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T. R. SNOW

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DEVICE FOR HOLDING HAIR CURLER ROLLERS

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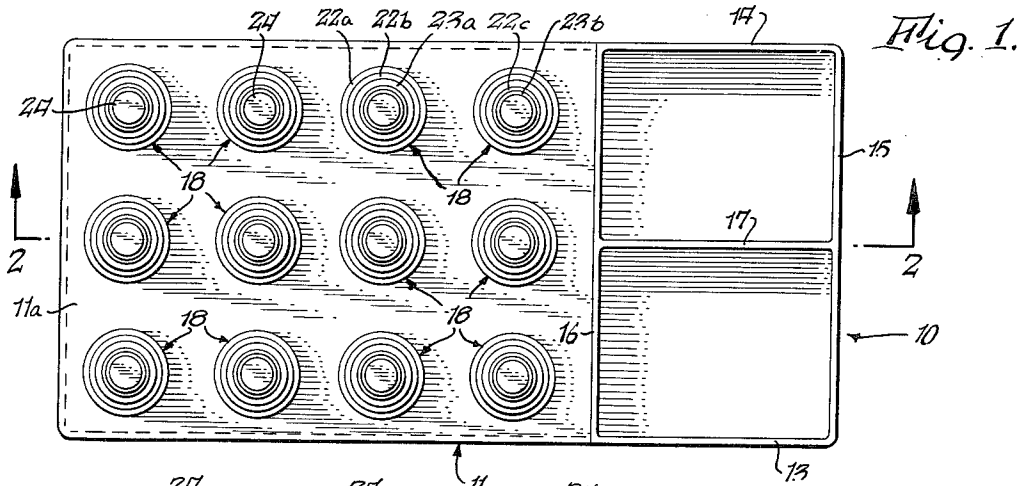
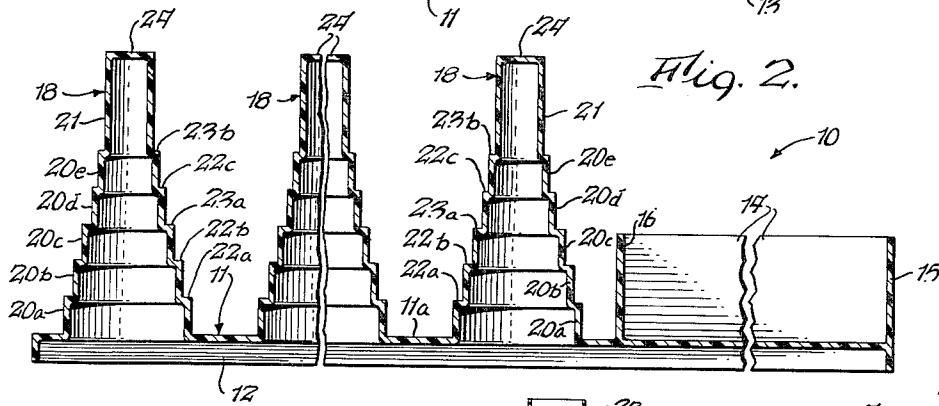
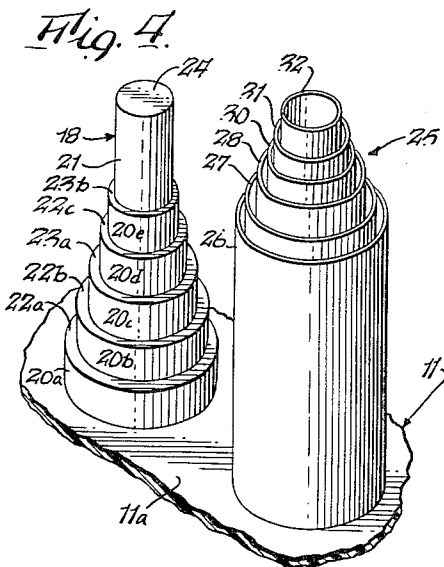
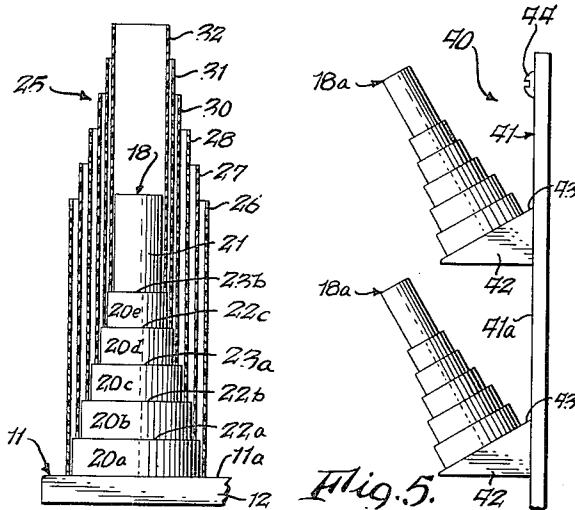


Fig. 5. INVENTOR.

