Jan. 5, 1932. P. E. GAIRE 1,839,668

HAIR TREATING APPARATUS

Filed Oct. 24, 1930

Fig. 1.

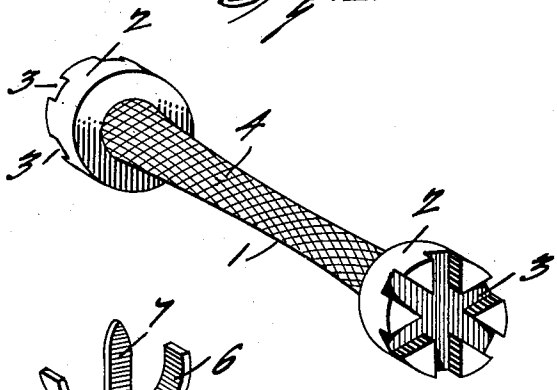


Fig. 2.

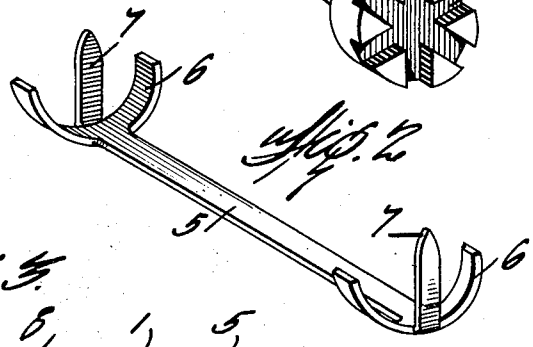


Fig. 3.

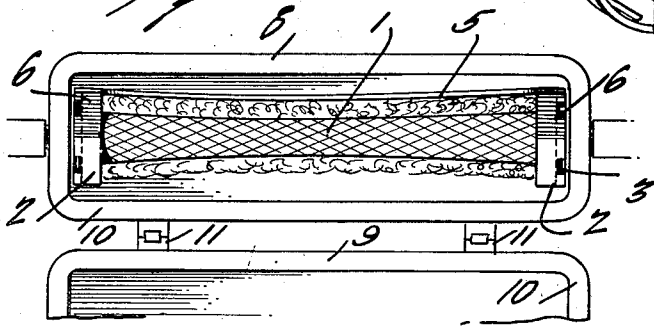


Fig. 4.

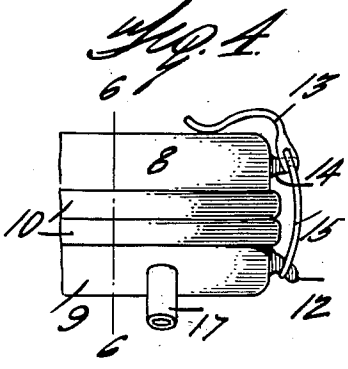


Fig. 6.

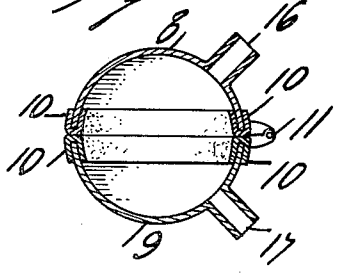


Fig. 5.



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Patented Jan. 5, 1932 1,839,668

UNITED STATES PATENT OFFICE

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HAIR TREATING APPARATUS

Application filed October 24, 1930. Serial No. 491,041.

This invention is directed to an improvement in hair treating apparatus, and particularly to the box in which the hair curled about a curling pin is subjected to the influence of the treating agent, such as steam or the like.

In boxes of this type as heretofore constructed, the curling pin on which the hair is initially curled is provided with a clamping arm carried by the pin and operating to clamp the hair when coiled on the pin in proper relation to the pin during the treating operation. The clamping arms are objectionable, in that by reason of their hinged connection with the pin they ordinarily occupy a fixed clamping relation to the pin and thus do not readily accommodate different character of hair when coiled on the pin and thereby tend to materially increase the time and labor of the operator in properly fixing the hair on the pin and in releasing the arm to permit the removal of the hair from the pin after treatment.

In the hair treating apparatus of this type, it is recognized as an essential that after the hair is coiled on the pin it must be maintained substantially in coiled relation, that is, prevented from unwinding from the pin during the treating operation and, therefore, as a matter of course, some means must be provided to accomplish this result.

The present invention, therefore, is directed to means which may be readily associated with the pin and bodily disconnected therefrom at will to hold the hair against uncoiling from the pin during treatment, the hair holding means being adapted for various positions circumferentially of the pin to insure the most effective clamping cooperation in accordance with the particular amount of hair or character of hair wound on the pin.

A further object of the present invention is the provision of clamping or hair-retaining means which, through its bodily independence of the pin, may be conveniently and quickly applied to or removed from the pin at will, thereby materially facilitating the securing of the hair in place on the pin for treatment and the separation of the hair from the coiling pin following treatment, with the effect of materially shortening the time required in these important details of the hair treating operation.

The invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a perspective view of the improved curling pin.

Figure 2 is a perspective view of the clamping member.

