May 14, 1968 P. E. NIMMO, JR 3,383,270

ORNAMENTAL LOOP-TYPE BOWS

Original Filed Sept. 27, 1962

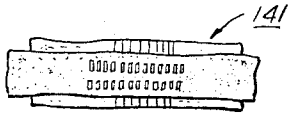


Fig. 1

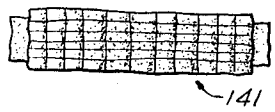


Fig. 2

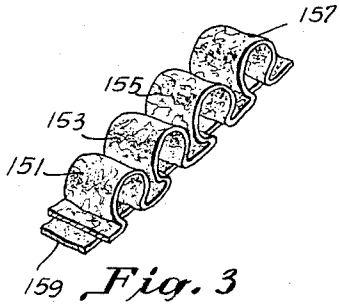


Fig. 3

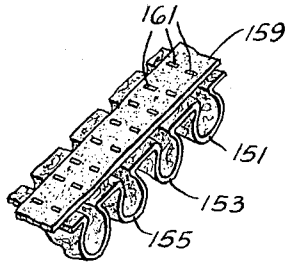


Fig 4

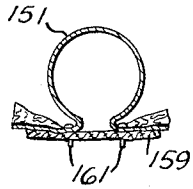


Fig. 5

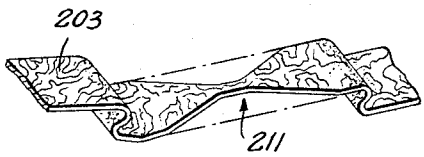


Fig. 6

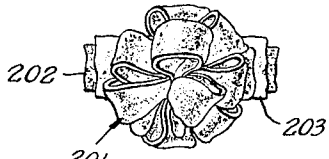


Fig. 8

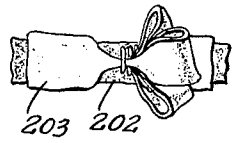


Fig. 7

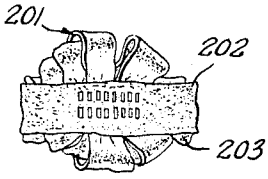


Fig. 9



Fig. 10

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3,383,270

ORNAMENTAL LOOP-TYPE BOWS

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Original application Sept. 27, 1962, Ser. No. 226,574, now Patent No. 3,318,497, dated May 9, 1967. Divided and this application Aug. 24, 1966, Ser. No. 574,829

6 Claims. (Cl. 161—10)

ABSTRACT OF THE DISCLOSURE

The invention relates to a permanent type bow of relatively high configuration retention. The bow is predicated on the use of loops formed in a ribbon in such manner as to impart resiliency thereto so that it will spring back to original shape after deformation. A backing strip of relatively stiff material comprises the base of the bow and a strip of ribbon of resilient material is fastened to the backing strip, then looped once, fastened again to the backing strip, looped a second time, fastened again to the backing strip until the requisite number of loops, e.g. 9, have been formed and attached to the backing strip. Thus, it may be seen that the fastening means, which may comprise staples, are equal in number to the number of loops plus one and each loop is anchored on both sides thereof. The number of loops is sufficient to provide touching relationship between the loops, which extend radially outwardly of the backing strip. The loops are simple, i.e. not convoluted or twisted, such that their lower extremities face each other. A modification relates to a bow of the same general formation except that the ribbon is notched at spaced apart positions therealong and the weakened or notched ribbons are fastened or stapled at incrementally spaced apart positions along the backing strip forming loops between the notches. These loops are arranged in haphazard form to comprise the pompon or corsage type bow. A substantially circular bow may be obtained by spacing the fastening means very close together, and an oval bow is made by spacing the staples or fastening means further apart to extend the length of the bow.

The present invention relates generally to the art of looping and in particular to ornamental bows of various types, as well as spaced-apart loops fixed to display cards for packaging purposes.

This application is a divisional application of Ser. No. 226,574 filed Sept. 27, 1962, now Patent 3,318,497, entitled "Loop-Making Apparatus and Method" by the same inventor.

With the ever-increasing cost of labor, it is desirable to automate the production of decorative adjuncts, which ordinarily require costly artistic skill to produce. This makes available a supply of bows at reasonable cost to professional wrappers, as well as to the expanding "do it yourself" market.

The present invention improves over the prior art in the provision of new type loop bows which are readily fabricatable from a ribbon and backing strip supply, a completed loop or bow or series of loops or bows without manual supervision or human intervention.

