Sept. 16, 1941. M. KATZ 2,255,887

PAPER ROD AND THE METHOD OF CONSTRUCTING THE SAME

Filed June 29, 1939

Fig. 1.

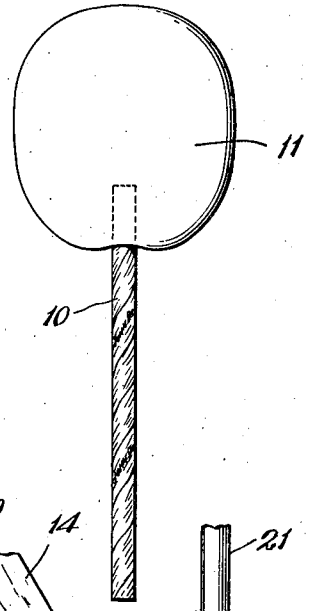


Fig. 2.

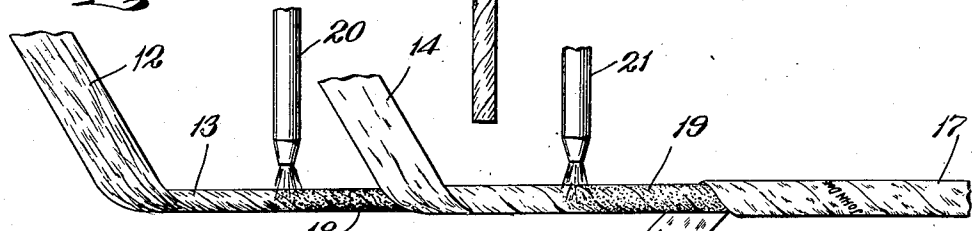


Fig. 3.

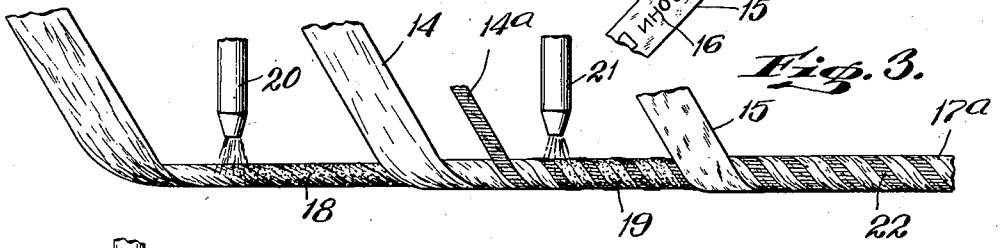


Fig. 4.

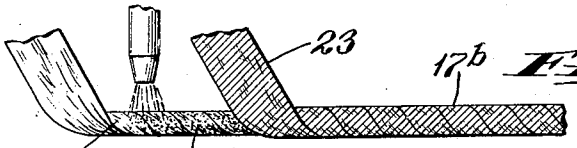


Fig. 9.



Fig. 5.

Fig. 6.

Fig. 7.

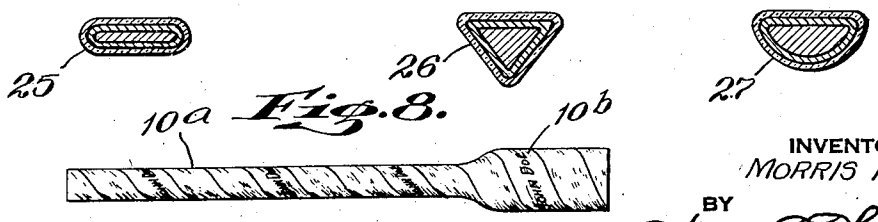


Fig. 8.

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PAPER ROD AND THE METHOD OF CONSTRUCTING THE SAME

Morris Katz, Bronx, N. Y.

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4 Claims. (Cl. 93—1)

This invention relates to what I term paper rod or what also may be referred to as paper stick, and particularly to a product of this type and kind employing an outer layer, casing or jacket of moisture-proof material, as well as having sanitary properties to adapt the same for many uses, one example of which would be in the construction of what is commonly known as lollipop sticks; and the object of the invention is to produce a product of the character described comprising a twisted paper core upon which is arranged one or more windings of paper, "Cellophane" or paper and "Cellophane," means being employed to secure and adhere the outer wrapper or wrappings upon the paper core as well as one wrapping upon the other in forming a stiff rod-like strand which may be cut into predetermined stick or rod lengths, depending upon the uses for which the resulting device is intended; a further object being to provide a product of the character described which may be of any desired cross sectional contour throughout the length thereof or of a combination of different cross sectional contours in the production of different types and kinds of rods, sticks, stirrers, agitators or the like, and with these and other objects in view, the invention consists in a device of the character described, which is constructed in accordance with the method more fully hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a diagrammatic view of a lollipop illustrating one use or adaptation of my invention.

Fig. 2 is a diagrammatic view illustrating the method of forming one type of rod or stick according to my invention.

Fig. 3 is a view similar to Fig. 2 showing another adaptation of the invention.

