Jan. 11, 1944. G. W. VON HOFE 2,338,887

ART OF LABELING

Original Filed May 4, 1938

Fig. 1.



Fig. 2.

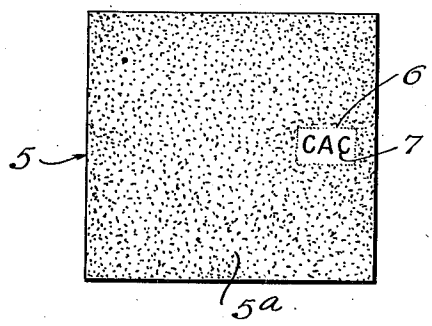


Fig. 3.

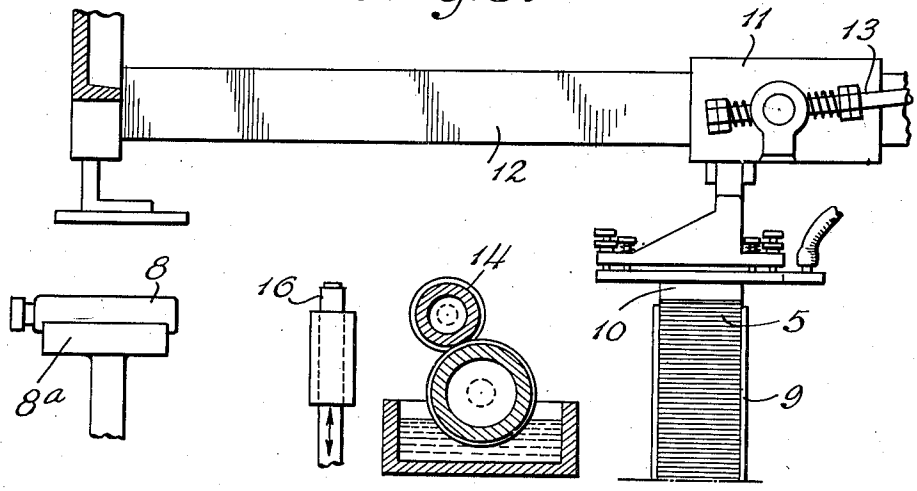
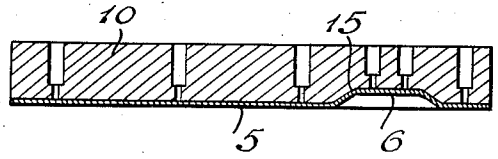


Fig. 4.



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ART OF LABELING

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Original application May 4, 1938, Serial No. 205,994. Divided and this application January 22, 1941, Serial No. 375,428

4 Claims. (Cl. 216—2)

The invention relates to the art of labeling and more particularly to labels including indications designed to supply predetermined identifying information with respect to the products to which the labels relate.

In various lines of merchandise and specially in the food and drug line, bootlegging and price cutting is practiced to a considerable extent with resultant harm to the reputation of the genuine merchandise and injury to the manufacturer thereof. In addition, certain products are of little or no value after they have been on the shelves of dealers or otherwise displayed for sale beyond a given time.

In attempting to control these factors, producers have added code marks on the exposed surface of the labels to identify the formula or batch from which the contents of the containers to which said labels are applied, were made, and also to identify the individual or organization to whom the particular merchandise was sold. These marks also may serve to indicate when the merchandise has lost its value as salable articles, useful for the purpose for which they were intended.

Sometimes these code marks are produced directly upon an exposed surface of the packages in which the merchandise is contained. In any case, under existing practice, the code marks are easily accessible and accordingly may be easily changed or obliterated to destroy their identifying values.

The invention contemplates an improvement in the art of labeling whereby the labels may be provided with code marks or other identifying indications in such a manner that the latter are incapable of being altered or obliterated without resulting damage to the labels, and in some cases so that the uninitiated will be completely unaware of the presence thereof, and the presence and location of the identifying indicia will be known only to those entitled to the information.

Other more specific objects will appear from the description hereinafter and the features of novelty will be pointed out in the claims.

This application is a division of another application filed by me in the United States Patent Office on May 4, 1938, Serial No. 205,994.

In the accompanying drawing which illustrates an example of the invention without defining its limits, Fig. 1 is an elevation of a bottle with the novel label applied thereto; Fig. 2 is a rear face view of the novel label; Fig. 3 is a diagrammatic view illustrating an example of mechanism which may be utilized in the production of the novel label, and Fig. 4 is an enlarged section of a part of said mechanism.