Figure 3 is a plan view showing the hair coiled on the pin, the clamping member in place, and the pin in one part of the sectional box, the remaining section of the box being shown in open relation.

Figure 4 is a view in elevation of the box in closed relation.

Figure 5 is a perspective view showing the box section fastening means which as understood is arranged at each end of the box.

Figure 6 is a section on the line 6—6 of Figure 4.

The invention is directed to those elements of a hair treating apparatus including a box in which is arranged a curling pin on which a strand of hair is curled and which is provided with means for retaining the hair in coiled position on the pin, it being understood that the box is subjected to the treating medium, such as steam, hot air or the like, for a sufficient length of time to fix the hair in the coiled or curled condition resultant from its winding about the pin and, of course, a number of such instrumentalities sufficient to take care of the hair of the customer are employed in each operation.

The curling pin includes a body length 1 in the form of a spindle, the diameter of which is gradually decreased from the respective ends toward the center, so that the pin in effect presents a concave appearance. The pin includes, either integrally or removably secured, disk-like terminals 2 having a diameter exceeding that of the maximum diameter of the pin and arranged concentric with the pin. The relatively outer surfaces of these disk heads 2 are formed with a series of diametric channels 3, preferably equally spaced circumferentially of the disk and opening through the end or peripheral wall thereof, as clearly shown in Figure 1.

An appropriate length of the body 1 of the

pin, either the full length or a portion thereof, is roughened or knurled at 4 to insure a more or less positive frictional engagement between the hair wound thereon and the pin body, thus permitting the hair to be wound on the pin and to remain in its wound position longitudinally of the pin without slipping or permitting the coils of the hair to work together.

It is, of course, apparent that means must be provided for fixing the hair with relation to the pin after the hair has been coiled on the pin, and while this has been heretofore arranged for by hingedly connecting a clamping arm to the pin and moving this arm into clamping cooperation with the hair, such arrangement has been found objectionable, in that it will not readily accommodate different character of hair and different lengths of hair when coiled on the pin. Furthermore, this type of clamping means requires considerable time to move to and from clamping position, particularly as it cooperates with the pin only in one plane and the hair must be coiled on the pin to this plane in order to permit effective operation of the clamping arm.

The present invention avoids these difficulties by providing a clamping member which is an independent element with respect to and wholly detachable from the clamping pin. This element includes a bar 5 of sufficient length and of such shape longitudinally as to bear on the hair coiled about the body of the pin when the clamping element is in place. The ends of the bar 5 are provided with arcuate terminals 6 which, when the bar is applied, are designed to rest upon the peripheral surface of the respective disk heads 2 of the pin, the outer edge of the terminals 6 being provided in longitudinal alignment with the bar 5 with radial sections 7 of a width and length to be more or less snugly received in a particular channel 3 on the outer surface of each disk head 2.

Thus following the coiling of the hair on the pin, which coiling, it is understood, continues until the pin is somewhat close to the head of the customer, the clamping element is applied in position to hold the hair on the pin at the particular point of the pin at which the final coil terminates. This application of the clamping element requires obviously that the element be capable of different positions circumferentially of the pin, as naturally the hair coiled thereon will not terminate at the same point on the circumference of the pin in different uses of the pin. With the capability of the clamping pin cooperating with the pin disk heads at different positions circumferentially of the pin, it is apparent that the clamping member may be applied so as to engage the hair at the terminal of the final coil on the pin by merely engaging the radial sections 7 of the clamping member in that particular recess 3 of each head which is most convenient to the desired position of the clamping element.

With the clamping element in place, it is apparent that the hair coiled on the pin is maintained in coiled position and cannot separate from the pin except following the removal of the clamping member, and as the clamping member is in its clamping relation to the pin adjustable to various positions circumferentially of the pin, it follows that the hair as applied to the pin may be clamped at its final coil no matter where such final coil may terminate circumferentially of the pin.

The pin with the hair curled thereon and the clamping member applied is to be inserted in a box formed of similar sections 8 and 9, which sections constitute similar longitudinal divisions of the elongated circular box. In order to insure non-leaking cooperation of the meeting edges of the sections 8 and 9 when said sections are arranged in box-forming relation, such meeting edges are provided with compressible gaskets 10, preferably in the form of U-shaped rubber sections, in which the edges of the box sections are inserted and by which said edges are embraced by the rubber gaskets, as clearly shown in Figure 6. The sections 8 and 9 of the box have hinged connection at 11 on one longitudinal meeting line so that the sections may be opened relative to each other for the introduction and removal of the curling pin, hair and clamping element.

The box sections are provided with means by which they may be held in box-forming relation under more or less pressure sufficient to compress the meeting surfaces of the respective gaskets 10 to insure a sealing juncture between the box sections. This holding means is arranged at the respective ends of the boxes and includes a pin 12 projecting from one section, a finger lever 13 pivotally connected to the other section at 14 and having a link 15 terminally formed at one end to engage the projection 12 and pivotally connected at the opposite end to the finger lever 13 beyond the pivotal connection of such lever with the box section. Obviously, on a movement of the finger lever in one direction, the link is bodily moved to release its connection with the projection 12, and on a movement of the finger lever in the opposite direction, the link is bodily moved to exert a binding or compressing action between the respective sections to thereby insure the sealing cooperation of the gaskets 10 and insure an air-tight juncture between the sections.

