Nov. 13, 1945. J. B. PANUSHKA ET AL 2,388,797

HAIR CURLER

Filed Aug. 17, 1943

Fig. 2.

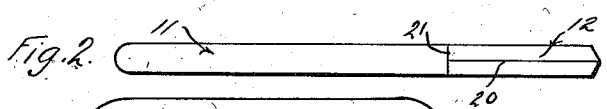


Fig. 1.

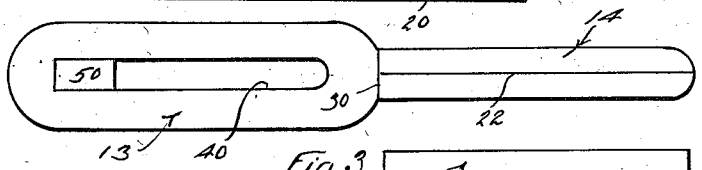


Fig. 3

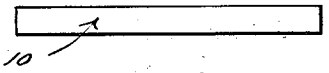


Fig. 4



Fig. 5.

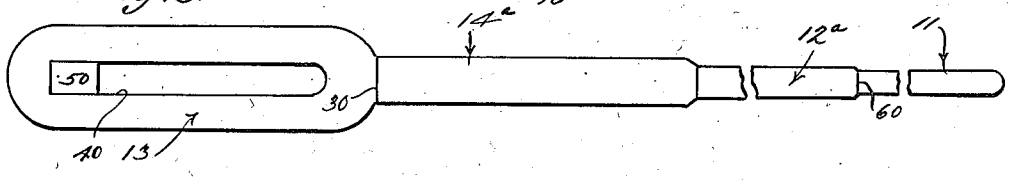
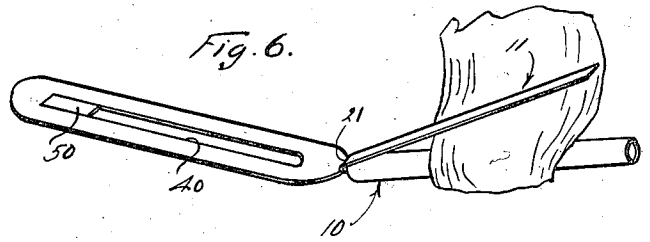


Fig. 6.



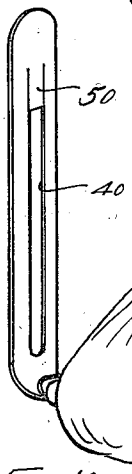


Fig. 7

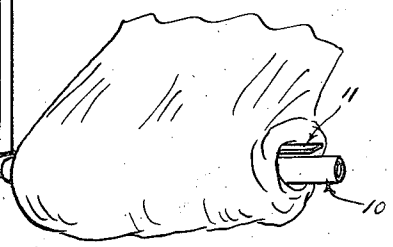


Fig. 8.

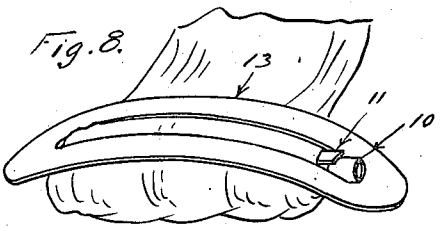


Fig. 10.

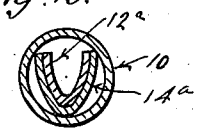


Fig. 9.

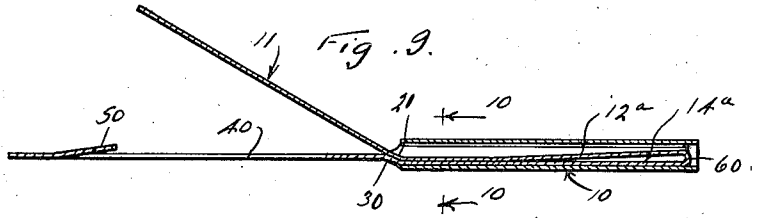
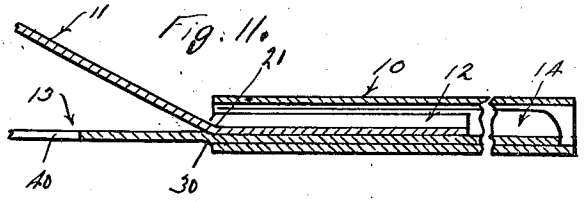


Fig. 11.



Inventors
John B Panushka
and Leonard A. Wheeler
by [signature]
Attorney

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UNITED STATES PATENT OFFICE

2,388,797

HAIR CURLER

John B. Panushka, Glendale, and Leonard A. Wheeler, Los Angeles, Calif., assignors of one-half to Robert H. Clark and one-half to William H. Maxwell, both of Los Angeles, Calif.

Application August 17, 1943, Serial No. 498,948

4 Claims. (Cl. 132—41)

This invention relates to a hair curler and it is an object of the invention to provide a simple, practical and effective device for curling hair.

