove, means adapted to automatically move the member in one direction, and a clamp pivotally mounted upon the mandrel.

4. A curling iron comprising a handle, a mandrel rotatably mounted upon the handle and provided with a spiral screw and a groove, the grooves of the screw communicating with said first named groove, a member movably mounted upon the handle and provided with a lug engaging in the said first named groove, a clamp pivotally mounted upon the mandrel and provided with an extension presenting inclined faces and having a seat, and an arm secured to the member and adapted for coöperation with the inclined faces and the seat.

5. A curling iron comprising a rotatably mounted mandrel, a pivotally mounted clamp, a spring normally holding the clamp in closed position, and a movably mounted member, the movement of the member being adapted to rotate the mandrel and to swing the clamp on its pivot.

6. A curling iron comprising a handle provided with a slot having a lateral branch at one end and increased laterally in both directions at its opposite end, a mandrel rotatably mounted upon the handle and provided with a spiral screw and a groove, the grooves of the screw communicating with the first-named groove, a member movably mounted upon the handle and passing through the slot, said member being provided with a lug adapted to be directed into one of the grooves of the screw, and a spring acting upon the member.

7. A curling iron comprising a handle, a mandrel rotatably mounted upon the handle, a clamp pivotally mounted upon the mandrel and provided with an inclined face, means mounted upon the handle for rotating the mandrel, and means connected with said first-named means and being adapted when moved to engage the inclined face and open the clamp.

8. A curling iron comprising a handle, a mandrel rotatably mounted upon the handle, a clamp pivotally mounted upon the mandrel and provided with an inclined face and seat, means by which the mandrel may be rotated, and means connected with said first-named means and being adapted to engage the inclined face and open the clamp and to engage the seat to secure the clamp in opened position.

9. A curling iron comprising a handle, a mandrel rotatably mounted upon the handle, a clamp pivotally mounted upon the mandrel and provided with a seat and an inclined face and a spring, means by which the mandrel may be rotated, and means connected with the first named means and adapted to engage the inclined face to close the clamp, the spring to open the clamp and the seat to secure the clamp opened.

10. A curling iron including a handle, a member movably mounted upon the handle, and a mandrel rotatably mounted upon the handle and provided with a spiral groove with which the member is adapted to be engaged when it is desired to rotate the mandrel in one direction, said mandrel being provided with another groove with which the member is adapted to be engaged when it is desired to rotate the mandrel in the reverse direction.

11. A curling iron including a handle, a member movably mounted upon the handle, a mandrel rotatably mounted upon the handle and provided with a spiral groove with which the member is adapted to be engaged when it is desired to rotate the mandrel in one direction, said mandrel being provided with another groove with which the member is adapted to be engaged when it is desired to rotate the mandrel in the reverse direction, and a spring acting upon the member.

12. A curling iron including a handle, a member movably mounted upon the handle and provided with a lug, a mandrel rotatably mounted upon the handle and provided with a spiral groove with which the lug is adapted to be engaged when it is desired to rotate the mandrel in one direction, said mandrel being provided with another spiral groove with which the lug is adapted to be engaged when it is desired to rotate the mandrel in the reverse direction.

13. A curling iron including a handle, a mandrel rotatably mounted upon the handle, a pivotally mounted clamp, a mandrel rotating member, and means on said member for engaging and opening the clamp during the initial movement of said member, a further movement of said member moving said means out of engagement with and permitting the clamp to close.

14. A curling iron including a handle, a mandrel rotatably mounted upon the handle, a pivotally mounted clamp, a mandrel rotating member, and means on said member for engaging and opening the clamp during the initial movement of said member, a further movement of said member carrying said means out of engagement with and permitting the clamp to close, and the final movement of the member in the reverse direction causing said means to engage and open the clamp.

In testimony whereof I affix my signature in presence of two witnesses.

ANDREW H. GEMMELL.

Witnesses:
W. C. PHILLIPS,
D. J. COOK.