The terminal of the finger lever 13 is so shaped that when in locking or operative position it rests more or less closely against the surface of the box section to which it is connected, thereby avoiding undue obstruction. The box, or more particularly the respective

sections, is formed with means, such as indicated at 16 and 17, to provide for the introduction and escape of the treating medium, such as steam, hot air or the like.

The hair is coiled on the pins in the usual way, being prevented from casual disconnection or longitudinal movement by the roughened or knurled portion of the pin, indicated at 4. Following the coiling of the proper length of hair on the pin, the clamping member is applied, the radial projections 7 thereof being seated in the most convenient channel 3 in the disk heads, with the bar 5 of the clamping member overlying the hair and holding it more or less snugly to the pin and preventing any uncoiling movement of the pin during the subsequent operation. The box, which is open, then receives the pin and hair coiled thereon, the latter being placed loosely in the box and, of course, having an overall length convenient to this introduction. The hair extending between the coiling pin and the head of the customer rests on one of the sealing gaskets 10. The box sections are then closed and the end clamping means connected to maintain sealing engagement between the meeting edges of the box sections, following which the treating agent, such as steam, hot air or the like, is introduced into the box for the requisite time necessary to set the curl of the hair as coiled about the pin.

Following the treatment, the box is opened and the clamping member physically removed from the pin, thereby permitting the pin to be turned conveniently to remove the hair coiled thereon. Owing to the physical separation of the clamping member and curling pin and the adaptation of the curling pin to receive the clamping member at a considerable number of different positions circumferentially of the pin, it is apparent that the operation of fixing the hair on the pin or removing the hair therefrom is simply and expeditiously accomplished, thereby materially shortening the time necessary in the treatment of the hair, no inconsiderable portion of which time has been heretofore required in the operation of fixing the hair on the pin and removing the hair from the pin after treatment.

It is, of course, understood that protective pads may be clamped about the hair between the box and head of the customer to avoid unduly heating the customer's head, though this forms no material part of the invention and is more properly an adjunct of the heat treating apparatus as a whole. The entire freedom of the pin from any obstruction during the coiling or uncoiling operation incident to the complete separation of the clamping member therefrom obviously renders the necessary operations of the attendant more easily and quickly performed, with greater certainty of placement of the coils, and thus tending to a more perfect hair curling operation. Furthermore, the complete independence of the curling pin and hair-clamping member permit any one of such clamping members to cooperate with any curling pin and thus avoids the necessity of dispensing with the curling pin in the event the ordinarily hinged clamping member is displaced or out of order.

I claim:—

1. A curling pin about which the hair is curled, an element wholly separable from the curling pin for clamping the hair in position thereon, and cooperating means on the pin to support the element in a plurality of positions relative to the pin.

2. In a hair treating box, a curling pin to be inserted therein on which the hair is curled, and hair-clamping means for cooperation with said pin, said clamping means being adapted to cooperate with the pin at different positions circumferentially of the pin, and means on the pin to provide for such cooperation of the clamping means.

3. A curling pin for hair treating apparatus adapted to have the hair curled thereon, and a separable clamping member to retain the hair on the pin, said member being connectible with the pin in a variety of positions circumferentially of the pin, and means on the pin to provide for such cooperation of the clamping means.

4. A hair curling pin for hair treating apparatus including a pin body on which the hair is curled, disk heads at the terminals of the body, and a clamping member for the hair on the pin adapted to engage the said disk members.

5. A hair curling pin having disk heads formed in their outer surfaces with a plurality of radial channels, and a clamping member to overlie the hair on the pin and having terminal elements to cooperate with any one of said channels in the respective disk heads.

6. A curling pin having disk heads formed in their outer surfaces with a plurality of diametric channels, a clamping member including a bar to overlie the hair on the pin, and radial projections at the terminals of the bar to seat in any one of said channels of the disk heads.

7. A curling pin having disk heads formed in their outer surfaces with a plurality of diametric channels, a clamping member including a bar to overlie the hair on the pin, and radial projections at the terminals of the bar to seat in any one of said channels of the disk heads, said clamping member having arcuate sections to bear on the periphery of the disk heads.

8. A curling pin for use in hair treating apparatus including a pin body having the hair-receiving surface roughened, disk heads at the ends of the body formed on their outer

surfaces with a plurality of diametric channels, a clamping member including a bar to overlie and clamp the hair on the pin body, and radial projections at the terminals of said bar to cooperate with any of the diametric channels of the disk heads.

9. A curling pin for use in hair treating apparatus including a pin body having the hair-receiving surface roughened, disk heads at the ends of the body formed on their outer surfaces with a plurality of diametric channels, a clamping member including a bar to overlie and clamp the hair on the pin body, and radial projections at the terminals of said bar to cooperate with any of the diametric channels of the disk heads, said clamping member being directly supported by the peripheral surfaces of the disk heads.

In testimony whereof I affix my signature.

PAUL EDMUND GAIRE. [L. S.]