Our present invention is primarily concerned with features of construction for use in hair curler made of paper, or the like, and more specifically it is concerned with features of construction applicable to curlers of the type mentioned in which there is a spindle on which the hair is to be wound, a retainer for retaining hair on the spindle as the winding operation takes place, and a fastener for securing a roll of hair on the spindle. Curlers of the general type to which our construction is applicable involve a main part of spindle around which a strand of hair is wound or rolled. To facilitate winding the hair on the spindle the curler is provided with a retaining device in the form of an arm which acts to hold a strand of hair on the spindle. A fastening device is provided to be applied after the hair is rolled onto the spindle and serves to fasten the roll so that it stays on the spindle or does not become unwound.

Our present invention is primarily concerned with features of construction for joining the spindle, the fastener, and the retainer in a hair curler of the character hereinabove referred to. By our present invention we have provided an extremely simple, inexpensive construction whereby we form the spindle separate from the other parts and then join it thereto by a very simple, inexpensive assembling operation.

An object of the present invention is to provide a hair curler construction by which the fastener and retainer of a curler of the character mentioned are connected to the spindle by means of tabs which are formed on or project from the fastener and spindle and which are received in one end of the spindle. In the preferred construction the entire device is formed of paper and the spindle is tubular in form and integral tabs are provided on the fastener and retainer to be received in one end of the spindle.

The various objects and features of our invention will be fully understood from the following detailed description of typical preferred forms and applications of the invention, throughout which description reference is made to the accompanying drawing, in which:

Fig. 1 is a plan view of the blank for forming the fastener showing it before the other parts are applied thereto and showing the fastener with a tab independent of the other parts of the device and adapted to be inserted into the inner end of the tubular spindle. Fig. 2 is a plan view of the retainer showing it independent of the other parts of the device and showing a tab on the retainer adapted to be inserted into the inner end of the tubular spindle. Fig. 3 is a side elevation of the tubular spindle showing it independent of the other parts. Fig. 4 is an end view of the spindle shown in Fig. 3. Fig. 5 is a view similar to Fig. 1 showing a form of construction in which the tabs of the fastener and retainer are joined so that the fastener, retainer and the tabs of those parts are formed of a single or integral sheet of material. Figs. 6, 7 and 8 are views illustrating the manner in which the device is used. Fig. 6 shows the end portion of a strand of hair being applied to the spindle and showing the retainer in position ready to be engaged over the end portion of the strand of hair to hold it on the spindle. Fig. 7 is a view showing the hair wrapped or rolled on the spindle and over the retainer and showing the fastener in position ready to be engaged over the roll of hair. Fig. 8 is a view showing the fastener engaged over the roll of hair and the outer end of the fastener joined with the outer end of the spindle. Fig. 9 is a longitudinal detailed sectional view of the device provided by the invention showing the parts assembled, using the construction illustrated in Fig. 5. Fig. 10 is an enlarged detailed transverse sectional view taken as indicated by line 10—10 on Fig. 9 and Fig. 11 is an enlarged detailed sectional view of a portion of a device embodying the construction shown in Figs. 1 and 2.

The curler provided by this invention involves, generally, a tubular spindle 10, an arm shaped retainer 11 for holding the end of a strand of hair on the spindle, a tab 12 on the retainer 11 to facilitate connection of the retainer with the spindle, a fastener 13 for fastening a roll of hair against displacement from the spindle and a tab 14 on the fastener 13 to facilitate its connection with the spindle 10.

The construction which we have provided is particularly applicable to hair curlers formed of paper, or the like, and although we refer to the curler as being made of paper it is to be understood that we do not wish to limit ourselves to any particular material but mean to include by the term "paper" any other like or similar sheet material that can be worked, handled, and which will operate in the manner hereinafter described. We have in mind that other sheet materials or compositions, such as sheet fibrous materials, or sheet materials of the type commonly known as plastics, may be used in carrying out the invention.

The spindle 10, in accordance with our invention, is in the form of an elongate tube round in cross section and open at its ends. The spindle may, in practice, vary in size and length as circumstances require, it being preferred for most purposes to proportion it about as illustrated in the drawing. In practice the spindle is formed of a simple, straight tube of paper.

The retainer 11 is provided as a means for retaining the end portion of a strand of hair on the spindle as the user starts to roll the hair on the spindle. The retainer 11 is preferably in the form of an arm adapted to be engaged over the end portion of the strand of hair in a manner such as is illustrated in Fig. 6. In the preferred construction we have formed the retainer 11 of a strip of paper or the like, and we form the tab 12 integral with the inner end of the retainer and shape and proportion the tab so that it will be received and retained in the inner end portion of the tubular spindle 10.

In practice various means may be employed for securing the tab 12 in the spindle. We have found it desirable in the case of the tab shown in Fig. 2, to form it somewhat wider than the opening in the spindle and to provide a longitudinal score 20 in the tab so that the tab can be bent into a U or V shape to facilitate insertion into the end of the spindle. In addition to shaping the tab to fit tight in the spindle a suitable adhesive may be applied to make it secure in the spindle.