Theodore R. Snow

BY

Popp and Sommer

ATTORNEYS

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DEVICE FOR HOLDING HAIR CURLER ROLLERS

Theodore R. Snow, 125 S. 7th St., Olean, N.Y.

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8 Claims. (Cl. 211-13)

This invention relates to a device for holding tubes of varying peripheries such as hair curler rollers of varying diameters in extended telescopic relation in order to facilitate access to individual rollers by the person using the same. The inventive device is equally adapted for use in either beauty shops or at home.

At present, it is customary for a person using a group of such hair curler rollers, normally six in number, to place the same on end in concentric relationship of a flat supporting surface. In a beauty shop for example, this normally would be a tray also containing the clips employed to retain the rollers in the curled or "set" hair. One important disadvantage inherent in this practice is that selection of a particular roller other than the largest of the concentric group is both difficult and time consuming. The reason for this is that the rollers are all usually of the same length and fit fairly closely within one another, in fact too close for the fingers of the user to grasp a particular inner roller, without disturbing the other rollers. Consequently, as the rollers are used to set the hair, the remaining ones are usually disarranged and in many cases tipped over. This, of course, requires periodic rearrangement of the remaining rollers both during and following use, which is a waste of time.

Accordingly, it is a primary object of the present invention to provide a device for holding one or more groups of such concentrically arranged rollers in extended telescopic relation, and thereby greatly facilitate access to individual rollers of varying diameters, as well as avoid the time consuming operations of re-arranging the rollers following use.

Another object of the invention is to provide such a roller holding device which is not only economical to manufacture, but also may be sold at low cost and is most effective for the purpose intended.

A further object is to provide such a roller holding device which may incorporate compartments for the clip normally used with such rollers.

Still another object is to provide such a roller holding device which may be mounted on a wall for ease of access and to preserve horizontal table supporting space.

A still further object is to provide such a roller holding device which is equally adapted for use in beauty shops and by the home user.

Additional objects and advantages of the invention will become apparent from a consideration of the following detailed description and the accompanying drawings wherein:

FIG. 1 is a top plan view on a reduced scale of a preferred embodiment of the inventive roller holding device, and which incorporates compartments for the clips used in conjunction with the rollers;

FIG. 2 is an enlarged fragmentary vertical sectional view taken along line 2-2 of FIG. 1;

FIG. 3 is a fragmentary side elevational view of the inventive device illustrated in FIG. 2, and illustrates one of the roller holding spindles carrying a group of hair curler rollers of varying diameters, the rollers being shown in section;

FIG. 4 is an enlarged, fragmentary perspective view of two of said spindles and illustrates one spindle without rollers and one with rollers mounted thereon, and

FIG. 5 is a partial side elevational view on a reduced scale of a modified form of the inventive device which may be mounted on a wall.

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Referring to the drawing, and particularly FIGS. 1 and 2, a preferred embodiment of the inventive device is generally indicated at 10. This device includes a generally flat base portion 11 of elongated generally rectangular plan and provided with a depending peripheral rim portion 12. At its right end, base portion 11 is provided with upstanding longitudinal side walls 13, 14 and connected at each end by upstanding lateral walls 15, 16, the latter being connected by an upstanding medial longitudinal wall 17. These various upstanding wall portions form two compartments for holding the clips (not shown) normally used with the hair curler rollers.

The larger, left end of base portion 11 is provided with a plurality of upstanding, preferably hollow spindles 18, there being twelve such spindles illustrated in FIGS. 1 and 2, but obviously the number may be varied as desired.

As also seen in FIGS. 3 and 4, spindles 18 project outwardly in spaced relation from and generally perpendicular to the left end of base portion 11. Each spindle 18 tapers inwardly toward its outer end in a series of steps. Such steps are formed by longitudinal portions 20a, b, c, d, e of generally uniform length and longer longitudinal portion 21, these longitudinal portions being severally separated respectively by lateral portions 22a, b, 23a, 22c and 23b, lateral portions 22a, b, c being of generally uniform width, and lateral portions 23a, b being of generally uniform narrower width. The outer end of each spindle 18 is preferably closed by a top wall portion 24.

