Jan. 13, 1948. W. H. BRADY, JR., ET AL 2,434,545

ADHESIVE LABEL DISPENSER

Filed Feb. 21, 1945

Fig. 1

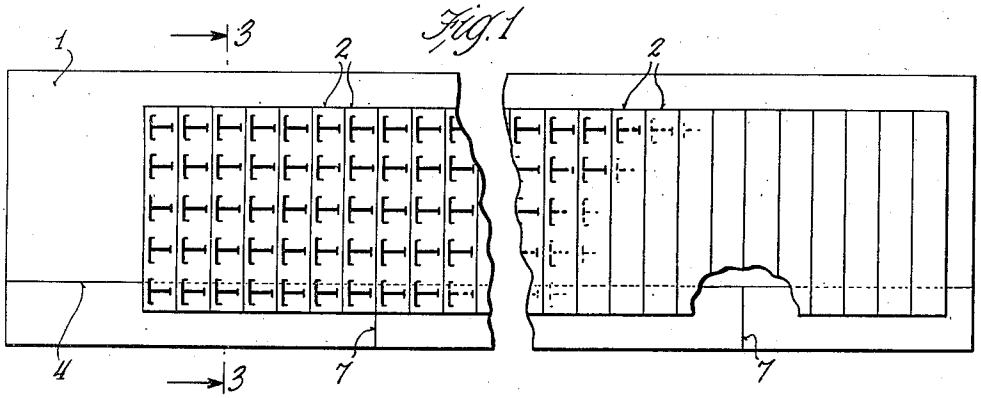


Fig. 2

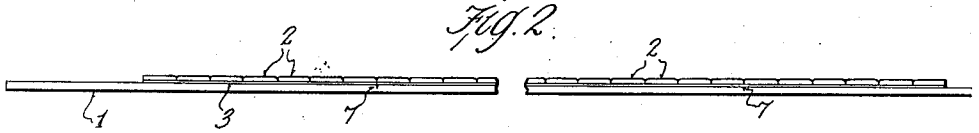


Fig. 3

Fig. 4

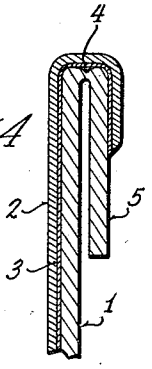


Fig. 5

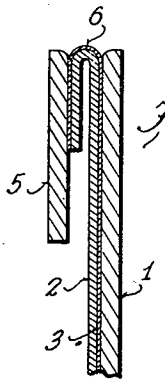
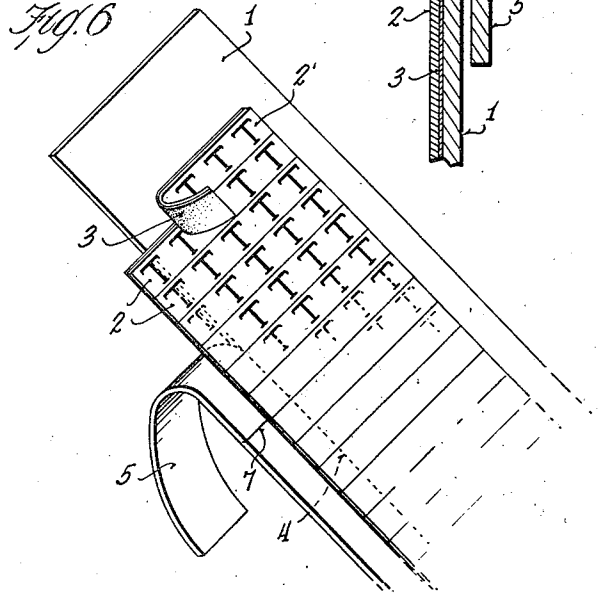


Fig. 6



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ADHESIVE LABEL DISPENSER

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5 Claims. (Cl. 206—56)

1

This invention relates to a combination of pressure sensitive adhesive labels with a dispenser mounting therefor and it resides more specifically in a side by side series of pliant adhesive backed labels in separable pressure sensitive adhesive contact with a dispenser mounting composed of a thin concreted layer of backing material having a predisposition to complete severance by cracking upon subjection to creasing along a line intersecting said series of labels close to one margin thereof, whereby a completely cracked off or severed portion of said backing layer underlying a minor portion of each label may be formed and peeled away from said labels to expose an overhanging marginal tab which may be grasped for the purpose of removing the remaining part of the label from the backing.