Fig. 4 is a view similar to Figs. 2 and 3 showing another modification.

Figs. 5, 6 and 7 are diagrammatic cross sectional views of modified forms of rods which may be employed.

Fig. 8 is a plan view of a modified form of product produced by simply flattening or reforming one end of a stick or rod of predetermined length in producing a stirrer or like implement; and

Fig. 9 is a diagrammatic cross sectional view showing another adaptation of the invention.

In the manufacture of lollipops it has been a common practice to employ wooden sticks upon which the candy body is arranged. These types of sticks have been very injurious to children and have caused many serious accidents, not only to the mouth and throat, but also to other parts of the head by children falling with the lollipop in the mouth or held in the hand. One of the features of my invention is in the production of a substitute for sticks of this type and kind which will possess all of the required stiffness and rigidity in supporting the candy body during the process of consuming the same; while at the same time presenting a stick-like body which will collapse under excessive endwise strain, thus eliminating all serious accidents of the type and kind under consideration.

Furthermore, I provide a strand which offers greater sanitary properties in the provision of a smooth glazed surface on the exterior of the stick by reason of a "Cellophane" or similar outer wrapping composed of a water-proof type of material of this kind so as to be unaffected by contact with moisture, especially in the consumption of the candy product arranged on the stick.

Still further, my improved stick structure lends itself to the application of trade names and the like upon the inner surface of the outer "Cellophane" wrap, by direct printing thereon, thus providing added commercial value to the product. These printings may also comprise verses which might appeal to a child, or may constitute floral, animal or other pictorial representations. It will also be apparent that sticks of the type and kind under consideration may be produced more economically than the common wood sticks, while at the same time adding thereto, the many advantageous features, part of which are enumerated above.

Simply to illustrate one adaptation of the invention, I have shown in Fig. 1 of the drawing a lollipop stick 10 for supporting a candy body 11 at one end thereof. At this time it will also be apparent that the sticks may be used for supporting any other type or kind of confection, including apples on the stick, the various frozen confections, and the like.

The stick 10 may be constructed in accordance with several methods, and in Fig. 2 of the drawing, one method of constructing a stick or strand of the type and kind under consideration, con-

sists in first twisting a crepe or crinkled paper strip 12, for example kraft paper, to form a twisted core 13, upon which is spirally wrapped another strip 14, over which is applied a final outer spirally wrapped strip 15. The latter is preferably composed of "Cellophane" or similar material of the water-proof or moisture-proof type.

The strip 15 may be of a transparent structure and have printed or otherwise applied on the inner surface thereof, suitable characters or symbols 16 for the purposes heretofore set forth. By arranging these characters upon the inner surface of the strip, no particular care is necessary with respect to the type of inks employed, and furthermore, the characterization becomes guarded and protected against destruction or wear. The strips are preferably processed or assembled in one continuous operation in producing the resulting strand-like product 17 which is later fashioned or cut to form stick or rod-like products, such for example, as the lollipop stick 10, Fig. 1.

The strip 14 may be a colored paper strip depending entirely upon the effect which is desired in the resulting product. On the other hand, this strip may constitute another "Cellophane" strip, in which event, it would preferably be colored to produce any desired color effect. In some instances, two differently colored strips may be employed side by side or one arranged upon the other as for example at 14a in Fig. 3 of the drawing where the narrower or tinseled strip 14a is disposed upon the strip 14. In this teaching, it will also be apparent that the strip 14 may be paper as well as "Cellophane", otherwise the teaching in Fig. 3 of the drawing is identical as that shown in Fig. 2. In both instances, a suitable adhesive is applied to adhere the strip 14 to the core 13 and the strip 15 to the strip 14. These adhesives are preferably of the non-poisonous type such for example as used on various gummed products, and may be applied directly to both surfaces of the strip 14, or as shown in the drawing, may be applied to the core 13 as shown at 18 and upon the strip 14 as shown at 19 through the medium of sprays, brushes or other applicators, as indicated at 20, 21. The only difference in the structure shown in Fig. 3 of the drawing, is that the cement or adhesive is applied also on the outer surface of the strip 14a.

The cement employed in addition to adhering or cementing the various strands one upon the other and upon the core, also gives to the resulting product 17, when dry, a stiffness and rigidity substantially equal to that of an ordinary wood stick, with the exception that insofar as strength is concerned when subjected to end-wise strains, my composite paper or paper and "Cellophane" strip will collapse when subjected to an end-wise blow, and in fact will bend when forcibly strained at any point throughout the length thereof. The cementing of the various wrappings or jackets will prevent any possible unravelling of the ends of the resulting stick, and in fact it is difficult to peel off or unravel these ends. A more or less homogeneous mass of the material results in the finished product.

In Fig. 3 of the drawing, it will be apparent that the resulting product 17a will have the narrow spirally arranged bars 22, formed by the strip 14, exposed through the "Cellophane" wrap 15, if the latter is composed of transparent material. Otherwise, these strands would be used solely for reinforcing purposes and not have the added property of producing ornamental effects. Instead of a flat strip, a round strand, commonly referred to as a tinsel, could be substituted for the strip 14a.

