

not be limited to the apparatus and procedures described herein, but rather by the apparatus and methods described by the language of the claims, and their equivalents.

For example, the compressible and pliant material layer on the core tubes of the winding mandrel may also be used to facilitate the formation of a coreless roll of pressure sensitive adhesive tape using a level winding technique, rather than a concentric winding technique. In this instance, the adhesive liner on the tape strip being wound is sufficiently long to mask adhesive on the first pass of the level winding process, which defines the innermost spiral wrap on the tape roll ultimately formed thereby.

It is also contemplated that tape rolls be formed with no tape tab portion. In this instance, the cut-off and winding assembly is controlled to sever the advancing tape strip at the leading lateral edge of the liner/tab, thereby placing no liner/tab material on the trailing edge of the severed tape strip which is ultimately wound as the outermost wrap and edge of a finished tape roll. Thus, all of the liner/tab is used to form the liner of the tape roll being wound on the winding mandrel.

In another embodiment, a small lateral strip of the leading edge of a tape roll being wound on the winding mandrel is bent back upon itself as it is wound around the winding mandrel. As that bent-over lateral strip is wound about the winding mandrel, it then first engages the adhesive of the advancing tape strip. Thus, the leading edge itself is not exposed, but rather sandwiched and secured between the first and second innermost wraps of the tape roll being formed. This arrangement thus reduces the possibility that an underlapping portion of the leading edge is unadhered and thus prone to catch and become inadvertently peeled from the tape roll.

Although discussed primarily above in the context of pressure sensitive tape having adhesive on one side thereof, with the adhesive being wound on the inner side of the tape windings, it is contemplated that the inventions defined herein are applicable to form coreless rolls of tape wound in an opposite configuration (with the adhesive side facing out), as well as to form coreless rolls of pressure sensitive adhesive tape transfer materials and doublesided pressure adhesive tape. It is understood that the winding of coreless tape rolls with the adhesive side facing away from the winding mandrel winding axis will result in some different process considerations. For instance, when a liner is provided which masks the adhesive on the innermost wrap of such tape, the adhesive on the tape will not engage successive windings thereof until the initiation of the third wrap of tape about the winding mandrel. Thus, it will be necessary to maintain the increased tension on the tape as it is wound for two initial wraps about the winding mandrel in order to cinch the tape about the winding mandrel using its own adhesive. In that regard, the roller and O-rings on the cut-off and winding assembly must necessarily be release coated or formed of a suitable material (i.e., silicone rubber) because they will be contacting the adhesive bearing side of the tape. Because the adhesive is on an opposite side of the tape, the tail-winder assembly **308** must be reconfigured, since there would be no adhesion of the severed tape to the anchor plate, but rather to the pinning bar **342**. Further, because the outermost wrap of a finished tape roll would have its adhesive on its outer surface, the length of the liner/tab may be extended so that the segment thereof which previously formed the tape tab portion is long enough to extend about the entire outermost wrap of the finished tape roll, thereby masking exposed adhesive thereon. Pressure sensitive adhesive tape wound with its adhesive side out requires no liner

on the innermost wrap to prevent adhesive from engaging the winding mandrel, since the nonadhesive side of the tape faces the winding mandrel. Thus, it is contemplated that no liner be provided for the innermost wrap, in which instance the adhesion by wrapping about the winding mandrel would begin with the second wrap. If a liner/tab is provided, the liner/tab may be severed at its trailing lateral edge by the cut-off and winding assembly and serve only to mask the outermost wrap of a finished tape roll, rather than as a liner for an innermost wrap.

What is claimed is:

1. A liner/tab combination for masking the trailing edge of a first roll of pressure sensitive adhesive tape and the leading edge of a second, successively formed roll of pressure sensitive adhesive tape, the liner/tab combination comprising:

a first segment and a second segment severed from a single masking sheet adhered to the adhesive side of a length of pressure sensitive tape prior to winding the tape upon itself, with the sheet adhered thereto being laterally severed into the first and the second segments, with the first segment defining a mask for the outermost end of the first roll of tape and the second segment defining a mask for the first wrap of the second, separate roll of tape, wherein the first segment masks all adhesive on the outermost end of the first roll of tape, and the second segment masks all adhesive on the innermost end of the second roll of tape.

2. The invention of claim **1**, wherein the tape is wound upon itself about an axis, and the adhesive side of the tape faces the axis.

3. The invention of claim **1** wherein the first and the second segments have a lateral width equal to a lateral width of the pressure sensitive adhesive tape.

4. The invention of claim **1** wherein the first and the second segments have an exposed surface facing away from the adhesive side of the pressure sensitive adhesive tape, with the exposed surface of the first and the second segments being free of adhesive.

5. The invention of claim **1** wherein the first and the second segments have an exposed surface facing away from the adhesive side of the pressure sensitive adhesive tape, with the exposed surface bearing visually perceptible indicia.

6. The invention of claim **1** wherein the first and the second segments have an adhered surface facing the adhesive side of the pressure sensitive adhesive tape, with the adhered surface bearing visually perceptible indicia thereon.

7. The invention of claim **1** wherein each roll is free of an inner core.

8. The invention of claim **1** wherein the second segment longitudinally masks an adhesive bearing portion of the innermost end of the second roll of tape which portion would have been exposed without the second segment.

9. A liner/tab combination for masking the trailing edge of a first roll of pressure sensitive adhesive tape and the leading edge of a second, successively formed roll of pressure sensitive adhesive tape, the liner/tab combination comprising:

a first segment and a second segment severed from a single masking sheet adhered to the adhesive side of a length of pressure sensitive tape prior to winding the tape upon itself, with the sheet adhered thereto being laterally severed into the first and the second segments, with the first segment defining a mask for the outermost end of the first roll of tape and the second segment defining a mask for the first wrap of the second, separate roll of tape, wherein: