March 24, 1942. G. F. JACKSON 2,277,108

METHOD OF ATTACHING OPENER KEYS TO END CLOSURES OF TEAR STRIP CANS

Filed Aug. 7, 1940

FIG. 1

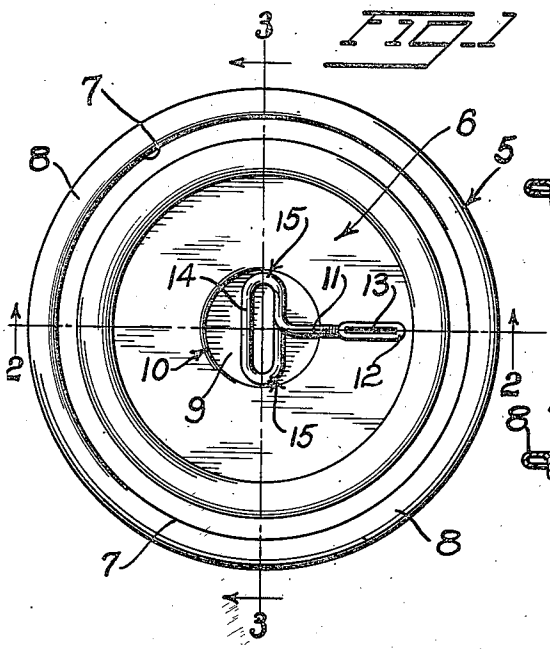


FIG. 3

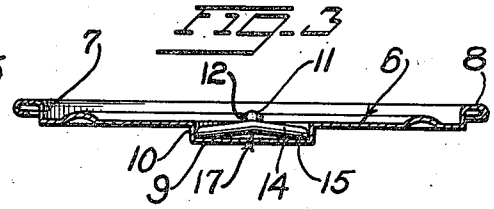


FIG. 4

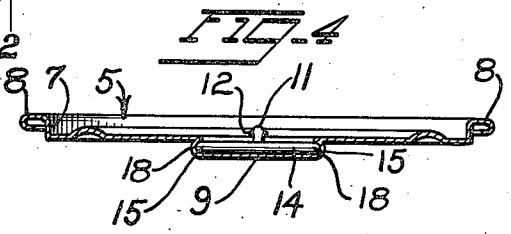


FIG. 2

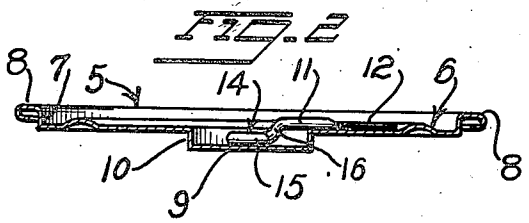


FIG. 5

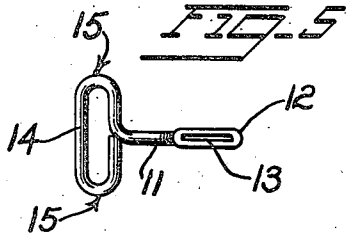


FIG. 7

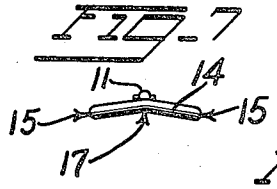


FIG. 6

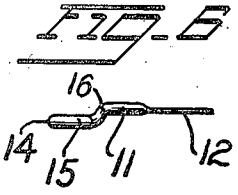
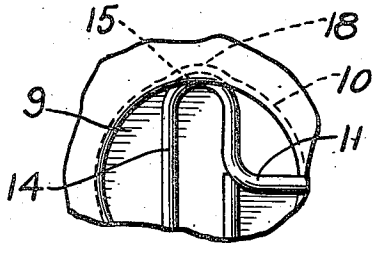


FIG. 8



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UNITED STATES PATENT OFFICE

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METHOD OF ATTACHING OPENER KEYS TO END CLOSURES OF TEAR STRIP CANS

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Application August 7, 1940, Serial No. 351,676

2 Claims. (Cl. 29—148)

The invention relates generally to metallic receptacles of the well known tear strip type which are opened by tear strip winding keys temporarily secured to the receptacles during the manufacture thereof, and it primarily seeks to provide a novel method of effecting the temporary attachment of said keys.

Metallic receptacles of the character stated including the end closures thereof frequently are internally, or externally, or both internally and externally coated with lacquer, or similar protective coatings and the tear strip winding keys usually are attached by soldering or welding. It has been found that the application of heat incident to this key attachment by soldering or welding is injurious to said protective coatings, and the present invention seeks to remedy this objectionable condition by providing a novel method of attachment enabling the keys to be temporarily held in place on the containers by retaining friction and without the necessity of applying heat.

In its more detailed nature the invention resides in the novel method consisting in providing a container portion having an upright wall defined, tear strip winding key head receiving recess, forming a tear strip winding key with a head portion shaped in the form of a shallow V dimensioned to slip freely into said depression, placing said key head in said depression and straightening the shallow V to cause the ends thereof to impinge or indent in the depression defining wall portions and effect temporary attachment of said key.

