United States Patent [19]

Prince et al.

[11] **3,791,391**

[45] **Feb. 12, 1974**

[54] **HAIR CURLER APPARATUS**

[76] Inventors: **Zodell W. Prince**, P.O. Box 94111, Houston, Tex. 77018; **Dallas D. Weatherholt**, 13207 Buxley, Houston, Tex. 77045; **Adelene Trombatore Reistino**, 1002 San Jose, Hearne, Tex. 77859

[22] Filed: **June 20, 1972**

[21] Appl. No.: **264,444**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 66,217, Aug. 24, 1970, abandoned.

[52] **U.S. Cl.** **132/39**

[51] **Int. Cl.** **A45d 2/02**

[58] **Field of Search** .... 132/139, 40, 41, 42; 206/46; 260/27 R

[56] **References Cited**

UNITED STATES PATENTS

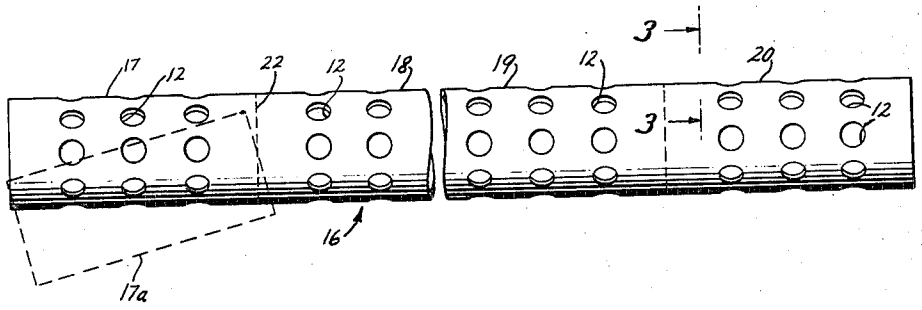
2,465,745	3/1949	Orr et al.	132/39
2,860,769	11/1958	Waller	206/46 H
2,732,845	1/1956	Winkler	132/42
2,496,566	2/1950	Szwarc	260/27 R
2,354,574	7/1944	Carson	260/27 R
2,788,788	4/1957	Solomon	132/40
2,972,994	2/1961	Ferens	132/40
3,108,604	10/1963	Krull	132/39

Primary Examiner—Louis G. Mancene
Assistant Examiner—Gregory E. McNeill
Attorney, Agent, or Firm—Carl B. Fox, Jr.

[57] **ABSTRACT**

Disposable hair curlers, made of plastic-coated paper, and intended to be disposed of after only one use. In a preferred embodiment, the curlers are supplied plurally in stick form, one curler at a time being broken from the stick of curlers for use.

