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LABEL-RECEIVING CONTAINERS

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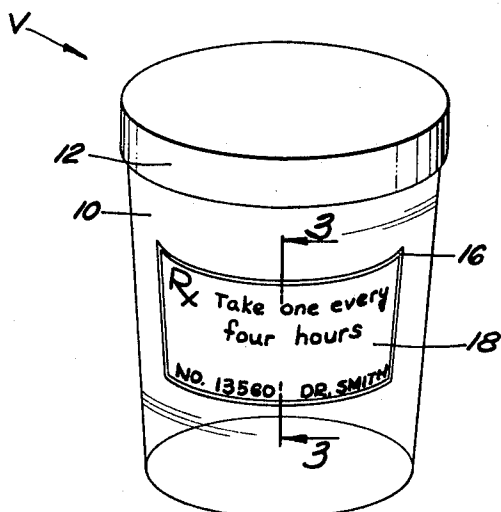


FIG. 1.

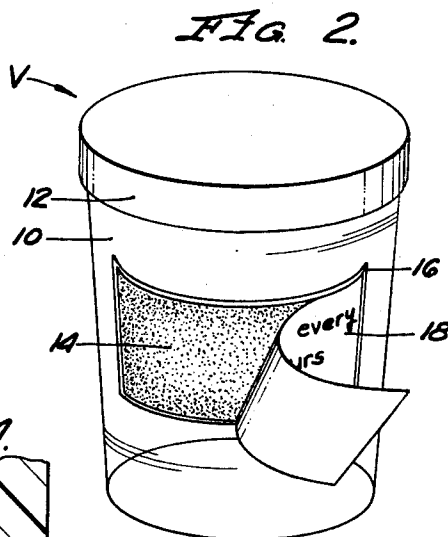


FIG. 2.

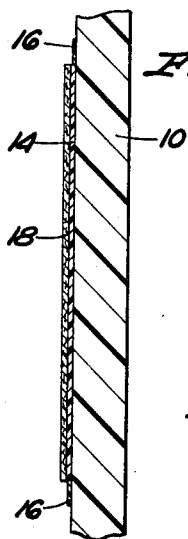


FIG. 3.

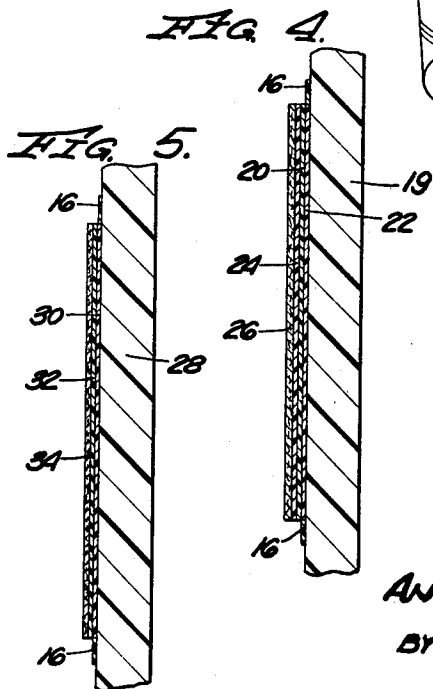


FIG. 4.

FIG. 5.

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3,494,059

LABEL-RECEIVING CONTAINERS

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1 Claim

ABSTRACT OF THE DISCLOSURE

A prescription vial or laboratory sample bottle having a portion of its outer wall covered by a layer of pressure-sensitive adhesive to which a label can be quickly applied by merely pressing it in place over the adhesive. The label requires no adhesive of its own because of the pressure-sensitive character of that on the vial or bottle. Where the layer of adhesive is transparent, its borders can be outlined in color to mark the place where the label is to be applied.

