April 24, 1951 F. PRICE 2,550,295

ADJUSTABLE HANDLE FOR CURLING, WAVING, AND PRESSING IRONS

Filed Sept. 18, 1946

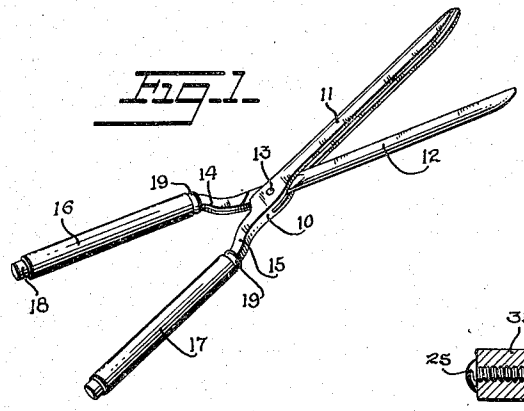


Fig. 1.

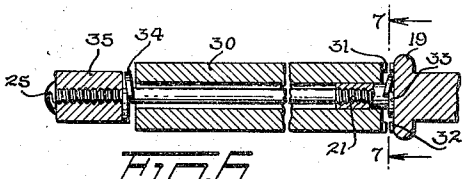


Fig. 6.

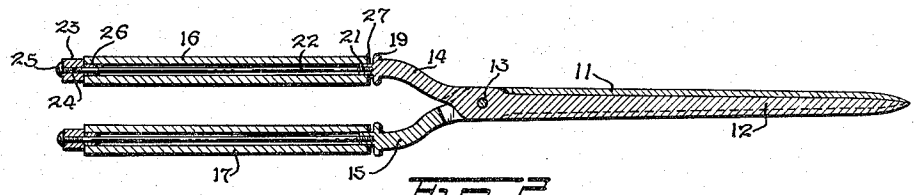


Fig. 2.

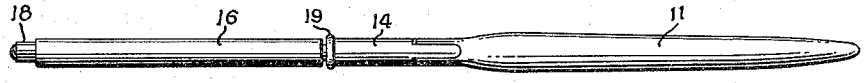


Fig. 3.



Fig. 4.

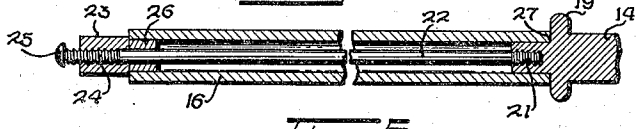


Fig. 5.

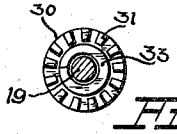


Fig. 7.

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ADJUSTABLE HANDLE FOR CURLING, WAVING, AND PRESSING IRONS

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5 Claims. (Cl. 132—37)

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This invention relates to hair curling, waving and pressing irons and more particularly to the construction of the handle portions thereof.

It is the object of the present invention to provide a curling iron with handles which may be rotated freely upon the handle hub portions to permit the easy rotation and manipulation of the curling iron during certain operations upon the hair.

It is another object of the invention to provide a curling iron with rotatable handle portions which can be, at the will of the operator, made freely rotatable, or less freely rotatable as by ratcheting, or may be locked to the handle hub portion for no rotation at all.

According to the invention, the curling iron is made of the usual two parts pivoted together in scissors fashion. Each of the parts has a rearwardly extending handle hub portion on which there is journaled handle sleeves which when free permit easy rotation of the curling iron within the lock of gathered hair. On the end of the hub portion there is provided a locking nut whereby the handle sleeve can be forced forwardly against a shoulder portion and retained by friction against rotation as at times and during certain operations when it is not desirable to have the handles rotatable.

At other times it may be desirable to have the handles rotatable but not as freely as they would be with the one adjustment. In order to effect this result, there is provided ratchet teeth on the shoulder portion and upon the sleeve which are so shaped that they may ride over each other when extra rolling pressure is provided on the sleeve. A spring will normally keep these ratchet portions separated but when the tension of the spring has been somewhat overcome by a tightening up of the locking nut at the end of the hub these ratchet teeth will ride over one another. A second spring of the split ring type is located at the free end of the sleeve and is adapted to be engaged by the locking nut. When the locking nut is screwed upon the hub portion to overcome the axial tension of this latter spring and to flatten it out, the ratchet teeth will be locked in positive engagement.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

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Fig. 1 is a perspective view looking down upon an opened curling iron.