Heretofore pressure sensitive adhesive labels of small size have been furnished to the user as parts of a continuous roll like a roll of surgical adhesive tape. In this form each label must be cut from the roll and this is a tedious and annoying task when large numbers of labels are to be handled. To overcome this disadvantage, separately cut individual labels have also heretofore been attached in side by side series to board backing strips having a smooth facing which will not part from the backing and impair the adhesive coating of the label. Although such a dispenser is far more convenient to use than a continuous roll it is often difficult to remove the labels from the dispenser board. An operator using such a dispenser must keep available a sharp pointed tool for lifting an edge of the label so that it may be grasped and removed and this operation usually requires the employment of both hands. Since labels of this sort are very commonly used for marking the ends of complex assembled wire cables requiring much manipulation on the part of the operator assembling the same, it is desirable that the labels be furnished in a form in which the markings on them are clearly displayed and in a form in which manipulation is reduced to a minimum.

By the use of this invention all of the advantages of clear display which the card type dispenser possesses are retained but at the same time a positive and easily manipulated method of removal of the labels is provided which does not require the use of any implement and which may be performed with one hand if necessary.

This invention is herein described by reference to the accompanying drawing which forms a part hereof and in which there is set forth by way of illustration and not of limitation certain forms in which the dispenser of this invention may be embodied.

2

In the drawing:

Fig. 1 is a top plan view partly broken away of one form of a dispenser of this invention;

Fig. 2 is a side view in elevation of the dispenser shown in Fig. 1;

Fig. 3 is an end view in elevation and in section of the dispenser shown in Fig. 1 viewed through the plane 3—3 there indicated;

Fig. 4 is a fragmentary enlarged detailed view in end elevation and in section of the dispenser shown in Fig. 1 undergoing the first step of the creasing operation by which the backing is severed;

Fig. 5 is an enlarged fragmentary detailed view in end elevation and in section showing the second step of the creasing operation by which the backing is severed; and

Fig. 6 is a perspective view of a fragment of the dispenser shown in Fig. 1 showing the manner in which the severed backing portion is removed to expose tabs which can be grasped to remove the labels.

Referring now to the drawing, a dispenser is there shown made up of a backing board 1 to which a plurality of separate pressure sensitive adhesive labels 2 is attached. The margins of the board 1 preferably extend beyond the margins of the labels 2 thus permitting dispensers to be stacked or packaged without danger of the adhesive material coming in contact with anything which might adhere thereto. At the same time the markings borne by the labels 2 are prominently displayed so that an operator can instantly select the particular dispenser or label desired. The backing board 1 is formed for purposes to be more fully described hereinafter of a resilient but somewhat brittle concreted substance of substantial thickness such as, for example, sheet vulcanized fiber, phenol-aldehyde-resin bonded fiber pulp, homogeneous pyroxylin or other plastic of similar physical properties or any similar material which is self-sustaining resilient but brittle when subjected to severe creasing. The backing board 1 furthermore must be composed of a thoroughly concreted substance such as those named so that surface fibers and laminations will not separate therefrom and adhere to the adhesive coating of the labels 2 when they are stripped therefrom.

By the term concreted, as used herein, there is meant a condition or state within the backing material which limits freedom of relative movement between adjacent constituent components.