BACKGROUND OF THE INVENTION

This invention relates generally to containers such as prescription vials, sample bottles and the like to which identifying labels must, from time to time, be applied. More particularly, the invention relates to improved containers of this type having tacky pressure-sensitive adhesive coatings on their outer surfaces to which labels without glue can be quickly and easily applied by merely pressing them in place thereover.

Pharmacists, laboratory workers, and numerous others have daily occasion to package medical prescriptions or put samples of one kind or another in containers such as prescription vials, sample bottles, and the like, and thereafter label the containers to identify their contents. A fairly common way of achieving the latter is by a cellophane tape method in which the necessary label for each container is prepared, as by typing, and set aside until one or more pieces of cellophane tape are procured, after which the label is properly positioned on the container and the tape pressed into place over it and portions of the adjacent container wall to anchor the label in place. This is a rather cumbersome and time-consuming procedure which can lead to error where a number of labels have been prepared for taping to different containers, since there is always a chance, under such circumstances, of inadvertent mismatching of at least some of the containers and labels.

Where prescription vials have transparent walls, many pharmacists insert labels in the filled vials in such a way that they can be read through the vial walls. This labeling technique is unsanitary and can, for obvious reasons, result in subsequent loss of the labels. Moreover, such labels are harder to read than labels affixed to the outer sides of the vials, particularly where the latter are relatively narrow, as in the case of tubular vials of small cross-sectional diameter.

The application of gummed labels to prescription vials and the like constitutes another common method of labelling such containers. These labels, however, require moistening prior to usage and are hence messy and bothersome to fool with, particularly in sizable quantity, as anyone who has had experience with them can attest. The necessity of such moistening is also disadvantageous from a time consumption standpoint.

SUMMARY OF THE INVENTION

The unique containers of this invention are generally similar in appearance, and manner and materials of construction, to the conventional prescription vials, sample bottles, etc., of everyday usage, but differ therefrom in

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having a layer of tacky pressure-sensitive adhesive, preferably a rubbery-base adhesive, overlying at least a portion of the outer wall surface of each. The adhesive is of a type adapted to receive the under surface of a plain label (typically a paper label with no glue or mucilage on its underside) and bond it firmly to the container, which latter can be made of glass, plastic, or any other material suitable for the purpose. The tacky adhesive layer can be substantially transparent and colorless, transparent and colored, translucent or opaque.

That area of container wall covered by the adhesive layer is preferably about the size and shape of the label most conveniently suitable for use on the container, although it can vary from this within the scope of the present invention. It is only necessary, in this connection, that the adhesive be spread over a large enough area to permit the attachment of a label of some sort to the container. The layer of adhesive can extend beyond the label boundaries, since any portions thus exposed around the edges of the label will be innocuous and, in most cases at least, hardly noticeable, although somewhat tacky to the touch.

The preferred adhesives for use on the containers of this invention are identical to those presently employed, or suitable for use, on pressure-sensitive tapes, particularly the well-known cellophane tapes of either the type having a backing coated only on one face with adhesive or the so-called double-coated type in which both faces carry an adhesive coating. The adhesives used on such cellophane tapes are rubbery-base pressure-sensitive inherently water-repellent adhesives commonly compounded of a natural or synthetic rubber and a tackifying resin (such as a rosin derivative or a hydrocarbon type resin) or from a rubbery polymer that is intrinsically tacky (such as a polyacrylate or a polyvinyl ether polymer). Specific examples of such adhesives will be disclosed hereinafter.

The adhesives of this invention can be applied directly to the outer walls of their host containers, or be bonded to those walls through an intervening primer coating of a character hereinafter revealed. In a variant form of the invention, the layer of adhesive to which the label is to be applied can be that on the outer face of a piece of double-coated cellophane (that is, cellophane coated on each side with a rubbery-base pressure-sensitive adhesive) which has been trimmed to the proper size and affixed to the outer-container wall in proper position to serve its intended purpose. The double-coated cellophane is bonded firmly to the container wall at its inner face and has its outer face exposed with the layer of tacky pressure-sensitive adhesive thereon providing a properly pressure-sensitive bed for the reception of a label in accordance with the teachings herein.

