Mar. 20, 1923. 1,449,288.

F. M. KILLEN.

CURLING IRON.

FILED OCT. 6, 1922.

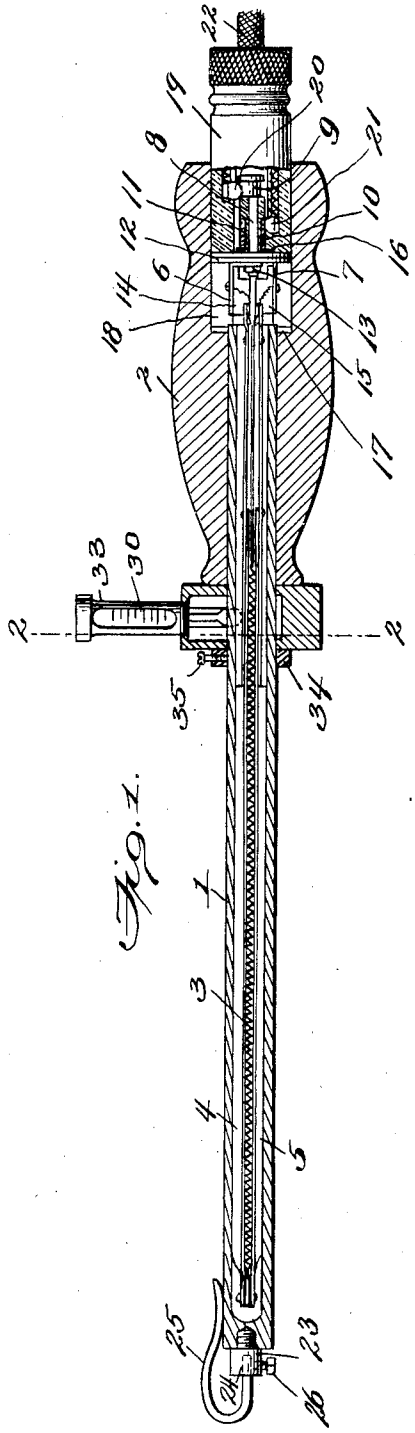


Fig. 1.

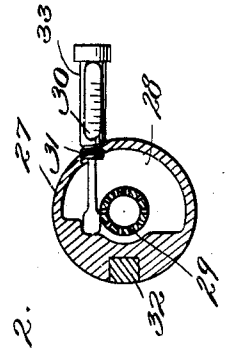


Fig. 2.

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UNITED STATES PATENT OFFICE.

FRANK M. KILLEN, OF ASHEVILLE, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO EDWIN W. GROVE, OF ASHEVILLE, NORTH CAROLINA.

CURLING IRON.

Application filed October 6, 1922. Serial No. 592,746.

To all whom it may concern:

Be it known that I, FRANK M. KILLEN, a citizen of the United States, residing at at Asheville, in the county of Buncombe and State of North Carolina, have invented new and useful Improvements in Curling Irons, of which the following is a specification.

This invention relates to curling irons and has for its principal object the provision of means associated with a curling iron of the self-heated type for indicating the temperature of the curling iron when in use, to the end that the operator of the iron may be in a position to know the temperature thereof at all times and to guard against permitting it to become so hot as to be injurious to the hair.

A more specific object of the invention is the provision of a temperature indicating device in association with a self-heated curling iron, so constructed as to remain upright and constantly in view throughout the rotary movement of the curling iron when winding a curl.

Still another object of the invention is to provide a weighted device journally mounted upon a curling iron and carrying a thermometer, one end of which is retained in heat exchanging relation with the barrel of said curling iron while the other end is carried upright by the weighted device, throughout the rotary movement of said curling iron.

With the above and other objects in view, my invention consists in the improved curling iron illustrated in the accompanying drawings, described in the following specification, and particularly claimed, and in such variations and modifications thereof as will be obvious to those skilled in the art to which my invention relates.

In the drawings accompanying and forming a part of this specification, and wherein the preferred embodiment of my invention is illustrated:—

Figure 1 is a side elevation partly in section of a curling iron constructed after the manner of my improved invention.

Figure 2 is a cross section taken along the line 2—2 of Figure 1.

Referring now in detail to the several figures the numeral 1 represents the metallic barrel or body of the curling iron which is provided with the handle 2, the latter being made of non-heat conductive substance. The barrel 1 is hollow from its inner end to a point adjacent its outer end and houses the metallic heating element 3 which is of well known construction and consists of a high resistance wire riveted between heat diffusing elements 4 and 5 which contact frictionally with the inner wall of the metallic barrel. The outer end of the heating element is electrically connected to metallic clips 6 and 7 one of which makes electrical contact with a pin 8 conductively associated with an annular terminal 9 the other being insulated from the pin 8 but conductively related to the annular terminal 10 which surrounds the pin 8 and is insulated therefrom by means of the insulation sleeve 11. The pin 8 passes through a pair of insulating washers 12 and is secured thereto by means of the nut 13. The clips 6 and 7 are screwed to the insulating blocks 14 and 15 which are riveted together and to the end of the heating element. The washers 12 are held rigidly to the insulating blocks 14 and 15 by means of the annular end 16 of the clip 7 which passes through a slot in said washers and engages the outer surface thereof.