It is to be noted that longitudinal portion 21 at the outer end of each spindle 18 is substantially longer than any other one of the five remaining longitudinal portions 20a-e. In fact, longitudinal portion 21 is at least twice as long as any other such longitudinal portions 20a-e for a purpose to be described in greater detail below. In addition, the two lateral portions 23a, b are each preferably $\frac{2}{3}$ as wide as any of the three remaining lateral portions 22a, b, c, also for a purpose to be described in greater detail below.

A typical group of concentric hair curler rollers is generally indicated at 25 in FIGS. 3 and 4, this group numbering six rollers of varying diameters from the largest, 26, through rollers 27, 28, 30 and 31 of intermediate sizes, to the smallest roller 32. Normally, these rollers vary only in diameters for a particular group of rollers, the length of each roller in a group usually being the same.

As will be evident from FIG. 3 in particular, the largest or outermost roller 26 rests upon the top surface 11a of the left end of base portion 11 and encloses closely, but not tightly, the lowest longitudinal portion 20a of the lowest step. The remaining rollers 27, 28, 30, 31 and 32 rest upon the corresponding lateral portions 22a, 22b, 23a, 22c, and 23b respectively of the corresponding steps. Likewise, rollers 27, 28, 30 and 31 enclose the corresponding longitudinal portions 20b-e of the corresponding steps, roller 32 enclosing the outer longitudinal portion 21.

Continuing with FIG. 3, the reason for making longitudinal portion 21 substantially longer than any other longitudinal portion 20a-e for each spindle 18 will now become apparent. Were this not done, any slight bump or jar to the group of rollers 25 would tend to knock some or all of the group off the corresponding spindle 18. However, with the substantially longer outer longitudinal portion 21, this undesirable result is avoided, since the top and innermost roller 32 is adequately supported against being knocked off its step and serves as a central support for the remaining concentrically arranged rollers of group 25.

In a typical spindle construction, such as the one illus-

trated, the various longitudinal portions 20a-e are each of approximately 1/4 inch minimum or preferably 3/8 inch in length, to permit and facilitate individual roller selection, while the length or height of the outermost longitudinal portion 21 is at least twice as long as each portion 20a-e, and preferably one inch in length. For a typical group of rollers such as the illustrated group 25, the length of each roller is about 2 11/16 inches or 2 3/4 inches. The overall height of each spindle 18 is typically 2 7/8 inches, making a spindle height to roller height ratio of at least 1 to 1, actually greater than 1 to 1. In addition, the ratio of the height of longitudinal portion 21 to the height of innermost roller 32 is 1 inch to 2 3/4 inches, over 1/2 of the inner periphery of this roller being supported against accidental dislocation from the spindle. These height ratios and especially the ratio of the height of longitudinal portion 21 to each of longitudinal portions 20a-e have been found to be quite sufficient to provide a stable support for the roller group 25, while at the same time accomplishing the desired purpose of arranging the roller group in concentric, extended telescopic relation on the various lateral step portions and around the various longitudinal step portions.

By so supporting roller group 25, each individual roller may readily be grasped by the person using such rollers, with no fumbling or segregation of rollers being required. To this end, each roller projects at least 1/4 inch or preferably 3/8 inch above the immediately surrounding roller, and this has been found to be quite adequate to permit grasping a particular roller, especially one of the inner rollers, without disturbing any of the other rollers.

With respect to the lateral portions 22a, b, c and 23a, b, these are designed to accommodate each individual roller depending upon its outer diameter. For example, in the roller group 25 illustrated, the various rollers have the following outer diameters: 26-1 1/2 inch; 27-1 3/16 inch or 1 1/4 inch; 28-1 1/8 inch; 30-1 5/16 inch; 31-1 3/16 inch and 32-5/8 inch. Each roller has a thickness of about 1/32 inch.

Thus, to accommodate this particular group, the outer diameters of longitudinal portions 20a-e and 21, reading from the base 11 towards the outer end of each spindle 18 are as follows: the lowest longitudinal portion 20a-1 5/16 inch; the next longitudinal portion 20b-1 1/8 inch; the next longitudinal portion 20c-1 5/16 inch; the next longitudinal portion 20d-1 3/16 inch; the next longitudinal portion 20e-5/8 inch, and the outermost longitudinal portion 21-1 1/2 inch. As will be evident from the above, the lateral step portions 22a, b, c are each 3/16 inch and portions 23a, b are each 1/8 inch in width.

While each of the rollers in group 25 fits snugly around the corresponding longitudinal portion 20a-e or 21, there is some slight clearance between the inner diameter of the corresponding roller and the longitudinal portion which it surrounds, in order to facilitate removal and replacement of each individual roller in its proper place on each spindle 18.