As should be apparent from the foregoing, any adhesive or cellophane layer or lamina affixed to the containers of this invention can be clear and transparent or colored in some fashion. In the latter case, the adhesive-covered areas of clear glass or plastic containers (or containers colored differently from the adhesive and/or cellophane laminae on their respective outer walls) can generally be easily seen, thereby making it a simple matter to properly position labels thereover. Where essentially no coloration is present in any adhesive or cellophane layer on the outer surface of a container in accordance with this invention, the adhesive-covered area of the container wall can be marked with a colored border to outline the place where a label is to be affixed. The colored border can be of continuous or interrupted character, and of any suitable color. It can comprise a colored imprint on the container wall itself or be integral with the laminated adhesive or double-coated cellophane (as, for example, a colored border around the edge of the cellophane lamina

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of the latter) forming said adhesive-covered area of the container wall. Alternatively, the colored border can comprise colored strips of any suitable material which are glued, or otherwise affixed, to the container wall in such a way as to define the tacky label-receiving bed formed thereon by the laminated adhesive or double-coated cellophane.

As will be evident, labels can be quickly and easily affixed to the containers of this invention by merely positioning the labels over the tacky pressure-sensitive adhesive coatings on the container walls and applying gently smoothing pressure thereto. The pressure-sensitive adhesive forms an immediate bond with the undersurfaces of the labels to hold them firmly in place against the container walls. The affixation of the label can thus be carried out as one smoothly continuous pressing operation rather than a step-wise operation requiring one or more time-consuming preliminary steps (such as, for example the procurement of strips of cellophane tape of appropriate length or moistening of the underside of the label) as do presently employed techniques for affixing labels to the outer walls of prescription vials and the like.

It is thus a principal object of this invention to provide a container suitable as a prescription vial or laboratory sample bottle to which a plain, ungummed label can be quickly applied by merely pressing it in place thereon.

It is another object of the invention to, by the provision of such a container, make available a much simpler technique for the labelling of prescription vials and laboratory sample bottles than any such technique heretofore employed.

It is yet another object of the invention to make available such a simplified labelling technique which is completely sanitary, offers minimal opportunity for error, and avoids any possibility of subsequent separation of labels from their corresponding containers and loss, in whole or part, of the labels.

Other objects, features and advantages of the invention will become apparent in the light of subsequent disclosures herein.

BRIEF DESCRIPTION OF THE DRAWING

FIGURE 1 is a perspective view of a prescription vial in accordance with this invention having a layer of pressure-sensitive adhesive overlying a portion of its outer wall surrounded by a colored imprinted border strip, and showing a label pressed into place over the adhesive.

FIGURE 2 is a view of the prescription vial and label similar to the FIGURE 1 view, but showing the latter only partially affixed to the layer of adhesive in a position illustrative of a preferred method of applying the label to the vial.

FIGURE 3 is an enlarged fragmentary view, in longitudinal section, of the vial, including its layer of adhesive, and label, taken along line 3—3 of FIGURE 1.

FIGURE 4 is a view similar to the FIGURE 3 view of a modified form of the prescription vial having a piece of double-coated cellophane in place of the adhesive layer of the FIGURE 3 vial.

FIGURE 5 is a view similar to the FIGURE 3 view of still another modified form of the prescription vial, this one differing from that of the FIGURE 3 view in the inclusion of a layer of primer material between the layer of adhesive and the outer wall surface of the vial.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Considering now the drawing in greater detail, there is shown generally at V an enclosed prescription vial in accordance with this invention, hereinafter referred to as enclosed vial V. Enclosed vial V consists of an open ended container 10 of generally cylindrical shape, and a cap enclosure 12, hereinafter referred to as cap 12, which fits tightly over the open end of the container to serve as a friction-fitting top therefor. Container 10 is of clear

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plastic construction and, along with cap 12, of conventional type, except for the presence of a layer of tacky pressure-sensitive adhesive 14, soon to be described in greater detail, overlying a segment of its outer wall, as best illustrated in FIGURE 2.