In accordance with this invention, a number of different type configurations may be produced, including the tailored bow, rondo loop, the pompon and corsage style bows and other miscellaneous type bows which are formed from loops. The principles of the invention permit application to form large bows or small bows, oval shaped bows and even circular bows when the so called tailored bow is modified.

In producing the bows of the invention, a decorative ribbon, preferably of a flat, flexible strip form is caused to be looped upon and secured to a backing strip of somewhat stiffer material, such as cardboard or the like. The ribbon and backing strip are advanced together through a fastening station, at which point the ribbon is gripped or arrested in movement and the backing strip backed off to loop the ribbon upon itself. This loop is then secured to the backing strip, as by fastening or stitching means such as a staple, and the looping step repeated, except that the succeeding anchor position is displaced relative to the initial anchor position by, e.g., 1/32 of an inch, to preclude pile-up of fastening elements and to permit the fabrication of sequential loops. This process is repeated up to a dozen or more times to produce a series of loops affixed to one area or length of the backing strip, thereby forming a single bow.

In the automatic bow-forming sequence the next looping step is omitted leaving a void and another bow formed in the manner of the first, such that the product emerging from the machine may comprise a plurality of spaced-apart bows affixed to a common backing strip. Any number of such bows may be automatically severed for packing or, in fact, severing may occur between individual bows, if such is the desired packing approach.

The process for producing the foregoing described basic or tailored bow is readily alterable to provide the rondo or packaging arrangement. It is necessary to provide fastening means at spaced apart positions in pairs for each loop in order that the mouth or opening of the loop may be adjusted or widened to permit disposition of the product along the strip or backing card and to permit resiliency in the gripping force applied by the loop to the product to be retained. This is achieved by a fastening operation in the cycle immediately prior to and following looping. Also the strip is advanced the desired length by a forward stroke, then it is retracted by a shorter effective stroke, thereby spacing the anchoring positions and partially opening the loops. Also, one or more looping steps is omitted between the forming of the rondo loops, thereby advancing the strip and ribbon between loops in order to space the products to be packaged for display.

A further species of highly ornamental bow includes those that are formed from ribbon that is notched in the vicinity of the individual loop anchor points to provide a random-like loop distribution in any given bow. The pompon and corsage type bows are typical examples in which the step of notching is performed prior to the step of securing the ribbon to the backing strip to permit the loops to fall in haphazard manner. To facilitate this loop deployment, a wire brush or the like may be used to fluff or disperse the individual loops as they are anchored to the backing strip.

With the foregoing in mind, it is an object of this invention to provide novel loop-type bows.

A further object is a provision of bow construction susceptible to automatic production;

These and other objects and advantages of this invention will become further apparent to those skilled in the art from the following detailed description of certain embodiments thereof when taken in light of the accompanying drawing in which:

FIGS. 1 and 2 show a typical tailored bow as viewed from the bottom and top respectively;

FIGS. 3, 4 and 5 show a perspective view of a series of the rondo loops, as viewed from the top and bottom along with a suitable cross-sectional view of one loop in detail;

FIGS. 6, 7, 8 and 9 show in persepctive various views of the material as it is formed into a pompon type bow;

FIG. 10 is a schematic arrangement, in side elevation, of a tailored bow for use in connection with the description of the figures appearing on the same sheet.

A typical tailored bow **141** is shown in plan in FIG. 2, as having eleven loops. The bottom of this bow is shown in FIG. 1 where the twelve fasteners or staples are apparent, showing that each bow has one more fastener than loops.

Rondo or packaging loops, are illustrated in FIGS. 3, 4, and 5. The principal difference in the manufacture of packaging arrangements over bows is the fact that a spacing is established between successive loops rather than between bunches of loops. Also, frequently it is desirable to leave the loops partly open where they join the base strip in order to conserve looping material and provide larger loops.

In FIG. 3, a series of loops **151**, **153** and **157** are affixed to a backing strip **159** in spaced-apart relation. FIGS. 4 and 5 show the staples **161** fastening the loops to the backing strip **159** in pairs per loop. This, of course, is analogous to the use of a staple prior to the initiation of a bow and following the formation of the last loop of the same bow.

FIGS. 6 through 9, show the essentials to the formation of a pompon bow, as depicted at **201**. The ribbon **203** as shown in FIG. 6 is suitably notched, for example by a die resembling opposed truncated triangles such that the anchor area **211** represents the weakest point of ribbon to permit the loops to fall in haphazard arrangement.