In assembling the curling iron the barrel is slipped into the bore in the upper end of the handle 2 and passed therethrough until the flange 17 at the outer end of said barrel engages the bottom of the counter-bore 18 in the outer end of said handle. When the parts are in this position the electrical terminals 9 and 10 are housed within said counter-bore there being a space surrounding them sufficient to permit the insertion of the plug 19. This plug is constructed inwardly with a pair of insulated contact shoes 20 and 21 which are adapted to frictionally engage the terminals 9 and 10. Electrical connections from the contacts 20 and 21 extend through the outer end of the plug, in the cord 22 and are adapted to be connected to an ordinary electric light socket. Due to the annular form of the terminals 9 and 10 the plug 19 is swivelly mounted with respect to the curling iron so that the latter may be turned when winding a curl without twisting the cord 22.

The outer end of the barrel 1 is provided with a cap screw 23 having a bore 24 arranged axially of its head in which the

spring clip 25 is adapted to be inserted. This clip is detachably held in place by a set screw 26 entering the bore 24 through the side of the head of the cap screw. The outer end of the spring clip 25 makes resilient contact with the barrel of the curling iron and is for the purpose of holding the end of the lock of hair while it is being wound upon the curling iron by rotating the latter.

Journally mounted upon the barrel 1 adjacent the handle 2 is a cylindrical casing 27 internally hollowed to form a chamber 28. The portion of the barrel 1 of the curling iron which passes through this chamber is provided with a plurality of radial apertures 29 opening into the barrel 1 so that the heat from the heating element 3 may be directly radiated into the chamber 28. A thermometer 30 passes through an aperture 31 in the wall of the casing 27, the bulb of which lies adjacent the barrel 1 close to the apertures 29. By being so disposed the thermometer renders an accurate indication of the temperature of the barrel of the curling iron. The lower side of the casing 27 is weighted by means of the imbedded weight 32 so that said casing remains stationary while the curling iron is being rotated, the thermometer 30 being thereby maintained in an upright position where it is constantly in view. The exposed part of the thermometer is preferably enclosed in a metallic cage 33 to protect it from the risk of breakage. Endwise movement of the casing 27 along the barrel 1 is prevented by means of the collar 34 which is secured to the barrel 1 adjacent the casing 27 by means of the set screw 35.

While the temperature indicating device in the preferred embodiment here shown is associated with a curling iron which in itself presents some novel features, its use is not limited to this type of iron, but, by virtue of its detachable character, it is adapted to be used as an accessory to any of the ordinary forms of curling iron.

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

1. In combination a curling iron and a temperature indicating device relatively movable thereto.

2. In combination a curling iron comprising a rotatable barrel and a temperature indicating device associated with said barrel and maintaining an upright position relative thereto.

3. In combination a curling iron comprising a heated barrel, a temperature indicating device rotatably mounted upon said barrel and having a portion thereof arranged in heat exchanging relationship to said barrel.

4. In combination a curling iron comprising a heated barrel and a temperature indicating device rotatably mounted on said barrel and being weighted on one side to maintain an upright position when said barrel is rotated.

5. In combination a curling iron comprising a barrel, a temperature indicating device rotatably mounted with respect to said barrel and being weighted on one side to maintain an upright position when said barrel is rotated, said temperature indicating device having a portion thereof arranged in heat exchanging relationship with said barrel.

6. In combination a curling iron having a heated barrel, a temperature indicating device comprising a casing journalled upon said barrel eccentrically of its center of mass and enclosing a heat conserving chamber adjacent said barrel and a thermometer mounted upon said casing with the bulb thereof within said heat conserving chamber.

7. In combination a curling iron having a heated barrel, a temperature indicating device comprising a casing journalled upon said barrel eccentrically of its center of mass and enclosing a heat conserving chamber adjacent said barrel, and a thermometer mounted upon said casing and projecting from the lighter side thereof, the bulb of said thermometer being within said heat conserving chamber.

8. In combination a curling iron comprising a heated barrel, a temperature indicating device rotatably mounted on said barrel and being weighted on one side to maintain an upright position when said barrel is rotated and a curl engaging clip secured to the outer end of said barrel.

9. In combination a curling iron comprising a heated barrel, a temperature indicating device rotatably mounted on said barrel and being weighted on one side to retain an upright position when said barrel is rotated, an electric element for heating said barrel, a swivel connector conductively related to said heating element and a curl engaging clip secured to said barrel.

10. In combination a curling iron comprising a heated barrel provided with a longitudinal chamber, heating elements within said chamber, a temperature indicating device comprising a casing journalled upon said barrel eccentrically of its center of mass and enclosing a heat conserving chamber adjacent said barrel, a thermometer mounted upon said casing and having the bulb thereof in said heat conserving chamber and an aperture communicating with said heat conserving chamber and with the chamber in said barrel.

In testimony whereof I affix my signature.

FRANK M. KILLEN.