For example, in the case of cemented felted fibrous pulps such as vulcanized fiber or resin bonded pulp, a cementitious binder unites the component fibers into a more or less continuous integral mass. By reason of this when the material is subjected to creasing by extreme bending, the tensile strength of fibers crossing the crease is exceeded and a complete rupture of the same occurs. In the case of a concreted homogeneous material, such as pyroxylin or other plastic of like physical properties, the exceeding of the tensile strength of the substance itself results in a complete rupture. It is an important aspect of the discovery of this invention that materials exhibiting concreted properties as thus defined also exhibit the property of being capable of separation from the label adhesive without giving off and leaving attached to such adhesive any fragments or small particles which would mask the adhesive and thus impair it.

As appears more clearly in Fig. 2 the labels 2 are provided with a pressure sensitive adhesive coating 3 which is in adhesive contact with the backing board 1 thus serving to maintain the labels 2 in their intended display position on the back of the board 1. Before applying the labels 2 to the board 1 the board 1 is preferably scored with a scratch or indentation 4 extending throughout and underlying the labels 2 close to one end thereof as appears more clearly in Fig. 3. The score 4 extends only partly through the thickness of the backing board 1 thus leaving the assembled dispenser substantially intact in a form which facilitates handling and distribution. The score 4 may be formed if desired on the back of the board 1 in a position directly opposite that which is shown and by so doing an article of substantially equivalent quality will result although slightly superior results are obtained when the score is as shown in the drawing.

When it is desired to remove a label from the backing board 1 this may be accomplished by first bending the board 1 away from the face upon which the labels are mounted in such a way as to form a crease along the scored line 4 and when this is done a cracking or severance of the board 1 along the line 4 is initiated as diagrammatically illustrated in Fig. 4 thus starting the formation of a severed strip 5. During this operation a hinging operation takes place along a line which is on the back surface of the board 1 thus necessitating shifting of the label 2 with respect to the severed strip 5 by an amount approximating the double thickness of the board 1. The severed strip 5 is then flexed in the opposite direction to form a new crease following the severed juncture and when this is done a small portion of the label 2 forms a bead designated by the numeral 6 which is entirely and completely exposed and which insures positive separation of the strip 5 from the main backing 1.

In the case of concreted substances such as vulcanized fiber and resin bonded felted fiber the usual methods of manufacture thereof result in a material having a pronounced orientation of fibers in one direction. By reason of this, creasing of the material in a direction traversing the grain even without previous scoring produces a clean and complete severance, while creasing with the grain, that is to say, with a major part of the fibers parallel to or sloping across the crease, does not produce a reliable severance because shredding and lamination occurs with consequent masking of the label adhesive. It is, therefore,

possible to construct a dispenser in accordance with this invention having the necessary predisposition to cracking disposed to extend so as to traverse the series of labels by having the grain run at right angles to the intended crease and inherent severability will exist at the location desired. It is preferred, however, that such predisposition be created otherwise than by orientation of the grain of the material, for example, by scoring as shown or by other forms of indentation or by perforation and the like, since by so doing the cracking off operation can be performed with greater ease and certainty. Furthermore, when the predisposition to cracking is created by scoring and the like, orientation of the grain of the material to cross the labels may be directed to develop other desired properties as, for example, to render a long slender backing stiffer in the direction of its length, thus permitting the use of thinner material than would otherwise be feasible.

While in the drawing the thickness of materials has been exaggerated by reason of the limitations of pen and ink drafting methods, it will be understood that the materials shown in actual use are no thicker than they need be to perform their intended function. In the case of vulcanized fiber, for example, materials for the backing 1 would usually be from 0.004 to 0.020 inch in thickness with preference being given to material falling in the middle of this range. As a general rule, the denser the backing material, the thinner it may be.

When complete severance of the strip 5 from the backing 1 has been accomplished by the creasing action above described the operator may then peel the strip 5 from the labels 2 in the manner indicated in Fig. 6. In doing so the labels 2 remain adherent to the main backing 1, with an exposed overhanging tab which may be easily grasped by the operator for the purpose of removing the same from the backing 1. For example, one of the labels is shown in position of partial removal from the backing 1 the same being designated by the numeral 2'. The operator, if he chooses, may peel the strip 5 to expose any number of the labels 2 which he desires or he may expose the entire content of the backing 1 if a large number of labels are to be used immediately.