5 Claims, 3 Drawing Figures



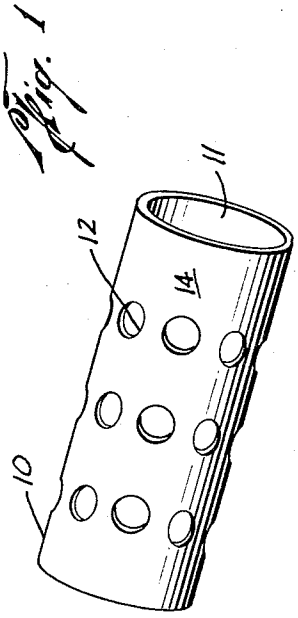


Fig. 1

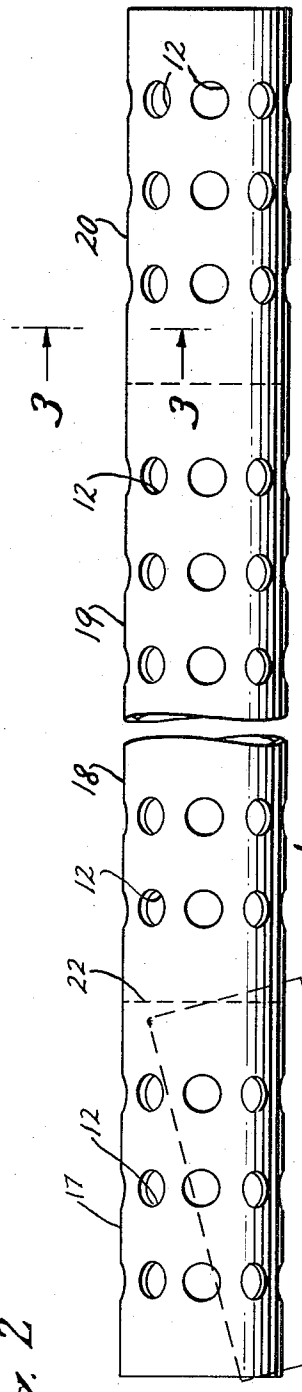


Fig. 2

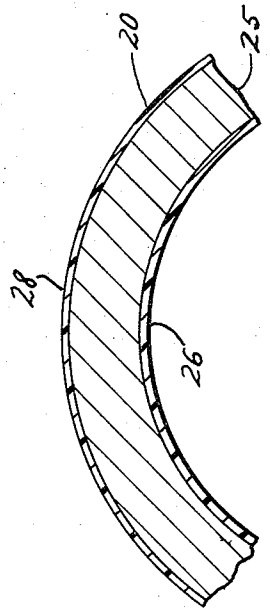


Fig. 3

Zodell W. Prince
Dallas D. Weatherholt
Adelene L. Trombatore
INVENTORS

BY Carl B. Fox, Jr.

ATTORNEY

HAIR CURLER APPARATUS

REFERENCE TO EARLIER FILED APPLICATION

This application is a continuation-in-part of U.S. Pat. application Ser. No. 66,217, filed Aug. 24, 1970 now abandoned by Zodell W. Prince, Dallas D. Weatherholt, and Adelene L. Trombatore, entitled "Hair Curler Apparatus."

BACKGROUND OF THE INVENTION

Hair curlers, or croquignole form, for use in setting and drying hair rolled onto the curlers, are conventionally of metal or plastic from suitable for use time after time. Between uses, these curlers are preferably washed or otherwise cleaned so that they will be clean for their next use. But proper cleaning of the curlers between uses is the exception rather than the rule, since beauty salons are usually busy and it is difficult to find time for cleaning of the curlers. Modern curlers are usually made of plastic instead of metal, since plastic is cheaper and curlers made of plastic are sufficiently durable for many uses. However, re-use of the curlers is undesirable unless the curlers are properly cleaned between uses.

The curlers are supplied in a variety of sizes, and in the usual salon the different sizes become mixed in a common container, so that it is difficult to find a desired size quickly. This makes it advantageous to use the curlers according to this invention, especially those supplied in stick form, as it is far easier to locate and use a curler of the desired size. If the disposable curlers according to the invention are not in stick form, they are in a supply container having therein curlers of only one size, so that a curler of a desired size can be readily located and used. In both forms, the necessity for cleaning between uses is completely avoided, as the curlers are thrown away after a single use.

In preferred form, the curlers are made of paper which is coated with plastic so that the paper will be at least somewhat water repellant and the curlers will not become overly soggy and weak, in one use of the curlers. Only a thin coating of plastic need be used. The curlers made in this manner are very inexpensive so that the cost of their use is little if any more expensive than the use of conventional curlers. Any suitable plastic or resin, or even wax, may be used for plastic coating of the curlers, the types conventionally used to coat paper plates and paper cups being suitable. knowledge of these being known in the art. Coating plastic such as polyethylene is suitable, as well as many other plastic materials.

BRIEF DESCRIPTIONS OF THE DRAWINGS

FIG. 1 is a perspective view of a single curler according to the invention.

FIG. 2 is a side elevation showing a stick of curlers, of preferred form according to the invention.

FIG. 3 is an enlarged partial cross section taken at line 3 — 3 of FIG. 2.

Other objects and advantages of the invention will appear from the drawings and from the descriptions of the preferred embodiments of the invention.