The layer of adhesive 14, while shown in FIGURE 3 in exaggerated thickness for purposes of better illustration, is actually thin, in the order of thickness of the adhesive coatings on pressure-sensitive cellophane, and similar types of, adhesive tapes. The adhesive is bonded to the outer surface of container 10 and as previously indicated, is preferably of a type suitable for use such as a cellophane tape adhesive coating material. The reason for this is the known capacity of cellophane tape adhesives for bonding to slick hydrophilic surfaces, such as the smooth outer surfaces of glass or plastic containers in accordance with this invention, as well as the ability of such adhesives, also known in view of their extensive use in pressure-sensitive tapes, to provide a tacky contact surface, even after extended periods of exposure, ideally suited for the reception and retention of labels pressed thereagainst.

Cellophane tape adhesives are, as previously noted, pressure-sensitive rubbery-base materials of an inherently water-repellent character prepared from a natural or synthetic rubber and a tackifying resin or a rubbery polymer that is intrinsically tacky. Specific details of the preparation of typical adhesive formulations within the scope of this invention, and the manner of applying adhesives to the outer surfaces of containers to achieve coatings such as that illustrated at 14 on the drawing, will be presently given in the form of illustrative examples. Thin layers of the rubbery-base adhesives under present consideration, such as those on cellophane tape and adhesive layer 14 on container 10 of the drawing, are essentially transparent and colorless (unless they contain coloring pigments), hence relatively invisible, in spite of their tacky surface textures.

Encircling the area covered by the layer of adhesive 14 on the outer surface of container 10 is a colored border strip 16. The purpose of the border strip is to clearly outline the edge of the adhesive layer (which, as indicated above, is almost invisible) and thereby permit quick spotting of the latter for application of a label thereto. Border strip 16, shown in FIGURE 3 in exaggerated thickness for the same reason that adhesive layer 14 is there so shown, is formed by four imprinted lines, intersecting at right angles, on the wall of container 10. The imprintation of the border strip lines can be achieved by any method suitable for the purpose, such methods being sufficiently well known to those skilled in the industrial plastics arts to require no detailed description here.

While container 10 has a colored border to mark the bounds of adhesive layer 14 on its outer wall, this is only a preferred, and not a critical, feature of my invention, since it adds to only the convenience of use, and not to the label-receiving functionality of the container. Other means of flagging the location of the adhesive-coated portion of the container's outer wall can be used in lieu of colored border 16, if desired. For example, a colored adhesive (one to which a coloring pigment has been added) can be substituted for the relatively colorless adhesive of adhesive layer 14; thin strips of colored cellophane tape can be used to outline the adhesive-coated area of the outer container walls; or any other visual aid which permits quick and easy identification of that portion of the container wall covered by the adhesive can be employed, for such flagging purposes.

FIGURE 4 is a view similar to the FIGURE 3 view, but showing a fragmentary section of the wall of a modified version of container 10 in which a piece of cellophane coated on each side with a tacky pressure-sensitive adhesive is bonded to its outer wall in place of the adhesive layer 14 of container 10. As FIGURE 4 shows, the double-coated cellophane has a center lamina of cellophane

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20 with a first adhesive coating 22 on one of its faces, and a second adhesive coating 24 on its other face. The double-coated cellophane is bonded to the wall of the container, shown at 19, by means of said first adhesive coating 22, thereby exposing said second adhesive coating 24 for label-receiving purposes similarly to the way in which adhesive layer 14 of container 10 is exposed. A label 26 is shown fastened flat against the adhesive coating 24 of the double-coated cellophane.

