Aug. 5, 1969 B. D. MORGAN 3,459,626

LABEL CARRIER AND RELEASE LAMINATE

Filed Nov. 6, 1964

FIG. 1

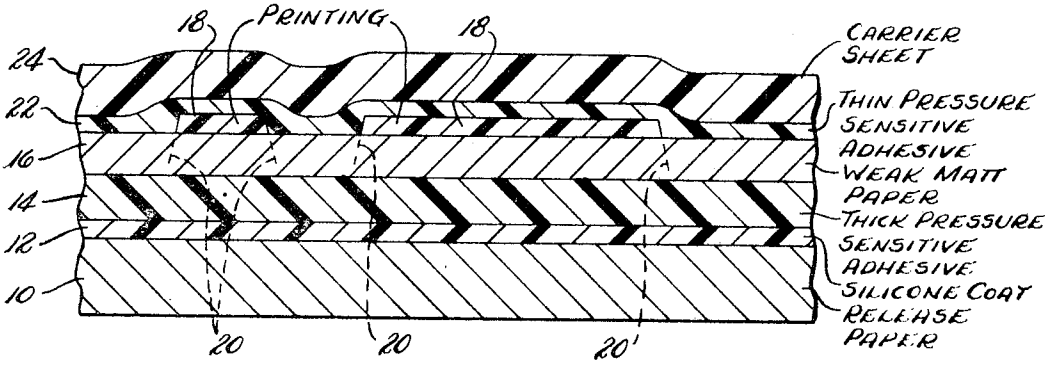
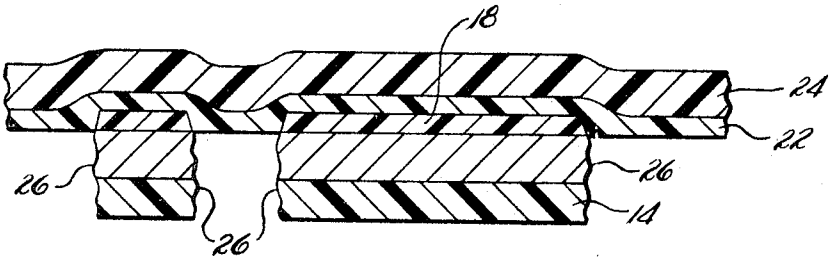


FIG. 2



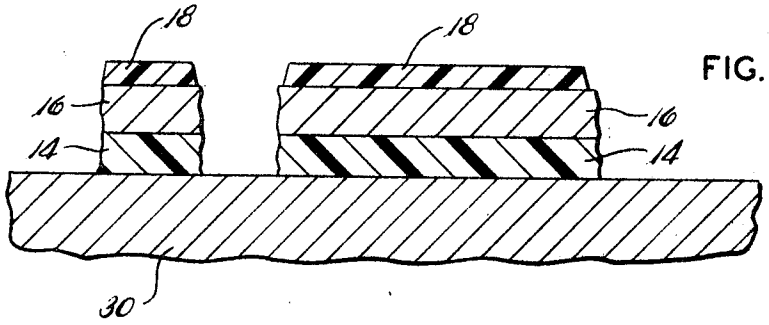


FIG. 3

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LABEL CARRIER AND RELEASE LAMINATE

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ABSTRACT OF THE DISCLOSURE

The laminate includes a relatively thick layer of pressure sensitive adhesive on a release paper, a layer of a relatively weak paper on the relatively thick adhesive layer, printing on the paper in selected areas impregnating and strengthening the paper in such areas, a relatively thin layer of pressure sensitive adhesive covering the printing and engaging the paper between local printed areas and a top carrier sheet. In use, the paper fractures and adheres to the release paper between the printed areas so that the printed areas can be adhered by the relatively thick layer of pressure sensitive adhesive onto a desired deposit area.

This invention relates to a laminate including pressure sensitive adhesive and of a character adapted to facilitate the positioning on a desired surface or surfaces of a plurality of separate labels, numbers, or other insignia which have been printed.

