Dec. 17, 1968 J. HENCHERT 3,416,221

METHOD OF PRE-FORMING AND ATTACHING METAL PULL TAB TO METAL CAN END RIVET FORMATION

Filed Nov. 1, 1963 2 Sheets-Sheet 1

FIG. 1

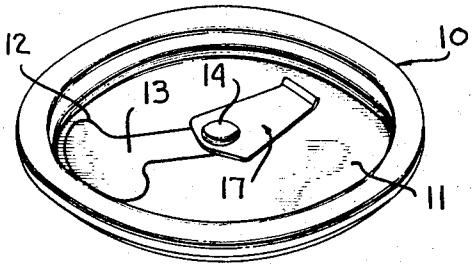

FIG. 2

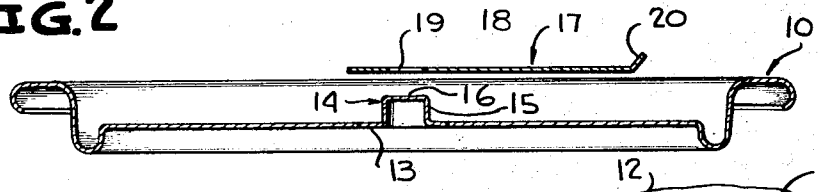

FIG. 3

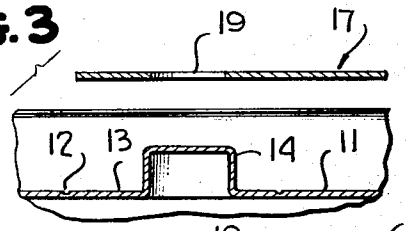

FIG. 4

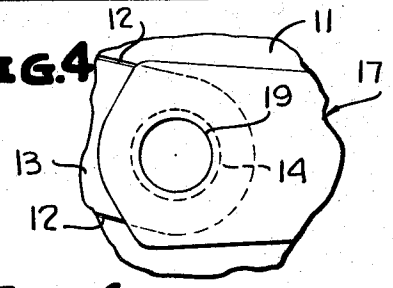

FIG. 5

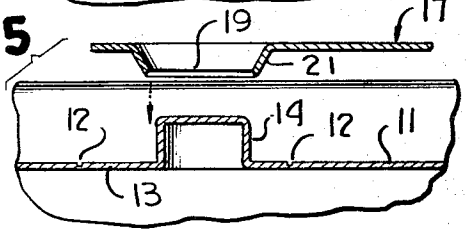

FIG. 6

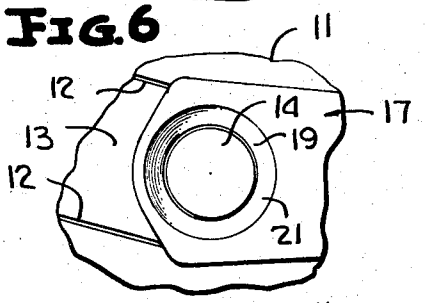

FIG. 7

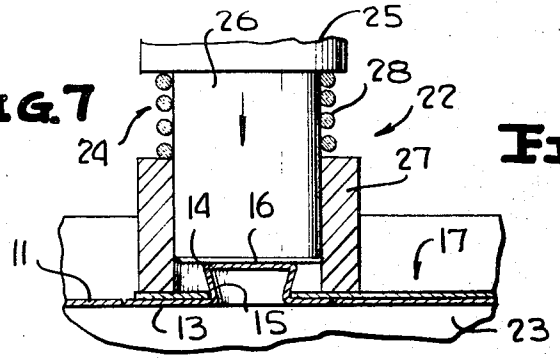

FIG. 9

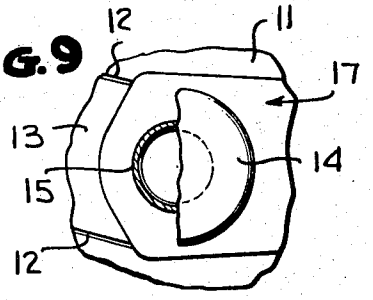

FIG. 8

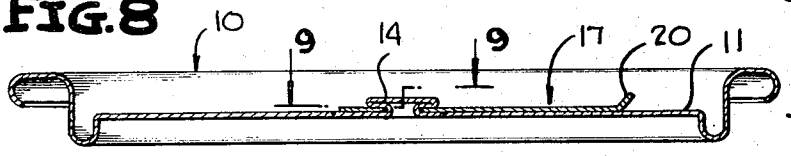

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FIG. 11

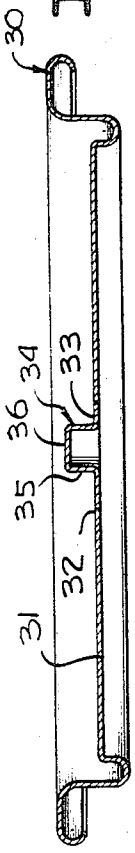


FIG. 12

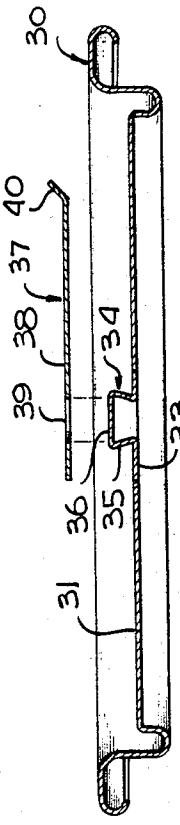


FIG. 13