FIGURE 5 is a sectional view, also similar to the FIGURE 3 view, taken through the wall of yet another modification of container 10. The FIGURE 5 container has an adhesive layer 32, similar in character to the layer of adhesive 14 on container 10, overlying a portion of its outer wall for label-receiving purposes. The FIGURE 5 container differs from container 10 however, in that its adhesive layer (adhesive layer 32) is anchored to the container wall, shown at 28, by means of an intervening coat of primer 30, rather than being bonded directly to the wall as adhesive layer 14 is bonded to the wall of container 10. The primer serves to provide a stronger bond between the adhesive and container wall than would otherwise exist, and can be chemically the same as any of the primers similarly employed for the bonding of the adhesive coatings of conventional cellophane adhesive tapes to their cellophane backing films. Such a primer is a practical necessity in the case of cellophane adhesive tapes to prevent delamination of the adhesive from the tape when the latter is pulled away from certain surfaces to which it has adhered, but no such delaminating possibility accompanies normal usage of the containers of this invention, since only one label is ordinarily applied to the adhesive-coated area of its outer wall, after which there will obviously be no delaminating force applied to the adhesive layer or the wall. Consequently, direct bonding between the adhesive and container walls of this invention is normally completely adequate for its intended purpose and while primer coatings can be interposed between the resulting adhesive layers and container walls within the scope of this invention, such coatings are generally unnecessary and can be dispensed with at a significant saving in cost.

Exemplary of those primers which have been employed to strengthen the bonding of rubbery-base adhesives to the cellophane backing films of cellophane adhesive tapes (thus qualifying them as suitable primers for purposes of this invention) are the dried deposition products of aqueous emulsions of hydrophilic colloidal agglutinants and latices of natural or synthetic rubber disclosed in U.S. Patent 2,328,066 to Drew (Aug. 31, 1943). The preferred primers of the Drew patent contain a protein glue, of which casein is the prime example (and has enjoyed extensive commercial usage), as the hydrophilic colloidal agglutinant. Another class of primers suitable for use with the rubbery-base adhesive of this invention includes dried deposition products of agglutinant-latex emulsions similar to those employed in the Drew patent, but using polyvinyl alcohol in place of the casein, or equivalent ingredient, of the latter emulsions. These primers are purported to have good moisture resistance and have been proposed for use in the manufacture of cellophane tapes to be employed in areas subject to high humidity conditions in U.S. Patent 2,328,057 to Coulter (Aug. 31, 1943).

Still another class of primers that can be employed to bond the adhesive layers of this invention to container walls comprises the dried deposition products of agglutinant-latex emulsions similar to those disclosed in the Drew and Coulter patents, but having a water-dispersible hydrophilic polyacrylamide substituted for at least a major portion of the casein, polyvinyl alcohol, or equivalent agglutinant ingredient of the latter emulsions. Primers of this latter type are discussed in detail, with emphasis on their utility for the bonding of adhesive

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coatings to cellophane tape backing films, in U.S. Patent 2,926,105 to Steinhauser et al. (Feb. 23, 1960).

As previously indicated, the adhesive-coated areas of the containers of this invention are adapted to receive plain paper labels, by which is meant labels free of pressure-sensitive, gummed, or other adhesive coatings. Labels 18, 26 and 34 of the drawing are all of this plain type, each having been applied to the container wall on which it is mounted by merely having been pressed in place over the adhesive-coated portion of that wall. FIGURE 2 illustrates an initial stage of a preferred way of affixing label 18 to container 10 on which the label is pressed, or smoothed, into place from one side to the other. It is, of course, within the scope of my invention to apply adhesive-coated labels of one kind or another to my novel containers but there would be little point in doing this (unless such labels happened to be the only available ones) because of the added cost of adhesive coated labels over plain ones.

Following are examples of specific ways of preparing adhesive-coated label-receiving containers in accordance with this invention. It should be clearly understood that these examples are for exemplary purposes only, and are not to be so viewed as to import limitation of the invention to the particular adhesives, primers, techniques and conditions set forth therein.

