Feb. 10, 1942. S. T. CARTER 2,272,262

STRIP STAMP AND THE LIKE

Filed June 1, 1940

Fig. 1

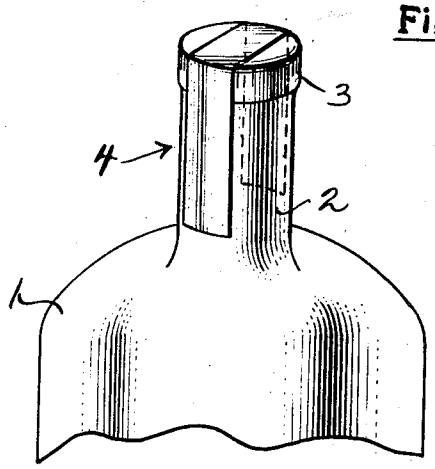


Fig. 2

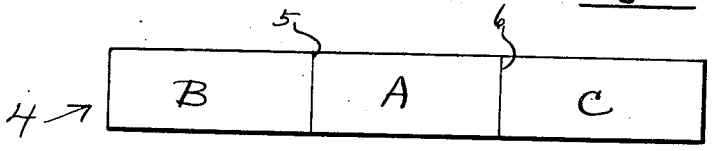
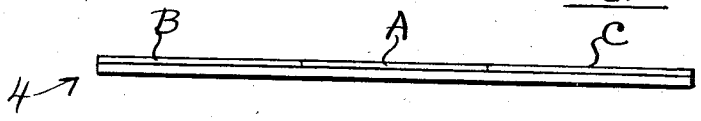


Fig. 3



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STRIP STAMP AND THE LIKE

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4 Claims. (Cl. 40—4)

My invention relates to a new and improved strip stamp or other device which is used at the mouth of the neck of a bottle, in order to indicate whether the original seal has been broken, and a new and improved method of applying said device to the bottle.

One of the objects of the invention is to provide an improved strip stamp or similar device which can be used in combination with a metal cap which is used for sealing the mouth of the neck of the bottle or other container.

Another object of the invention is to provide a strip stamp or the like which is provided with a slow-setting adhesive at the portion thereof which abuts said metal cap, and to provide said strip stamp or the like with ordinary quick-setting adhesive at the portions which contact with the glass wall of the neck of the bottle.

Other objects of my invention will be set forth in the following description and drawing which illustrates a preferred embodiment of the invention, it being understood that the above statement of the objects of my invention is intended to generally explain the same without limiting it in any manner.

Fig. 1 is a perspective view showing a part of a bottle which is sealed by means of a lacquered metal cap, and to which the improved strip stamp has been applied.

Fig. 2 is a plan view of the improved strip stamp, showing the face of the stamp to which the adhesive has been applied.

Fig. 3 is a diagrammatic front elevation of Fig. 2.

In bottling whiskey and numerous other beverages, it is necessary to apply a strip stamp over the metal cap which is used for sealing the neck of the bottle. These caps have lacquer on their exterior walls and it has been impossible to devise a quick-setting adhesive which will penetrate said lacquer and which will dry rapidly.

Under present commercial practice, it has been customary to coat one side of the strip stamp throughout with the same adhesive, in order to connect the stamp to the top and to the depending skirt of the lacquer-coated cap, and also to connect the stamp to the glass wall of the neck of the bottle below the skirt of the cap. This adhesive was necessarily a slow-setting adhesive, whose composition enabled it to penetrate the lacquer of the metal cap, so as to provide the necessary adhesion to the top of the cap. The ordinary quick-setting adhesive, which is effective to connect the strip stamp to the glass wall of the neck, dried or set too rapidly to connect the stamp to the lacquer coating of the cap.

Since this adhesive was a slow-setting adhesive it was necessary to apply the strip stamp to the neck of the bottle at a first station of a machine by means of wipers, and then to feed the bottle on the belt of this machine for one to two minutes, or even more, and then to apply the wipers of the machine again to the strip stamp at a second station of the machine, in order to complete the connection between the strip stamp and the cap and the glass wall of the bottle. This delay, and the necessity of using a long belt, and the use of wipers at two stations, is eliminated by my invention.

Fig. 1 shows the bottle 1, having the neck 2, which is sealed with the ordinary lacquered metal cap 3. This metal cap 3 is of conventional construction so that it is shown only diagrammatically. Ordinarily, the lacquer coating is applied only to the top wall of the cap 3, but it may also be applied to its skirt. The interior of the cap 3 is usually provided with a gasket made of cork or the like.

As shown in Fig. 2, the central portion of the strip stamp 4, between the lines 5 and 6, is coated with the usual slow-setting adhesive which can penetrate the lacquer coating of the cap 3, so as to provide the proper adhesion. The central area A of the strip stamp 4 is of sufficient length to abut the top wall of the cap 3, and also to abut the depending skirt of the cap 3. Therefore the entire area of the strip stamp 4 which contacts with the lacquer coating of the cap 3, is provided with said slow-setting adhesive.

The end areas B and C are provided with the usual quick-setting adhesive, which can adhere readily to the glass wall of the neck of the bottle.