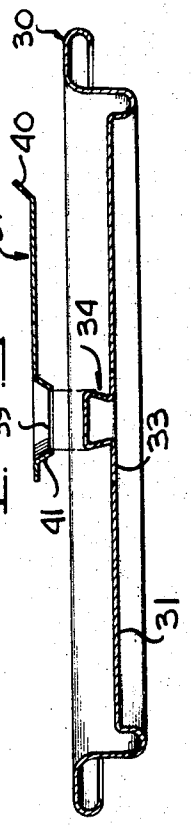


FIG. 15

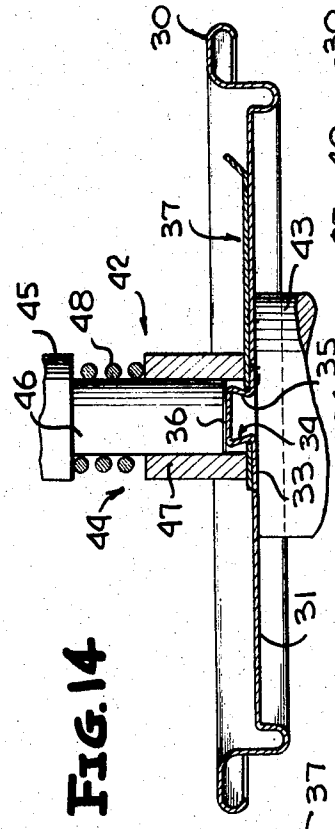


FIG. 16

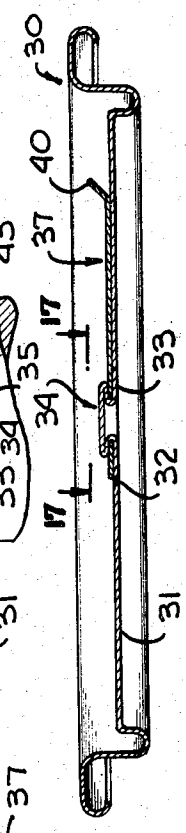


FIG. 10

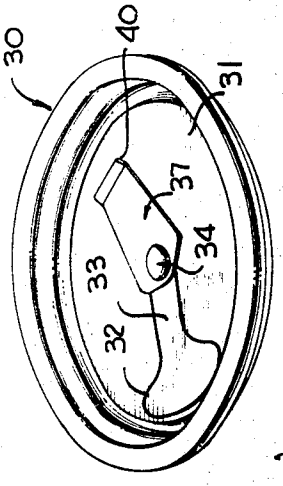


FIG. 14

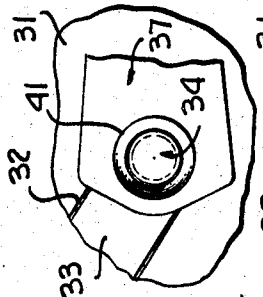
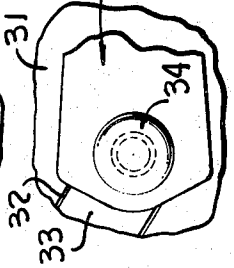


FIG. 17



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3,416,221

METHOD OF PRE-FORMING AND ATTACHING METAL PULL TAB TO METAL CAN END RIVET FORMATION

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Filed Nov. 1, 1963, Ser. No. 320,763
9 Claims. (Cl. 29—509)

This invention relates in general to new and useful improvements in methods of making easy opening containers, and more particularly relates to a novel method of making a connection between a metal pull tab and a tear strip portion of a can end.