Another object of the invention is to provide the novel combination of a metallic receptacle portion having a tear strip winding key receiving recess therein preferably but not necessarily in the bottom end closures and defined by upright wall portions, and a tear strip winding key having a rigid head including end portions temporarily secured in said recess by impingement in said recess defining wall portions effected by straightening out of previously bent portions of said key head.

Another object of the invention is to provide an end closure and tear strip winding key combination of the character stated in which the key is offset so that the head only thereof is mounted in the receiving recess and the remainder of the key closely overlies the portion of the end closure surrounding said recess.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by following the detailed description, the appended claims, and the several views illustrated in the accompanying drawing.

In the drawing:

Figure 1 is a plan view illustrating a metallic receptacle end closure with a tear strip winding key inserted, but not secured, in a central depression therein.

Figure 2 is a vertical cross section taken on the line 2—2 on Figure 1.

Figure 3 is a vertical cross section taken on the line 3—3 on Figure 1.

Figure 4 is a view similar to Figure 3 and illustrates the key as temporarily affixed to the end closure by a straightening out of the rigid head portion of the key.

Figure 5 is a plan view of the key per se.

Figure 6 is a side elevation of the key per se.

Figure 7 is a left end elevation of the key illustrated in Figure 6.

Figure 8 is an enlarged fragmentary plan view illustrating the manner in which an end of the right key head impinges in the wall portion defining the key head receiving recess of the end closure.

In the example of embodiment of the invention herein disclosed the tear strip winding key is illustrated as temporarily affixed to an end closure of a metallic receptacle, preferably the bottom end closure. It is to be understood, however, that the key may be temporarily attached to a suitable receiving recess formed in any portion of the metallic receptacle with which it is to be associated.

The end closure is generally designated 5 and includes the usual main depression 6 forming an upright wall or heel 7 for snugly fitting within the container body to be closed, said wall being surrounded by the usual securing flange portion 8.

The end closure is also provided with a depression 9, preferably formed in the center thereof, and defined by an upright wall 10. This recess or depression 9 is intended to receive the head of the tear strip winding key, and while it is preferred that it be disposed centrally of the end closure, it can be positioned off-center if desired, or, in fact, can be formed in any other portion of the container as hereinbefore stated.

The tear strip winding key shown in detail in Figures 5, 6 and 7 includes a shank portion 11, a flat tear strip engaging body portion 12 which is longitudinally slotted in the usual manner as at 13, and a transverse head portion 14 terminating in end loops 15. The head 14 is in

the form of a rigid closed loop and is so dimensioned that the end extremities or loop portions 15 thereof are readily receivable in the recess 9 but lie very close to the recess defining wall portions 10 in the manner clearly illustrated in Figures 1 and 3 of the drawing.

The key shank portion 11 is offset as at 16 so that the head 14 can lie in the recess 9 with the shank and body portions 11, 12 projecting radially over and in close proximity to the portion of the end closure surrounding said recess, in the manner illustrated in Figures 1 and 2 of the drawing. It will be noted also by reference to Figures 3 and 4 of the drawing that the rigid head 14 is initially shaped in the form of a very shallow V as at 17.

In practicing the method involved in the invention and in forming the article combination herein claimed, the key head 14 is placed in the end closure recess 9 in the manner illustrated in Figures 1 and 2 of the drawing, after which the shallow V of the head is straightened so as to increase the length of the head and cause the end extremities 15 thereof to impinge or detent in the wall portions 10 which define the end closure recess 9 in the manner illustrated at 18 in Figures 4 and 8 of the drawing.

By thus straightening the shallow V of the key head and causing the ends thereof to displace limited area wall portions of the recess defining wall 10, the key is temporarily retained in the recess without the necessity of soldering or welding, and by this means application of heat, which has been found injurious to lacquer or similar protective coatings applied internally or externally, or both internally and externally, to the receptacle end closures or other portions, is avoided. By merely lifting up on the free end or body portion 12 of the key a person intending to effect an opening of the receptacle to which the key is temporarily affixed can readily remove the key from the mounting recess. This removal of the key is facilitated by flattening the body portion 12 of the key in the manner illustrated in Figures 2, 5 and 6 of the drawing, because by this means a slight space is provided between said flat body and the portion of the end closure which it overlies.

It is of course to be understood that the details of structure and arrangement of parts may be variously changed and modified without departing from the spirit and scope of my invention.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is—

1. The method of temporarily securing a tear strip winding key to a metallic receptacle which consists in forming an upright wall defined tear strip key portion receiving recess in the receptacle, forming a tear strip winding key with a head portion shaped in the form of a shallow V dimensioned to slip freely into and extend transversely across said depression with its end extremities proximate said upright recess defining wall, placing said key head in the recess, and applying force to and straightening the V to cause said end extremities to indent in said wall and effect temporary attachment of said key.

2. The method of temporarily securing a tear strip winding key to a metallic receptacle which consists in forming an upright wall defined tear strip key portion receiving recess in the receptacle, forming a tear strip winding key with a head portion shaped in the form of a shallow V dimensioned to slip freely into and extend transversely across said depression with its end extremities proximate said upright recess defining wall and with a shank portion flattened to provide a finger hold and offset to lie flat against receptacle portions outside the recess, and applying force to and straightening the V to cause said end extremities to indent in said wall and effect temporary attachment of said key.

GEORGE F. JACKSON.