In Fig. 4 of the drawing, another adaptation of the invention is shown wherein a single strip 23 is spirally wound directly upon the core 18a. When using in the core a dark colored kraft paper, it is desirable to use an outer "Cellophane" strip 23 of colored material, unless it be desired to maintain the color of the kraft paper in the resulting product 17b. In the present instance, a red "Cellophane" strip 23 is shown applied to the core 18a and at 24 is shown the adhesive for adhering the strip 23 to the core also to give rigidity to the resulting product. With the structure shown in Fig. 4, the inner surface of the strip 23 may be printed in two or more colors to put any type or kind of characterizations thereon, in accordance with the teachings in Fig. 2 of the drawing. The structure shown in Fig. 4 would be primarily used in the production of a thinner resulting stick or rod. On the other hand, a larger core 18a could be used if the diameter of the stick or rod is to be maintained.

In Fig. 8 of the drawing, I have shown a slight modification in the resulting product, which consists in providing a stick or rod 10a having a flattened or enlarged end 10b at one end thereof. The stick is produced in accordance with the teachings above set forth in connection with Figs. 2, 3 and 4 of the drawing. The flattened end 10b is produced by simply applying pressure to the end of the stick before the same has become finally set or hardened. This will adapt the device as shown in Fig. 8 to the production of stirrers, agitators, or other devices used in mixing or stirring drinks, but may be used wherever rods or sticks of this type and kind are employed. On the other hand, it will be understood that the wide flattened end 10b may be used as a handle for a lollipop, or on the other hand may be used for the supporting end of the candy body 11.

It is also to be understood that in some products, two or more of the enlarged portions may be disposed at different sections or areas of a resulting device. In fact, the entire device may be shaped into an irregular or other than round cross sectional contour. For example, in Fig. 5 of the drawing, I have shown at 25 a stick of elliptical cross sectional form. In Fig. 6, I have shown a stick 26 of triangular cross sectional form, and in Fig. 7 of the drawing I have shown at 27 a stick of half-round cross sectional form. These shapes may be produced by die forming or shaping the round rod while in its soft and unhardened state. Suitable means may be provided for maintaining the shape of the product during the hardening or drying process.

In addition to producing products of the type and kind under consideration for devices such as those I have mentioned for illustrative purposes, it will be apparent that my invention deals primarily with the construction of what might be termed a paper stick or rod having the water-proof and other characteristics set forth, adapting the same for any use to which the same might be employed. In some instances, such for example in forming curtain rods and the like, center metallic cores 28 may be employed within the kraft paper core 18b as is indicated in Fig. 9 of

the drawing, upon which are arranged the wrappings *14a*, *15a* as is taught in Figs. 2 and 3, and in some instances a single outer wrapper may be employed as is taught in Fig. 4 of the drawing. In some further instances, the metal core **28** may be composed of a pliable rod or wire capable of maintaining a predetermined position when bent, thus adapting the device to other uses, while at the same time maintaining the hard or firm texture of the outer wall structure of the complete device. It will be noted that the kraft paper may be spirally wrapped upon the rigid rod or strand **28**.

As heretofore indicated, my improved moisture-proof and ornamented stick or rod may be used wherever a product of this type and kind can be practically used in replacing wood and metallic products and in producing various articles of manufacture, such for example, as curtain rods, wire garment hangers, etc. In these instances, the metallic cores may be used where added stiffness or rigidity and greater tensile strength is required.

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

1. An elongated strand-like body of rigid characteristics comprising a kraft paper core, a spiral casing arranged directly upon and adhered to the core, an outer spiral jacket arranged upon said casing and adhered thereto, said jacket being composed of water-proof material, and a metallic core element disposed and housed within said paper core.

2. An elongated strand-like body of rigid characteristics comprising a twisted paper core, a spiral casing arranged directly upon and adhered to the core, an outer spiral jacket arranged upon said casing and adhered thereto, said jacket being composed of water-proof material, and a narrow strip or strand arranged intermediate the casing and jacket in spiral arrangement with the adjacent spirals spaced one from the other longitudinally of the resulting body.

3. The herein described method of forming a rigid stick of the character described, which consists in twisting a paper strip to form a relatively thick core, spirally wrapping a casing directly upon the core with an adhesive disposed between the core and said casing, characterizing one surface of a water-proof "Cellophane" strip at predetermined intervals longitudinally thereof, spirally wrapping said "Cellophane" strip upon said casing, then drying the product thus formed to form a substantially rigid elongated strand, and then cutting the strand into predetermined stick lengths.

4. An elongated strand-like body of rigid characteristics comprising a twisted paper core, a spiral casing arranged directly upon and adhered to the core, an outer spiral jacket arranged upon said casing and adhered thereto, said jacket being composed of water-proof material, a narrow strip or strand arranged intermediate the casing and jacket in spiral arrangement with the adjacent spirals spaced one from the other longitudinally of the resulting body, a predetermined portion of said body being flattened to form a relatively wide and thin enlarged finger grip portion thereon.

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