It is the general object of the invention to provide a label carrier and release laminate in which separately printed labels, letters, numbers, or the like, can be applied by means of pressure sensitive adhesive in properly spaced relation on a base or bases.

Another object of the invention is the provision of a laminate of the type described wherein printed insignia, such as a plurality of separate letters can be individually and properly spaced but simultaneously applied to a base, for example, a window to provide an advertising or similar message or sign.

Another object of the invention is the provision of a laminate, such as described, whereby a plurality of separate labels can be simultaneously applied by pressure sensitive adhesive to a plurality of spaced separated articles.

The foregoing objects of the invention, and other objects which will become apparent as the description proceeds, are achieved by providing a label carrier and release laminate including a bottom layer of release paper having a silicone treated upper surface, a relative thick layer of pressure sensitive adhesive on the release paper, a layer of relative weak mat paper on the relatively thick adhesive layer, nitrocellulose lacquer printing on the matt paper in selected areas impregnating and strengthening the matt paper in those areas, a relatively thin layer of pressure sensitive adhesive covering the printing and engaging the matt paper between the printed areas, and a top carrier sheet secured to the thin layer of adhesive, the combination being characterized by the matt paper fracturing and carrying with the release paper between the printed areas upon removal of the release paper leaving the printed areas with the pressure sensitive adhesive thereon on the carrier sheet so that the printed areas alone can then be pressed against a base and the carrier sheet stripped from the printed areas.

For a better understanding of the invention reference should be had to the accompanying drawings wherein:

FIGURE 1 is a fragmentary cross sectional view on an enlarged scale of a laminate incorporating the features of the invention;

FIGURE 2 is a view of the laminate of FIGURE 1, still in cross section, but with the release paper and associated parts removed to prepare the laminate for the application to a base or bases of the separately printed labels or insignia; and

FIGURE 3 is a view still in cross section but illustrating the separate labels or insignia now applied by pressure sensitive adhesive to a base.

In the drawings, the numeral **10** indicates generally a release paper of a usual type and thickness, for example a kraft paper having a thickness of .005 inch. The upper surface of the release paper **10** is treated with a thin coat **12** of silicone base material, for example .00035 inch thick for facilitating the separation of the release paper **10** from the pressure sensitive adhesive incorporated in the laminate.

Layer **14** of the laminate is a relatively thick coating of pressure sensitive adhesive of known and conventional type. For example, this coating can be .002 inch thick.

On top of the coating **14** of pressure sensitive adhesive is a layer **16** of a relatively weak matt paper, usually between about .002 and about .004 inch. This matt paper layer **16** is made, for example, of half strength having a greater amount of filler, such as talc therein. The layer **16** of weak matt paper is of sufficient strength so that it can be handled in the laminating operation, but is relatively weak so that it can be torn or fractured in the manner hereinafter more specifically set forth.

The layer **16** of weak matt paper has printed theron at **18**, specifically with nitrocellulose lacquer in one or more colors the desired labels or other insignia. The printing impregnates down into the weak matt paper to some extent, for example as indicated by the dotted lines **20**, to thereby strengthen the matt paper in the areas immediately beneath the printing.

Positioned on top of the printing **18** and extending over the surface of the printing and over the unprinted surface of the layer **16** of weak matt paper is a relatively thin coating **22** of pressure sensitive adhesive of conventional type, for example a thickness of .0005 inch. Secured to the top of the coating **22** of pressure adhesive is a carrier sheet **24** of paper or plastic, for example having a thickness of between about .002 and about .004.

The laminate described can be made up with conventional methods and apparatus, the printing **18** being applied to the layer **16** of weak matt paper either before it is incorporated into the laminate or after the layer **16** of matt paper has been applied to a base portion of the laminate comprising the coating **14** of pressure sensitive adhesive the silicone coating **12** and the release paper **10**. In the event of the second procedure described, after the printing **18** has been applied to the upper surface of the layer **16** of matt paper as it is carried on the base portion of the laminate the final coating of pressure sensitive adhesive **22** and the carrier sheet **24** are applied on top to complete the laminate of FIGURE 1.