In practice the retainer 11 is adapted to be swung or flexed from a position where it is clear of the spindle 10 and allows the hair to be readily wrapped or wound thereon, and a position where it overlies the hair to retain it on the spindle. In practice the retainer has a hinge portion 21 in its inner end formed by scoring or by making a suitable bend in the material at the point 21. It will be noted that the hinge part 21 is located where the retainer 11 joins the tab 12 and when the parts are assembled the hinge part 21 is located adjacent the inner end of the spindle 11 into which the tab 12 is inserted.

In practice the retainer 11 is made sufficiently wide and heavy to have the necessary body and it is made sufficiently long to properly serve the purpose specified.

The fastener 13 is an elongate body or sheet of paper, or the like, having the tab 14 formed integral with its inner end. The tab 14, like the tab 12, is designed to be held in the tubular spindle 10 and to that end may be proportioned so that it has to be bent or deformed somewhat in order to be inserted in the spindle. In the case illustrated a line of scoring 22 is provided longitudinally of the spindle 10 to facilitate shaping the tab 14 to enter the spindle 10. Other lines of scoring can be provided if convenient. When the device is fully assembled the tab 12 is located over the tab 14 and both are fitted in the spindle 10, as clearly shown in the sectional view, Fig. 9.

The fastener 13 is designed to be moved from a position where it projects from the inner end portion of the spindle 10 clear of the spindle to facilitate winding of hair onto the spindle to a position where it overlies the roll of hair on the spindle, as shown in Fig. 8. To facilitate this action or movement there is a hinge portion 30 at the inner end of the fastener 12 which may be formed by scoring or by suitably bending the material along the line 30. When the parts are assembled the bend or hinge line 30, which occurs where the fastener 13 joins the tab 14, is located adjacent the inner end of the spindle 10.

The fastener 13 is provided with an opening 40 designed to receive the outer end portion of the spindle 10 when the parts are in the position shown in Fig. 8. The opening 40 may be in the form of an elongated slot formed longitudinally in the sheet of material which forms the fastener 13, the slot or opening being proportioned so that the parts can be engaged or latched together in the manner shown in Fig. 8. To facilitate retaining the outer end portion of the spindle in the opening 40 we form or leave a tab 50 at the end of the opening 40 to engage and bear on the outer end portion of the spindle.

In the form of the invention employing the parts as shown in Figs. 1, 2 and 11 the retainer 11 and the fastener 13, with their tabs 12 and 14, respectively, are formed separate or independent of each other and are individually or independently inserted into the spindle 10 to form the assembled construction. Fig. 11 shows the manner in which the parts are assembled.

In the form of the invention shown in Figs. 5 and 9 the retainer 11 and fastener 13 are formed integrally or from a single sheet of material by forming them so that the outer ends of their tabs are joined. In other words, in this latter form of the invention the tab 12^a of the retainer and the tab 14^a of the fastener have their outer ends joined at 60, and when the parts are assembled the tabs are bent along the line 60 or are doubled back one over the other so that they are engaged in the spindle 10, as shown in Fig. 9.

It is to be understood that in practice the tabs of the retainer and fastener may be proportioned to fit tightly into the spindle and remain therein by reason of the fit or they may be further secured in the spindle by the application of a suitable adhesive.

From the foregoing description it will be apparent that we have provided a curler which is extremely simple to manufacture, which is inexpensive, and which is effective in operation. It is also notable that we have provided a curler by which it is practical to form the spindle of one material or one grade of material and the other parts of a different grade of material or we may even form the spindle, the retainer, and the fastener each of a different material or different grade of material.

Having described only typical preferred forms and applications of our invention, we do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to outselves any variations or modifications that may appear to those skilled in the art or fall within the scope of the following claims.

Having described our invention, we claim:

1. A device of the character described including, an open ended tubular spindle, two arms, and tabs forming integral continuations of the arms engaged in the spindle from one end connecting the arms and the spindle there being flexibility between the arms and tabs allowing both arms to be folded over the spindle.

2. A device of the character described including, an open ended tubular spindle, two arms, and integral tabs on the arms engaged in one end of the spindle connecting the arms and the spindle, the tabs being joined together and serving to join the arms to the spindle so they can be folded over the spindle.

3. A device of the character described including, an open ended tubular spindle, two arms, and

integral tabs on the arms engaged in one end of the spindle connecting the arms and the spindle so they can be independently folded over the spindle, one of the arms being a retaining arm serving to retain hair on the spindle as it is wound thereon and the other arm being movable to a position to overlie the retaining arm and serve to fasten a roll of hair on the spindle, the last mentioned arm having an opening to receive and hold the other end of the spindle.

4. A device of the character described including, an open ended tubular spindle, a retaining arm, a tab integrally joined to one end of the retaining arm and held in the inner end of the spindle so the retaining arm can be swung to overlie the spindle, a fastener arm, and a tab integrally joined to the inner end of the fastener arm and held in the said end of the spindle so the fastener arm can be positioned to overlie the retaining arm and hold a roll of hair on the spindle, the fastener arm having an opening to receive and hold the outer end of the spindle, the tabs being integrally jointed together at a point within the sprindle.

JOHN B. PANUSHKA.
LEONARD A. WHEELER.