EXAMPLE I

This is an example of the preparation of prescription vials in accordance with this invention by the application of a thin coating of adhesive directly onto the unprimed outer surfaces of the vials.

An area of predetermined size and shape on the outer wall of each of a plurality of clean cylindrically-shaped clear plastic prescription vials is coated with a heptane solution of a pressure-sensitive adhesive material of the following composition (the ingredient proportions being given in parts by weight):

	Parts
Rubbery polyisobutylene (such as "Vistanex B120")	100
Low molecular weight tacky polyisobutylene (such as "Vistac A70")	70
Pure hydrocarbon terpene tackifier resin (such as "Piccolyte S85")	45
Rosin ester tackifier resin (such as "Hercolyn")	30
Di-tert.-amyl hydroquinone (antioxidant) (such as "Santovar A")	1.1

The prescription vials are next passed through an oven to evaporate solvent from the coatings of adhesive solution on their outer surfaces and convert the coatings to layers of tacky pressure-sensitive adhesive receptive to the pressure application of plain paper labels in accordance with the aims of this invention. Colored borders for the adhesive layers on the outer vial walls can, if desired, be provided.

EXAMPLE II

Example I describes a method of preparing adhesive-coated prescription vials in accordance with this invention by applying a polyisobutylene-tackifying resin mixture directly to the outer surfaces of the vials, in the form of thin coatings, and then converting the coatings into label-receiving layers of pressure-sensitive adhesive by oven-drying means.

The present example describes a method of applying pressure-sensitive adhesive layers to prescription vials similar in all respects to the method of Example I, except for the substitution of an acrylate type coating mixture for the polyisobutylene type mixture of the latter example.

Specifically, the coating mixture of the present example, which, as indicated above, is applied to the prescription vial outer walls in the same way as the adhesive mixture of Example I, is prepared by mixing 550 parts by weight of ethyl acetate solvent, 270 parts of isoamyl acrylate

monomer and 30 parts of acrylic acid. The resulting mixture is held at a temperature of 55° C. for a period of 10 hours, during which 2 parts benzoyl peroxide is added, as a catalyst, in four portions. Although polymerization is largely completed at the end of the 10 hours, heating is continued at about 60° C. for an additional hour to provide a viscous solution containing about 35% non-volatile solids. This is diluted with heptane to a non-volatile concentration of 20%. The diluted mixture is of coatable viscosity and is applied to the outer surfaces of said prescription vials in the same manner as in Example I. After being so coated, the vials are dried (also in the manner of Example I), leaving each with a label-receiving panel of thin adhesive of aggressively tacky and pressure-sensitive character on its outer wall.

EXAMPLE III

This is an example of yet another method of preparing prescription vials in accordance with this invention. The method is similar to that of Example I, except that here a primer coat is applied to the adhesive-coated areas of the vials, prior to the application of the adhesive to those areas, to provide a high-strength bond between the adhesive and vial walls. The primer is of the latex rubber-polyacrylamide type previously referred to and contains casein in an amount by weight about one-third that of the amount of polyacrylamide present.

A primer composition for use in the method of this example is prepared from the following ingredients, all parts being by weight:

	Parts
Buna S rubber (dry basis), as latex containing 40% solids	100
Polyacrylamide	43
Casein	15
Aqueous formaldehyde solution (37% conc.)	68.8
Ammonium hydroxide solution (28% conc.)	50.5
Fungicide	0.3
Water (iron free), approximately	550

Buna S rubber is a term applied to rubbery butadiene-styrene copolymers and a preferred type is GRS-2000. Such synthetic rubbers are commonly used in the production of rubber-resin pressure-sensitive tape adhesives.