Fig. 2 is a cross sectional view taken through the full length of the curling iron when the tongs thereof are closed upon one another

Fig. 3 is a side elevational view of the curling iron.

Fig. 4 is an enlarged longitudinal cross sectional view of the handle portion when the locking nut is adjusted to permit free rotation of the handle sleeve.

Fig. 5 is a similar cross sectional view after the locking nut has been adjusted to lock the handle sleeve upon the handle against rotation.

Fig. 6 is a side view of a modified form of handle arrangement which includes the ratchet portion on the handle shoulder and on the sleeve and, as well, the two springs located at opposite ends of the handle sleeve.

Fig. 7 is a transverse cross sectional view of the handle arrangement shown in Fig. 6 as viewed along line 7—7, looking in the direction of the arrows thereof.

Referring now particularly to Figs. 1 to 5, 10 represents a curling iron adapted for curling and waving hair having a pair of tong parts 11 and 12, pivoted together at 13. Extending rearwardly of the pivot are handle hub portions 14 and 15, on which there are respectively journaled handle sleeves 16 and 17 of heat insulating material. These handle sleeves are retained on the hub portion by adjustable nuts 18.

Each of the hub portions, 14 and 15, has a shoulder 19 and a pilot portion 21 adapted to receive one end of the handle sleeve. Into the pilot portion 21, there is projected a hub rod 22 carrying on its outer end a locking nut 23 adjustable on threads 24 provided on the outer end of the rod 22. On the tip end of the rod is an enlarged head portion 25 which serves as a stop to prevent the removal of the lock nut 23. The rear end of the handle sleeve has a radially inwardly extending portion 26 which is journaled on the rod 22, and which portion 26 cooperates with the pilot portion 21 to provide two small bearing surfaces on which the handle sleeve 26 can turn at times when the lock nut 23 is not tightened against the portion 26. At such times, the connection is practically frictionless and free of heat transmission.

When the sleeves are freely rotatable the curling iron can be easily rotated in the hand to give advantage to the operator when performing certain operations upon the hair as when forming the lock of hair into a curl. The hand will grasp

the two sleeves and the curling iron will be rotatable as a unit within the hand.

By tightening the lock nut 23, the sleeve 16 or 17 will be urged forwardly so that its forward end face 27 will be thrust into frictional and locked engagement with the shoulder portion 19. Thereafter the sleeve handles will not rotate. This will provide the usual curling iron, which is without rotatalbe handle sleeves.

Referring now to the form of the invention shown in Figs. 6 and 7, there is provided a handle sleeve 30 which has ratchet teeth 31 circumferentially spaced from one another on the forward end thereof. The shoulder 19 has ratchet teeth 32 thereon adapted to cooperate with the ratchet teeth 31 of the sleeve to retain the same in either ratchet engagement with one another or at times when the sleeve is fully thrust against the shoulder 19 to be locked with one another whereby to positively prevent rotation of the sleeve on the handle hub potrions. A spring washer 33 surrounds the handle hub portion located centrally of the ratchet teeth and will normally maintain the sleeve 30 removed from the shoulder 19. At the opposite end of the sleeve 30 and surrounding the hub portion, there is a spring washer 34 which is stronger than the spring 33.

A locking nut 35 is threaded to the end of the hub portion and when tightened so as to urge the spring 34 against the sleeve and to somewhat overcome the spring 33, will allow the ratchet teeth to have ratchet engagement with one another and permit the handle 30 to have rotation, though not so freely as when the ratchet teeth are clearly free of one another. The teeth are preferable rounded at their ends to permit rolling contact with one another. Further tightening of the locking nut 35 will compress the spring 34 and force the ratchet teeth into positive locking engagement so that no rotation of the sleeves will be had.

It will be apparent that there are times during the use of the curling iron upon the hair that each of the adjustments of the handle will have their particular use. The rotatable handles leave the iron free to be turned in the hands with the handles remaining stationary while the supporting rods turn in the handles eliminating frictional slipping of the handles within the hand with the consequent formation of blisters and other discomforts.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent, is:

1. A curling iron comprising parts pivoted together in scissors-like fashion and having hub portions at their respective rearward ends, handle sleeves journaled on the hub potrions, and complementary ratchet teeth on the contacting surfaces of the handle sleeves and the hub portions.