Referring now to FIG. 5, a modified embodiment of the inventive hair curler holder device is generally indicated at 40, and this modified device is designed to be mounted upon a wall, as opposed to the embodiment illustrated in FIGS. 1 and 2, the latter being designed to rest on a horizontal supporting surface such as a table, in the normal manner. The modified device 40 includes a generally flat base portion 41 provided with one or more inclined hollow shelf portions 42, (only two being shown), each of the latter preferably being in the form of a wedge or right triangle with the hypotenuse forming the inclined support surface 43 for the corresponding hollow spindle 18a. Thus, one or more spindles 18a project outwardly in spaced relation from each of shelf portions 42 and are preferably perpendicular to the inclined upper surface 43 of each shelf portion 42. Therefore, relative to the adjacent surface 41a of base portion 41, the spindles 18a are located at acute included angles of about 30 degrees each to base portion 41 in an upwardly inclined

direction, as viewed in FIG. 5. With such an angular arrangement for spindles 18a, access to each of the groups and each of the rollers held thereon is facilitated by inclining the spindles toward the hand of the user. At the same time, by the simple expedient of screws 44 or like fastening devices, the modified roller holding device 40 may readily be mounted on a wall or partition adjacent to the user, thereby freeing table space for other use. Spindles 18a are obviously of the same construction as spindles 18 and need not be further described in detail.

While either the preferred embodiment 10 or the modified embodiment 40 of the inventive device may be made of any suitable material, it is preferred that these embodiments be made of plastic material such as polyethylene or polystyrene, and which plastic material is injection molded to the desired shape, the various spindles 18 and compartments in the embodiment of FIGS. 1-4, as well as the spindles 18a and shelf portions 42 in the embodiment of FIG. 5, being molded integrally with the corresponding base portion to make a compact, inexpensive, durable, and light weight device.

From the foregoing detailed description it will now be apparent how the invention accomplishes its various objects, and the advantages inherent in such invention will likewise be evident. While the invention has been described and illustrated herein with respect to certain embodiments, it is to be understood that various changes and modifications may be made by those skilled in the art without departing from the inventive concept herein expressed, and it is further to be understood that the scope of the invention is to be determined by the appended claims.

What is claimed is:

1. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising elongated spindle means tapering inwardly toward one end in a series of steps, said steps being formed by longitudinal portions severally separated by lateral portions, the longitudinal portion at said one end being substantially longer than any other longitudinal portion.

2. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising elongated spindle means tapering inwardly toward one end in a series of steps, said steps being formed by longitudinal portions severally separated by lateral portions, the longitudinal portion at said one end being at least twice as long as any other longitudinal portion.

3. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising elongated spindle means tapering inwardly toward one end in a series of steps, said steps being formed by longitudinal portions of generally uniform length and severally separated by lateral portions, except that the longitudinal portion at said one end is substantially longer than any other longitudinal portion.

4. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising elongated spindle means tapering inwardly toward one end in a series of steps, said steps being formed by longitudinal portions of generally uniform length and severally separated by lateral portions, except that the longitudinal portion at said one end is at least twice as long as any other longitudinal portion.

5. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising a base portion and a plurality of elongated spindles projecting outwardly in spaced relation from said base portion, each of said spindles tapering inwardly toward its outer end in a series of steps, said steps being formed by longitudinal portions severally separated by lateral portions,

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the longitudinal portion at said outer end being substantially longer than any other longitudinal portion.

6. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising a base portion and a plurality of elongated spindles projecting outwardly in spaced relation from said base portion, each of said spindles tapering inwardly toward its outer end in a series of steps, said steps being formed by longitudinal portions of generally uniform length and severally separated by lateral portions, except that the longitudinal portion at said outer end is at least twice as long as any other longitudinal portion.

7. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising a generally flat base portion and a plurality of elongated spindles projecting outwardly in spaced relation from and generally perpendicular to said base portion, each of said spindles tapering inwardly toward its outer end in a series of steps, said steps being formed by longitudinal portions of generally uniform length and severally separated by lateral portions, except that the longitudinal portion at said outer end is at least twice as long as any other longitudinal portion.

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8. A device for holding tubes of varying peripheries, such as hair curler rollers of varying diameters, in extended telescopic relation, said device comprising a generally flat base portion having inclined lateral shelf portions and a plurality of elongated spindles projecting outwardly in spaced relation from said shelf portions at acute included angles to said base portion, each of said spindles tapering inwardly toward its outer end in a series of steps, said steps being formed by longitudinal portions of generally uniform length and severally separated by lateral portions, except that the longitudinal portion at said outer end is at least twice as long as any other longitudinal portion.

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CLAUDE A. LE ROY, *Primary Examiner*.

K. J. WINGERT, *Assistant Examiner*.