This is better seen in FIG. 7 where a few loops are shown stapled to the backing strip **202**. Since notching occurs independently of the back strip **202** and its path of travel, more latitude is available for the time of operation of a notching station. Obviously, it cannot be done when the ribbon **203** is being advanced to provide material for a loop but can be effective any time during the reverse stroke. Consequently, the station is cyclically operable in a sequential manner, once for each loop with one additional notch provided per bow.

Conventional reciprocating air cylinder drives, notching devices, stapling machines and cutters are available for use in constructing a machine to make bows in accordance with the present invention. Suitable speeds for the reciprocating air cylinders have been found to be in the order of three to four strokes per second, each of an adjustable 4 to 5-inch length. A stitcher with a capacity of 200 or more stitches per minute is sufficient to cooperate with such an air cylinder driving means to fabricate some 350–700 bows per hour, such bows having 12 or more loops each. The speed of the notcher in the embodiments for fabricating the pompon bow and the like should, of course, be approximately ½ that of the air cylinder and the cutter's speed need be only sufficient to sever individual bows or pluralities of bows, as desired for packing. Commercial control means, such as timers or sequencers, are readily available which enables the cycles described, and which will even accommodate a range of 1 to 400 loops per bow. For example, microswitches (not shown) may serve as reversers. Such switches or solenoids may cycle the notcher and stapler under control of the timer.

Although the invention has been described with respect to specific or preferred embodiments, it will be apparent that many other modifications can be made without departing from the scope of the principles disclosed. Accordingly, it is desired that the invention be limited only by the scope of the appended claims wherein:

What is claimed is:

1. A permanent type corsage bow of relatively high configuration retention comprising in combination a backing strip of stiff material; a strip of ribbon of resilient material notched at spaced apart intervals throughout its length; a plurality of stitching means permanently anchoring the notched areas of the ribbon to the backing strip at incrementally spaced positions along the strip to provide loops between the notches; said loops being arranged in a haphazard random fashion and extending radially outwardly of the strip in sufficient numbers to provide touching relationship between the loops; each of said loops having a common inner surface with the ends of each loop

adjacent the backing strip having opposed inner faces comprising the inner surface; said plurality of stitching means being at least equal in number to the number of formed loops; and said bow being characterized by a length exceeding its width.

2. A permanent type pompon bow of relatively high configuration retention comprising in combination a backing strip of stiff material; a strip of ribbon of resilient material notched at spaced apart intervals throughout its length; a plurality of stitching means fixedly anchoring the notched areas of the ribbon to the baking strip at incrementally spaced positions along the strip to provide loops between the notches; each of said loops having a closed inner surface folded upon itself with the portions thereof adjacent the backing strip facing each other; said plurality of stitching means being at least equal in number to the number of formed loops; said loops being in touching relation and arranged in a haphazard random fashion; and said bow being characterized by a length approximately the same as its width.

3. A permanent type tailored bow of relatively high configuration retention comprising in combination a backing strip of stiff material; a strip of ribbon of resilient material; a plurality of stitching means fixedly anchoring the strip of ribbon in spaced apart positions along the backing strip to form loops in the ribbon; said loops being arranged in touching relation in a semi-oval configuration relative to the backing strip through incremental spacing of the loops thereof; each of said loops being closed upon itself without any twisting of the ribbon; and said plurality of stitching means being at least equal in number to the number of formed loops plus one.

4. A permanent loop-type bow of relatively high configuration retention comprising, in combination a strip of ribbon of resilient material; a backing strip of stiff material; a plurality of staples attaching the ribbon to the backing strip at incrementally spaced positions therealong with the ribbon forming loops between adjacent staples; said loops forming a semi-oval configuration with the loops being in touching relation; each of said loops being closed upon itself without twisting the ribbon; and said plurality of staples being equal in number to the number of formed loops plus one.

5. A permanent type bow of relatively high configuration retention comprising, in combination a backing strip of stiff material; a strip of ribbon of resilient material; a plurality of fastening means fixedly attaching the ribbon to the top of the backing strip in incrementally spaced apart positions relative to the backing strip to form a sufficient number of contiguous loops of ribbon extending radially outwardly from the backing strip to provide touching relationship between the loops; each of said loops having face to face opposed lower extremities; and said plurality of fastening means being at least equal in number to the number of formed loops plus one.

6. The bow of claim 5 wherein said backing strip is of the order of the length of the bow and the ends of said strip of ribbon lie flat against and substantially cover the ends of the backing strip.

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