Now in the use of the laminate of FIGURE 1 when it becomes advisable to apply the printing **18** of the labels or other insignia to a base the release paper **10** is stripped away from the back or underside of the laminate and this carries with the release paper the silicone coating **12** and all of those portions of the coating **14** of pressures sensitive adhesive and those portions of the layer **16** of the weak matt paper between the printed labels or insignia. This results from the fact that the matt paper adheres to the thicker coating **14** of pressure sensitive adhesive more strongly than it adheres to the thinner coating **22** of pressure sensitive adhesive and the matt paper fractures entirely around each printing area. The result is a laminate as it appears in FIGURE 2 wherein the fracture lines of the layer **16** of weak matt paper are indicated by the numerals **26**, with these fracture lines extending down into the coating **14** of pressure sensitive adhesive. Thus separate printed labels or other insignia are now carried in spaced relation by the relatively thin

coating **22** of pressure sensitive adhesive all supported on the carrier sheet **24**. It should be understood that the adhesion between the areas of printing **18** and the relatively thin coating **22** of pressure sensitive adhesive is greater than the adhesion between the thicker coating **14** of pressure sensitive adhesive and the silicone release coat **12** carried by the release paper **10**.

With the laminate now appearing as shown in FIGURE 2 it is a simple matter to apply the printed insignia to a base **30** in spaced relation as shown in FIGURE 3 whereupon the carrier sheet **24** and its adherent coating **22** of pressure sensitive adhesive are stripped away to leave the printed insignia in the desired spaced relation on the base **30** and held thereon by the portions of the coating **14** of pressure sensitive adhesive beneath the printing **18**.

With the laminate of the invention printed labels can be applied to the tops of a plurality of bottles positioned in a case, to a plurality of boxes, or the like. Again, separately printed letters, numerals, forming appropriate advertising or identification can be applied in the desired spaced relation to a window or other base to deliver a desired message or identification.

While a certain representative embodiment and details have been shown for the purpose of illustrating the invention, it will be apparent to those skilled in this art that various changes and modifications may be made therein without departing from the spirit or scope of the invention.

What is claimed is:

1. A label carrier and release laminate including a bottom layer of release paper having a silicone-treated upper surface, a relatively thick layer of pressure sensitive adhesive about .002 inch thick on the treated surface of the release paper, a layer of relatively weak matt paper on the relatively thick adhesive layer, a nitrocellulose lacquer printing impregnating the matt paper in selected areas with the matt paper strengthened in those areas by the absorbed printing, a relatively thin layer of pressure sensitive adhesive covering the printing and engaging the matt paper on all unimpregnated portions, and a top carrier sheet secured to the thin layer of adhesive, which is characterized by the matt paper separating at the boundaries between the impregnated and unimpregnated areas thereof so that only the unimpregnated areas are carried with the release paper upon removal of the release paper, leaving the impregnated areas with the thick layer of pressure sensitive adhesive thereon on the carrier sheet so that the impregnated areas alone can then be pressed against a base and the carrier sheet stripped from the impregnated areas.

2. A label carrier and release laminate including a bottom layer of release paper having a release treated upper surface, a layer of relatively thick pressure sensitive adhesive about .002 inch thick on the treated surface of the release paper, a layer of relatively weak matt paper on said adhesive layer, a nitrocellulose lacquer printing impregnating the paper and being absorbed in selected areas with the absorbed printing strengthening the paper in those areas, a thin layer of pressure sensitive adhesive about .005 inch thick covering the printing and engaging the paper between the printed areas, and a top carrier sheet secured to the thin layer of adhesive the paper being adapted to tear at the edges of the impregnated areas and carry the unimpregnated areas with the release paper upon removal of the release paper, leaving the impregnated areas with the relatively thick pressure sensitive adhesive layer thereon on the carrier sheet so that the impregnated areas alone can then be pressed against a base and the carrier sheet stripped from the impregnated areas.

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U.S. Cl. X.R.

117—3; 156—230, 239; 161—165. 406