2. A curling iron comprising parts pivoted together in scissors-like fashion and having hub portions at their respective rearward ends, handle sleeves journaled on the hub portions, a ratchet connection between the handle sleeves and the hub portions, said ratchet connection comprising ratchet teeth on the inner end of the handle sleeve, said hub portions also having ratchet teeth in axial registration with the ratchet teeth of the handle sleeve, means for adjusting the sleeve so that the teeth of the respective parts can bear upon one another, and a spring included in said means to permit the axial shifting of the sleeve and separation of the ratchet teeth when the handle sleeves are acted upon by extra rotational force, and spring means for normally keeping the ratchet teeth out of engagement with one another.

3. A curling iron comprising parts pivoted together in scissors-like fashion and having hub portions at their respective rearward ends, handle sleeves journaled on the hub portions, a ratchet connection between the handle sleeves and the hub portions, said ratchet connection comprising ratchet teeth on the inner end of the handle sleeve, said hub portions also having ratchet teeth in axial registration with the ratchet teeth of the handle sleeve, means for adjusting the sleeve so that the teeth of the respective parts can bear upon one another, a spring included in said means to permit the axial shifting of the sleeve and separation of the ratchet teeth when the handle sleeves are acted upon by extra rotational force, spring means for normally keeping the ratchet teeth out of engagement with one another, said adjusting means comprising a thread formation on the hub portion, a lock nut axially adjustable thereon and said included spring being of the lock washer variety to permit lost motion between the lock nut and the handle sleeve, said locking spring being stronger than the spring adjacent the ratchet teeth, and said lock nut upon compressing the two springs adapted to force the sleeve axially on the hub portion so that the ratchet teeth will be held in locking engagement with one another and the handle sleeve will be at such times prevented from rotating.

4. In a device of the class described having a hub formed with a threaded opening and a shoulder concentrically surrounding the opening, a rod having one end threaded into the opening of the hub, an enlarged head formed on the other end of said rod, said rod having a threaded portion adjacent said enlarged head, a tubular handle freely rotative on said rod, and a lock nut threadedly engaged on the threaded portion of said rod and of a length less than the distance between said enlarged head and the adjacent end of said tubular handle when the other end of said handle engages the shoulder of the hub, said lock nut being tightened against the adjacent face of said enlarged head so as to prevent its complete disengagement from said rod and so as not to interfere with the rotation of said handle relative to said rod, whereby the nut may be tightened against the adjacent end of said handle to clamp the handle against rotation between the adjacent faces of the shoulder of the hub and said lock nut, and means providing a ratchet connection between the adjacent faces of the shoulder of the hub and said handle, said ratchet means comprises ratchet teeth formed on the end of said handle adjacent the hub, complementary ratchet teeth formed on the shoulder of the hub and engaged by said ratchet teeth of said handle, and means urging the handle into a position in which said teeth will be engaged but free to ride over one another in one direction of rotation of said handle.

5. In a device of the class described having a hub formed with a threaded opening and a shoulder concentrically surrounding the opening,

a rod having one end threaded into the opening of the hub, an enlarged head formed on the other end of said rod, said rod having a threaded portion adjacent said enlarged head, a tubular handle freely rotative on said rod, and a lock nut threadedly engaged on the threaded portion of said rod and of a length less than the distance between said enlarged head and the adjacent end of said tubular handle when the other end of said handle engages the shoulder of the hub, said lock nut being tightened against the adjacent face of said enlarged head so as to prevent its complete disengagement from said rod and so as not to interfere with the rotation of said handle relative to said rod, whereby the nut may be tightened against the adjacent end of said handle to clamp the handle against rotation between the adjacent faces of the shoulder of the hub and said lock nut, and means providing a ratchet connection between the adjacent faces of the shoulder of the hub and said handle, said ratchet means comprises ratchet teeth formed

on the end of said handle adjacent the hub, complementary ratchet teeth formed on the shoulder of the hub and engaged by said ratchet teeth of said handle, and means urging the handle into a position in which said teeth will be engaged but free to ride over one another in one direction of rotation of said handle, said urging means comprises a spring washer concentric on said rod and disposed between the adjacent faces of said lock nut and the adjacent end of said handle.

FANNIE PRICE.

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