The novel labels 5 may be of any existing type on the outer face of which the customary material or subject matter may be printed or otherwise produced in any conventional manner. The rear face of the label 5 is provided with a coating of adhesive 5a which is applied in such a way as to cover substantially the entire area of said rear face, said coating of adhesive being interrupted so as to leave a dry area 6, that is an area free from adhesive; the dry area 6 is of predetermined shape and of restricted dimensions relatively to the adhesive coating 5a, and is located at a predetermined point of the rear face of said label known only to those entitled to have this information. The code mark or other identifying indication 7 may be printed or otherwise produced in the dry area 6 in any convenient manner before the label 5 is adhesively applied to the bottle 8 or other article or container for which said label is intended.

The coating of adhesive 5a may be mechanically applied to the rear face of the label 5 for instance by the novel means illustrated diagrammatically in Figs. 3 and 4 of the accompanying drawing.

As shown in Fig. 3 the labels 5 are contained in a suitable hopper 9 in the form of a stationary stack with the exposed or printed faces upward, suitable provision being made in any conventional manner to adjust the stack upwardly for the purpose of periodically restoring the upper end of said stack to a predetermined level. The labels 5 are removed in individual succession from the upper end of the stack by means of a suction head 10 which is supported by and vertically adjustable upon a carriage 11, and which has a perforated active lower surface at which the suction, developed in any conventional manner, is effective. The latter is arranged to be reciprocated on a stationary rail 12 by suitable mechanism exemplified by the rod 13 to carry each successive label 5 from the stack to the point of application or label applying station at which the bottle 8 or other article is supported on a suitable support 8a in a label receiving position in any well known way. In the operation of the mechanism, the suction head 10 is lowered at one terminus of the reciprocation of the carriage 11 to bring its active surface into contact with the terminal label at the upper end of the stack to pick up said label 5 from said stack and then

raised and shifted with the carriage 11 along the rail 12 to the aforesaid point of application. At this point the suction head 10 is lowered to apply the label 5 carried thereby to the bottle 8 or other article. It will be understood that the suction effective at the active surface of the head 10 is controlled in any conventional manner in proper synchronism with the aforesaid operative steps to produce the desired results. During its travel from the stack to the point of application, the label 5 carried by the suction head 10 receives a coating of adhesive for instance by passing in tangential engagement with a suitably mounted adhesive applying roller 14; it will be understood that in the return direction the suction head 10 travels at a level above the adhesive applying roller 14 so as not to be soiled by adhesive therefrom. As so far described, the mechanical arrangement may be of any well known type suitable for the purpose.

As shown in Fig. 4, the suction head 10 is provided on its active surface with a depressed portion or recess 15 which is of restricted dimensions relatively to the area of said active surface and is dimensioned and shaped in accordance with the predetermined dimensions and shape of the dry area 6; the recess 15 furthermore is so located on the head 10 as to produce the dry area 6 at the aforesaid predetermined point on the rear face of the label 5 as will appear more clearly hereinafter. At a convenient point between the adhesive applying roller 14 and the point at which the bottle 8 or other article is supported in label receiving position, the mechanism may include means for producing the code mark or other identifying indication 7 in the dry area 6. This means is diagrammatically illustrated by a printing device 16 suitably operated in proper timing with the associated parts to imprint or otherwise produce the code mark or other identifying indication 7 in the dry area 6 prior to the application of a given label 5 to the bottle 8 or other article. In some instances, the code mark or other identifying indication 7 may be produced on the rear face of the label 5 prior to the application of the coating of adhesive 5a and at a point of said rear face at which the dry area 6 is to be located.

With the illustrated arrangement, as the suction head 10 is caused to pick up a terminal label 5 from the upper end of the stack, said label 5 will be drawn against the active face of said head 10, and at the same time a portion of said label 5 will be drawn into the recess 15 so as to lie outside of the normal surface plane of the label 5 as shown in Fig. 4. In other words, a restricted portion of the label 5 is temporarily distorted out of its normal plane in a manner permitting said label to readily return to its plane surface form.

As the suction head 10 with the label 5 in position thereon is shifted lengthwise of the rail 12 and said label 5 is passed in tangential contact with the adhesive applying roller 14, all parts of the rear surface of said label 5 will receive a coating of adhesive 5a with the exception of that part of the label 5 which is located in the recess 15, or which is temporarily distorted out of its normal plane. The part of the label 5 in the recess 15, because it does not come into contact with the adhesive applying roller 14 remains free from adhesive and accordingly constitutes the dry area 6. As the carriage 11 in the arrangement shown in the drawing proceeds along the rail 12 and the adhesive coated label 5 with the dry area 6 thereon passes beyond the adhesive applying roller 14, the printing device 16 will be operated in proper timing with the associated elements to impress or otherwise produce the code mark or other identifying indication 7 on the rear face of the label 5 in the dry area 6 thereof. If the code mark or other identifying indication 7 has previously been produced on the rear face of the label 5, it will be protected from contact with the roller 14 because it is located in the recess so as to be finally positioned in the dry area 6.