A suitable polyacrylamide is the medium molecular weight grade available under the designation "PAM 75" from American Cyanamid Company, although types of lower and higher molecular weight can be employed, such as "PAM 50" and "PAM 100," all of which are film-forming polymers that are hydrophilic and dispersible in water, and are supplied as white amorphous powders. The molecular weights are believed to lie in the general range of about 400,000 to 1,000,000.

In this example the polyacrylamide may become partially methylolated by reaction with formaldehyde in the alkaline aqueous system employed.

The fungicide is included to avoid bacterial spoilage in the event of storage for substantial periods before use. These are well known. An example is available under the trademark "Dowicide G" from Dow Chemical Company.

It will be noted that this composition employs about $\frac{3}{4}$ polyacrylamide and $\frac{1}{4}$ casein as the hydrophilic colloidal agglutinant phase of the primer. Provision is made for tanning the casein in situ during drying of the primer coating.

The following compounding procedure is employed:

An aqueous dispersion of polyacrylamide is prepared by adding successive increments of the 43 parts of polyacrylamide to about 430 parts of water in a Monel mixing kettle equipped for steam heating, and agitating at room temperature until dispersion is complete. Then 43 parts of the 28% ammonium hydroxide solution is added, followed by the 68.8 parts of 37% formaldehyde solution. A slightly exothermic reaction takes place and heating is employed so as to maintain a temperature of 40-60° C.

for about two hours with continued mixing. The alkalinity of the reaction mixture is adjusted with ammonia so as to maintain the pH value in the range between 8 and 10. Formaldehyde is present which reacts with ammonia to form hexamethylene tetramine, available as a formaldehyde-releasing tanning agent for the casein.

A casein solution is separately prepared in a stainless steel mixing drum. The 15 parts of casein is added to 45 parts of water, the fungicide is added, and the mixture is allowed to stand for one hour to wet and soften the casein. Then 7.5 parts of the 28% ammonium hydroxide solution and 75 parts of hot water (at about 80° C.) are successively added and the mixture is thoroughly agitated to form a smooth dispersion.

The casein solution is added to the polyacrylamide reaction mixture and thoroughly mixed at a temperature kept under 40° C. Then the 250 parts of aqueous rubber latex (100 parts rubber solids) is incorporated with agitation, the pH value being adjusted to 10-11 with ammonium hydroxide as required. After agitation to produce a smooth emulsion, the mixture is filtered through cheesecloth and is stored in polyethylene lined drums. Additional water can be added if needed to adjust the viscosity to a desired coating consistency, the viscosity after 24 hours standing at 25° C. preferably being in the range of 100 to 700 cps. as measured on a Brookfield viscosimeter.

Prescreened outer wall areas of prescription vials of the type processed in accordance with the method of Example I are coated with a thin layer of the aforesaid primer composition, the coating being applied in a thickness equivalent to about 8.5 lbs. of the coating of 1000 sq. yds. of container surface. This results in a dry coating weight of about 1.1 lbs. per 1000 sq. yds. of coated container surface. The primer coatings on the vials are flash-dried by subjecting them to a dry temperature of about 240° F. The dried primer layers on the vials are next coated with an adhesive mixture such as that described in Example I, after which the adhesive coatings are dried in the manner described in that example. The dried adhesive coatings are aggressively tacky and anchored firmly in place on the vials by the primer coatings. The latter (primer coatings) have the advantage of superior resistance to moisture in the atmosphere, hence the coated vials are ideally suited for use in areas subject to high humidity conditions.

The preferred proportions of hydrophilic colloidal agglutinant in polyacrylamide-containing primers of the type exemplified above are within the range from about 25 to 100 parts per 100 parts of rubber solids by weight.