At times it may be convenient to score the backing 1 as shown at 7 so that the cracked off portion 5 may be conveniently broken away at intervals so that the labels can be rendered accessible a few at a time without exposing all of the rest.

We claim:

1. In a dispensably mounted series of pressure sensitive adhesive labels the combination comprising a backing board composed of thin stiff card-like sheet concreted material crackable on creasing, a series of separate adjacent pliant labels disposed on one face of said board, a pressure sensitive adhesive permanently bonded to said labels and in separable adhesive contact with said board, and a score mark only in that face of said board to which said labels are attched extending so as to underlie each of said labels and adapted to respond by complete severance of said board upon subjection of the same to tight creasing along said score marks.

2. In a dispensably mounted pressure sensitive adhesive label the combination comprising a backing board composed of thin stiff card-like sheet concreted material crackable on bending

only when creased, a pliant label disposed on one face of said board, a pressure sensitive adhesive permanently bonded to said label and in separable adhesive contact with said board, and a line of indentation in said backing board partially penetrating the same and defining in pre-determined position beneath said label a line of cleavage easily crackable upon creasing along said line of indentation the extent of said partial penetration of said line of indentation being limited so as not to impair the unitary card-like properties of said backing board whereby said backing board provides a stiff substantially flat support for said label and a substantially unbroken protective cover for the adhesive of said label until said backing board is parted for use.

3. In a dispensably mounted series of pressure sensitive adhesive labels the combination comprising a backing board composed of thin stiff card-like sheet concreted material crackable on bending only when creased, a series of separate adjacent pliant labels disposed on one face of said board, a pressure sensitive adhesive permanently bonded to said labels and in separable adhesive contact with said board, a line of indentation in a part of said backing board covered by said labels partially penetrating said board sufficiently to weaken the same so as to provide in pre-determined position beneath said labels a line of cleavage easily crackable upon creasing along said line of indentation the extent of said partial penetration of said line of indentation being limited so as not to impair the unitary card-like properties of said backing board whereby said backing board provides a stiff substantially flat support for said labels and a substantially unbroken protective cover for the adhesive of said labels until said backing board is parted for use, and a plurality of lateral severance lines spaced on said board and extending from said line of indentation to an edge of said board adapted to permit complete severance of portions of said board so as to permit exposure of part of said labels without exposure of the remainder.

4. In a dispensably mounted pressure sensitive adhesive label the combination comprising a backing board composed of thin stiff card-like vulcanized fiber sheet material easily crackable on bending only when creased, a pliant label

disposed on one face of said board, a pressure sensitive adhesive permanently bonded to said label and in separable adhesive contact with said board, and a line of indentation in said backing board underlying said label partially penetrating said board sufficiently to weaken the same so as to provide in pre-determined position beneath said label a line of cleavage easily crackable upon creasing along said line of indentation the extent of said partial penetration of said line of indentation being limited so as not to impair the unitary card-like properties of said backing board whereby said backing board provides a stiff substantially flat support for said label and a substantially unbroken protective cover for the adhesive of said label until said backing board is parted for use.

5. In a dispensably mounted pressure sensitive adhesive label the combination comprising a backing sheet of light card-board, a label sheet coated with a permanently tacky adhesive and adhered to one face of the backing sheet with one edge of the label sheet in inwardly spaced parallel relation to one edge of the backing sheet, said label sheet having a plurality of spaced parallel slits extending normal to said edge of the label sheet and dividing the label sheet into individual labels, said backing sheet having a line of partial penetration extending entirely across the backing sheet to form a weakened line, said weakened line being beneath the label sheet and extending across the same in inwardly spaced parallel relation to said edge of the label sheet, and the extent of said partial penetration of said board being limited so that the backing sheet provides a flat support for the label and a protective covering for the adhesive of said labels until said backing sheet is parted for use.

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