The strip stamp is applied by the wipers of the usual machine in the ordinary manner, so that no change in manipulation and no change in the well-known machine is required. Since the adhesive on the areas B and C sets very quickly, the strip stamp is firmly maintained in position by said quick-setting adhesive, and the slow-setting adhesive in the area A is maintained with suitable pressure against the lacquered wall of the cap 3, by the quick-setting adhesive in areas B and C. Therefore, the bottle can be taken off the machine after a single operation of the wipers. After the bottle has been taken off the machine, the slow-setting adhesive sets and it produces perfect adhesion with the lacquered cap, because the quick-setting adhesive maintains the slow-setting adhe-

sive abutting the lacquer coating, under suitable pressure.

While the invention is of particular value in connection with bottles which contain whiskey and which must be provided with strip stamps under the law, the invention is not necessarily limited thereto. The container may be of any type and its wall may be made of any material to which a paper strip can be connected by a quick-setting adhesive.

When adhesive is applied to paper, in order to attach the paper to another article, the adhesive passes through two definite steps from the time that the adhesive is applied, until the adhesive has thoroughly set. The adhesive must first form the initial tacky connection. In such condition the paper strip is connected to the other article to the extent that the paper strip will not separate from the article by the curling of said paper strip. However, in such initial condition the paper strip can be separated from the cap or bottle or the like, without tearing the paper. In the second condition of the adhesive, said adhesive has set sufficiently so that the paper cannot be separated from the bottle or cap or the like, without tearing the paper. In the second condition, there may be some moisture in the adhesive and the adhesive may not be thoroughly dry.

According to my invention, the initial tacky condition is the important element, because the period of time which is required to dry the adhesive thoroughly is not important. The important factor is to fix the strip stamp properly in position, so that it will not separate by curling or the like.

As an example of the quick-setting adhesive, I refer to the well-known type which is made from sago starch. This could be diluted with water. Upon applying the strip stamp which has been coated with this adhesive to glass, the initial tacky condition is secured immediately. The time for setting said quick-setting adhesive is from 20 seconds to 30 seconds.

As an example of the slow-setting adhesive, I refer to the lacquer type of adhesive which must be diluted with a special solvent thinner. The initial tacky condition is secured in a period of 50 seconds to 70 seconds, and the time of setting to the second condition is from 4 minutes to 6 minutes.

The above periods of time are estimated upon the use of a very thin coating of adhesive. If a thicker coating of adhesive is required, a longer period of time is required for evaporating the liquid ingredient or ingredients of the adhesive. The quick-setting adhesive is designated commercially as No. 45 Special, and the slow-setting adhesive is designated commercially as D3–A.

The above example is merely given by way of illustration and the invention is not limited thereto.

Generally speaking, a quick-setting adhesive is one which will have an initial tack immediately upon application, and a slow-setting adhesive is one which requires from 50 seconds to 70 seconds before the initial tacky condition is secured.

Whenever I refer to a strip stamp in the claims, I include all similar devices made of paper and other materials, which adhere to the seal of a container, and also to the wall of the container below the seal, in order to detect the removal of the seal or sealing device. The wall of the container may be made of glass, porcelain, of various synthetic resins, of various plastics, such as cellulose acetate, etc. These equivalent materials are included in the claims when I refer to glass. The wipers of the machine downwardly pull the depending portions of the strip stamp by a downward movement, while pressing said depending portions against the glass wall of the bottle. The quick-setting adhesive has sufficient adhesion to the glass wall, prior to the setting of said quick-setting adhesive, to maintain the top portion of the strip stamp pressed against the top of the cap. When I refer to a strip stamp in a claim or claims, I include similar devices which will indicate when a closure device has been ruptured or removed.

I have described a preferred embodiment of my invention, but it is clear that numerous changes and omissions can be made without departing from its spirit.

I claim:

1. A strip stamp having layers of quick-setting adhesive at its end-portions and a layer of slow-setting adhesive intermediate said layers of quick-setting adhesive, all said layers being on the same face of said strip stamp, said slow-setting adhesive being adherent to a lacquered metal surface so that it can connect the respective part of the strip stamp to the lacquered surface of a metal member, said quick-setting adhesive forming an initial tacky connection with glass substantially immediately, so that when the end-portions of the stamp are applied to glass, said end-portions are then held to said glass substantially immediately solely by said initial tacky connection, and said end-portions will not curl away from the glass.

2. A strip stamp having a layer of slow-setting adhesive on its central portion, and layers of quick-setting adhesive at its end portions, said slow-setting adhesive being adapted to connect said central portion to a lacquered metal sealing member, said quick-setting adhesive being adapted to connect said end-portions to non-metallic material.

3. A strip stamp having a layer of slow-setting adhesive on its central portion, and layers of quick-setting adhesive at its end portions, said slow-setting adhesive being adapted to connect said central portion to a lacquered metal sealing member, said quick-setting adhesive being adapted to connect said end-portions to non-metallic material, said slow-setting adhesive having an initial tack in 50–70 seconds, said quick-setting adhesive having an immediate initial tack.

4. In combination, a container having a glass wall and a sealing member which is made of lacquered metal, a strip stamp having its top portion connected to said lacquered sealing member by a slow-setting adhesive, the end portions of said strip stamp being connected by a quick-setting adhesive to said glass wall below said sealing member.

SIDNEY T. CARTER.