EXAMPLE IV

This is another example of the preparation of prescription vials in accordance with this invention in which the label-receiving areas of the vial surfaces are first treated with a primer to improve the bond between the subsequently applied adhesive and container wall surfaces. The primer composition of this example is a latex rubber-polyvinyl alcohol mixture of the type previously referred to. The procedure described in Example III is followed in every respect except that in place of the primer composition there employed, such a composition comprising an aqueous emulsion of polyvinyl alcohol and Buna S (GR-S) latex such as described in U.S. Patent 2,889,038 to Kalleberg (June 2, 1959) is employed. The primer emulsion is applied in a thin coat and then flash-dried in the same manner as the primer composition of Example III. After this, the primed portions of the vials are coated with adhesive and dried in the manner described in Example III. The prescription vials are now ready for receiving labels on the adhesive-coated portions of their outer surfaces.

The preferred proportions of polyvinyl alcohol in primers of the type employed in this example are within the range from about 15 to about 300 parts by weight per 100 parts by weight of rubber latex.

EXAMPLE V

This example describes a method of preparing adhesive-coated prescription vials similar to the method of Example IV, except for the primer application step. Here, a latex-rubber-casein type of primer is employed in place of the latex rubber-polyvinyl alcohol primer of Example IV. Specifically, the primer composition applied to the label-receiving areas of the vial surfaces is made up of the following ingredients:

	Parts by weight
Casein	30
Rubber latex (60% rubber)	96
Ammonium hydroxide (28% NH ₃)	13
Beta-naphthol	1.5
Water	275

The above primer composition is prepared in accordance with the procedure described in U.S. 2,328,066 to Drew (Aug. 31, 1943). The primer composition is applied to the label-receiving areas of the prescription vials in a thin coat corresponding to about 1 lb. of the composition per 170 sq. yds. of coated vial wall surface, after which the coated vials are heated at 240° F. to flash-dry the primer coatings thereon. The primed vials are now subjected to the adhesive coating and drying steps described in Example IV.

To achieve a tough and moisture-resistant primer coating, and one which provides a stronger bond between the primer and adhesive subsequently to be applied to the vials, the casein in the primer composition can be tanned in situ after the latter has been applied to the proper areas of the outer vial walls. One way to effectuate such tanning is to add formaldehyde solution to the primer composition in an amount sufficient to provide about 6 parts by weight of formaldehyde per 100 parts of the casein present therein. This amount of formaldehyde is sufficient to tan all of the casein, but less can be employed if only partial tanning is desired. For a more detailed discussion of this, see the aforesaid patent to Drew (U.S. 2,328,066).

The useful range of proportions of hydrophilic colloidal agglutinant in those primers disclosed by Drew in U.S. 2,328,066, and exemplified above (in Example V), is from about 15 to 600 parts by weight per 100 parts of latex rubber solids.

It will be appreciated that the particular versions of my new and unique label-receiving container described

and illustrated herein merely exemplify preferred embodiments of that container, and that there are many variations of those embodiments within the scope of my invention. Some of these variations have already been mentioned and others will occur to those skilled in the art in the light of present teachings. Illustrative of such variations are containers of other than prescription vial or laboratory sample bottle character; containers made of materials other than glass or plastic (such as wood, metal, cardboard, etc.); containers with virtually the entire outer surfaces of their walls covered with a tacky pressure-sensitive adhesive; containers of various colors; containers having strip-away protective covers over the adhesive layers on their outer surfaces; etc.

In summary, my invention has been described in considerable detail in order to comply with the legal requirements for a full public disclosure thereof. Such detailed description is not, however, intended to in any way limit the broad features or principles of the invention, or the scope of patent monopoly sought to be granted, except insofar as dictated by the language of the following claim.

I claim:

1. A container characterized by the presence of a layer of pressure-sensitive adhesive overlying at least a portion of its outer wall area to which a label without adhesive can be attached by merely pressing it in place thereagainst, said pressure-sensitive adhesive being the exposed coating of adhesive on a piece of cellophane coated on each of its two sides with a pressure-sensitive adhesive and affixed to the outer wall of said container by means of the adhesive on one of said sides.

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U.S. Cl. X.R.

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