DESCRIPTIONS OF THE PREFERRED EMBODIMENTS

Referring to the drawings in detail, in FIG. 1 there is shown a single hair curler **10** according to the invention. The curler **10** is of cylindrical tubular shape and has a passage **11** therethrough from end to end. A plurality of openings or holes **12** are provided through the wall **14** of the curler, to provide for ventilation through the curler wall. The body of the curler is formed of paper, such as heavy paper or cardboard, and is coated over all of its exterior surfaces with a plastic or resin material in order that the curler is at least to some extent waterproof. The coating must be of a nature to remain solid and non-tacky when subjected to the temperatures at which hair is dried.

In FIG. 2 there is shown a stick **16** of hair curlers **17, 18, 19,** and **20.** The stick may include any suitable number of curlers to be of a length convenient for storage, handling and use. In other words, there may be additional curlers between curlers **18, 19** in the stick of curlers. The individual curlers of the stick of curlers are separated by circular lines of perforations **22,** or indentations or the like to provide break points along the length of the stick of curlers. As a curler is needed for use, it is broken off from the stick, at either end, as is indicated at **17*a***, which indicates breaking off of curler **17** from the stick of curlers **16.**

In FIG. 3 of the drawings, there is shown a partial cross sectional view, enlarged, of a wall portion of curler **20** of stick of curlers **16.** The paper wall **25** of the curler is shown to be clad or coated inwardly at **26** and outwardly at **28** with an at least partly waterproof plastic coating. The coating is continuous, preferably without breaks, to cover the entire exterior surface of the curler. Although continuous coating without breaks or gaps is preferred, it is possible to make the curlers, and sticks of curlers, of tubular paper stock which is coated before the circular lines of perforations **22** and/or the holes **12** are formed, so that the curlers and sticks of curlers would then not be coated at the perforations and around the edges of the holes. In spite of the resultant lack of complete coating, since the curlers are to be discarded after one use, the water penetration into the main wall structure would not be sufficient to weaken and spoil the curlers during use.

The lines of perforations **22,** as they have been termed heretofore, may be of any suitable nature. They may consist of any type of perforations, holes, indentations, or the like, which will provide that the curlers of a stick or curlers may be broken apart into individual curlers for use. It will be well understood that it will be much easier to handle and store the curlers in stick form, instead of in individual form, as a group of the curlers may be easily lifted and held, and neatly packed in boxes or other containers, without the awkwardness of having to hold or arrange a group of the same number of curlers in individual, loose, condition. As will be apparent, a number of sticks of plural curlers may be easily and neatly packed in a box or carton, for storage and shipment.

The paper bodies for the curlers may be made in any conventional manner, and may be coated in any conventional manner, these manufacturing procedures being well known in the papermakers art.

It is significant that the curlers according to the invention are designed for one time use, to be disposed

of after a single use, from the standpoint of sanitation. While it may at times be possible to reuse the curlers, that is not intended, and would thwart the objective of sanitation which is realized from the one time, disposable use of the curlers. The convenience of the curlers, especially when they are provided in stick form, outweighs whatever little additional cost, if any, that their use might entail. The problem of seeking a curler of a certain size, form a mixture of curlers of different sizes, is eliminated. In packing the curlers, it is possible to pack smaller diameter curler sticks inside of larger diameter curler sticks, to make the packing and shipment very compact.

While preferred embodiments of the invention have been shown in the drawings and described, many modifications of the invention may be made by a person skilled in the art without departing from the spirit of the invention, and it is intended to protect by Letters Patent all forms of the invention falling within the scope of the following claims.

We claim:

1. Multiple hair curler apparatus, comprising elongate tubular body means having plural end-to-end hair curlers formed along its length, said body means having breakable joint means between adjacent air curlers, whereby individual hair curlers may be broken from the ends of said body means and the entire length of said body means may be broken into individual hair curlers.

2. The combination of claim **1**, said body means being formed of waterproof plastic.

3. The combination of claim **1**, said body means being formed of waterproof plastic coated paper stock.

4. The combination of claim **3**, the plastic coating on said paper stock being substantially deteriorated by one hair setting use of a curler.

5. The combination of claim **1**, said individual hair curlers having wall perforations to provide ventilation during use.

* * * * *