The label 5 thus marked is then carried to the point of application and the suction head 10 is lowered to adhesively apply the label 5 to the bottle 8 or other article. When this application has been accomplished, the code mark or other identifying indication 7 will not be accessible except by damaging or destroying the applied label 5. If the bottle 8 or other container 8 or the contents thereof are non-transparent, or if the container to which the label 5 is applied is opaque, the code mark or other identifying indication 7 will as a matter of fact be invisible; in such case its presence and location will be known only to the initiated or to persons entitled to have the information. The last named persons may thus easily ascertain the nature of the code mark or other identifying indication 7 at will by simply cutting out and removing that part of the label 5 which includes the dry area 6; the removal of the indicated part of the label 5 may be readily accomplished because the label 5 throughout the dry area 6 does not adhere to the bottle 8 or its equivalent.

Under the circumstances, alterations or erasure of the code mark or equivalent indication 7 for purposes of deception is impossible without detection. The legitimate sponsor of the genuine product contained in the bottle or other container 8 is thereby provided with a reliable check on said product from the time it is delivered for sale until it is acquired by the final consumer or purchaser. Substitution of inferior and counterfeit materials or in other words bootlegging of the genuine product may thus be quickly and positively determined. At the same time, the length of time during which a particular product has been displayed for sale by a given tradesman may also be definitely checked, and the sale of merchandise which because of deterioration due to extended and prolonged retention on the shelves of a merchandising establishment has become inferior and even dangerous to use, thereby easily and positively prevented.

It will be noted that a plurality of different materials, as exemplified by adhesive and printing ink, are applied to the same surface of each label at predetermined points in its path of travel to the label applying station and while the label is in place on the suction head 10 or its equivalent.

Various changes in the specific forms shown and described may be made within the scope of the claims without departing from the spirit of the invention.

I claim:

1. The combination of adhesive applying means, a label supporting device having an active surface on which the label is supported, and provided with a recess constituting a relatively small portion of said active surface into which a restricted surface portion of the label at a prede-

termined point thereof is distorted out of its normal plane, said label supporting device being arranged to bring the undistorted surface portion of said label into contact with said adhesive applying means to receive a coating of adhesive therefrom, the distorted restricted portion of the label in said recess remaining free from adhesive to provide a dry area of restricted dimensions adapted to receive an identifying indication, and means operative on the distorted surface portion of said label for producing an identifying indication on said label in the distorted dry area thereof.

2. The combination of a supply of labels, a support located at a point of application at a distance from said supply for supporting an article in label receiving position, an adhesive applying roller located between said label supply and said point of application, a suction head for removing individual labels from said supply and having an active surface provided with a recess for receiving a restricted portion of a label at a predetermined point thereof, means for shifting said suction head to move the label carried thereby into contact with said adhesive applying roller whereby a coating of adhesive is applied to the label and that portion thereof in said recess remains free from adhesive to provide a dry area of restricted dimensions, and for subsequently shifting said adhesive coated label to said point of application, and means for producing an identifying mark on said label in the dry area thereof prior to the arrival of the suction head at said point of application.

3. In a labeling machine including a label applying station, and a carrying device for conveying labels to said applying station for application to articles thereat, that improvement which comprises an active surface on said carrying device consisting of a major section approximating substantially the entire area of said active surface for carrying a corresponding surface portion of a label in one plane, and a minor section approximating only a relatively small area of said active surface for carrying a corresponding small surface portion of said label in a different plane during conveyance thereof, and means operative independently at said two different planes for applying materials of different characteristics to the respective large and relatively small surface portions of said label during said conveyance thereof to the label applying station and while said label is in place on the active surface of said carrying device.

4. In a labeling machine including a label applying station, and carrying means including a suction head for conveying labels to said applying station for application to articles thereat, that improvement which comprises an active surface on said suction head at which suction is effective to hold a label in place thereon, said active surface consisting of a major section approximating substantially the entire area of said active surface for positioning a corresponding surfce portion of said label in one plane, and a minor section approximating only a relatively small area of said active surface for positioning a corresponding small surface portion of said label in a different plane, and means operative at said two different planes for applying adhesive to the large surface portion of the label, and printing ink to the relatively small surface portion of said label at predetermined points in its path of travel to said label applying station and while said label is in place on said active surface.

GEORGE W. VON HOFE.