At the present time containers are being provided with easy opening ends which have portions thereof defined by tear strips which are removable. In order to facilitate the attachment of pull tabs to the tear strips without perforating the can ends, the tear strips are provided with integral rivets which are utilized to secure the pull tabs to the tear strips. However, difficulties have been encountered in the utilization of such rivets in that there is not available sufficient metal for the rivets to sufficiently hold the pull tabs against any accidental removal from the tear strips during the opening of the cans. This invention relates to a novel manner of securing a pull tab to a tear strip utilizing an integral rivet wherein the pull tab is securely attached to the tear strip by means of the rivet.

At the present time a tubular rivet is formed and the pull tab is provided with a sufficiently large opening to be easily positioned over the rivet, after which the rivet is upset or deformed so as to flow outwardly over the pull tab around the opening therein. There is no gripping action of the pull tab on the rivet and the rivet functions solely to clamp the pull tab in place.

In accordance with this invention, it is proposed to provide a novel method of attaching a pull tab to a tear strip utilizing an integral rivet on the tear strip wherein prior to the crimping of the tubular rivet over the pull tab, the pull tab is caused to tightly grip the base of the rivet, thereby greatly enhancing the connection between the pull tab and the tear strip.

Yet another object of this invention is to provide a novel method of making a connection between a pull tab and a tear strip utilizing a rivet integral with the tear strip, the rivet being shaped so as to have a base portion joined to the tear strip of a smaller larger diameter than the outer end of the rivet, and the pull tab being provided with an opening which corresponds generally to the diameter of the rivet at the base thereof, after which the opening in the pull tab is temporarily expanded by a flanging operation so that the pull tab may be passed over the larger outer end of the rivet, followed by a re-forming operation on the pull tab to flatten out the flange thereof and decrease the diameter of the opening so that the rivet is firmly gripped at the base thereof by the pull tab and the pull tab would be retained on the rivet even without the customary final crimping thereof.

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

In the drawings:

FIGURE 1 is a top perspective view of a can end formed in accordance with this invention.

FIGURE 2 is a vertical sectional view on a large scale through the can end of FIGURE 1 prior to the attachment of the pull tab thereto.

FIGURE 3 is an enlarged fragmentary sectional view showing the relative sizes of the rivet and the opening in the pull tab.

FIGURE 4 is an enlarged fragmentary plan view wherein the relative dimensions of the opening and the rivet are clearly shown.

FIGURE 5 is an enlarged fragmentary sectional view similar to FIGURE 3 and shows the pull tab after the flanging thereof surrounding the opening to effect an increase in diameter in the opening.

FIGURE 6 is a plan view of the pull tab and rivet arrangement of FIGURE 5 and shows the relative dimensions of the opening and the rivet.

FIGURE 7 is a schematic view with parts in section of an apparatus which first re-forms the pull tab and then stakes the rivet.

FIGURE 8 is a vertical sectional view similar to FIGURE 2 and shows the assembled pull tab and can end.

FIGURE 9 is an enlarged fragmentary plan view with parts broken away and shown in section of the assembled can end and pull tab.

FIGURE 10 is a top perspective view of another can end formed by a slightly modified method.

FIGURE 11 is a vertical sectional view on a large scale taken through the can end of FIGURE 10 prior to the attachment of the pull tab thereto and with the rivet being of a cylindrical shape.

FIGURE 12 is a sectional view through the can end and pull tab showing the rivet after an initial staking operation and the pull tab prior to the shaping thereof.

FIGURE 13 is a sectional view similar to FIGURE 12 and shows the pull tab after the opening therethrough has been enlarged by a flanging operation.

FIGURE 14 is a fragmentary plan view showing the pull tab loosely positioned with respect to the rivet, the view being taken generally along the line **14—14** of FIGURE 13.

FIGURE 15 is a vertical sectional view through the assembled can end and pull tab and shows apparatus in position, the apparatus having re-formed the pull tab and in position for crimping the rivet.

FIGURE 16 is a sectional view through the assembled can end and pull tab.

FIGURE 17 is a fragmentary plan view taken generally along the line **17—17** of FIGURE 16 and shows the general details of the completed pull tab to can end tear strip assembly.

Referring now to the drawings in detail, it will be seen that there is illustrated in FIGURES 1 and 2 a can end which, with the exception of being particularly formed to be of the easy opening type, is a conventional type of can end. This can end is generally referred to by the numeral **10** and as far as this invention is concerned, the can end **10** includes an end panel **11** which has been formed with a score line **12** defining a tear strip **13** which is particularly shaped for the dispensing of liquids therefrom. The tear strip **13** is provided adjacent one end thereof, the starting end of the tear strip, with a tubular rivet **14**, as is best shown in FIGURE 2. The tubular rivet **14** includes an upstanding cylindrical wall **15** and an end wall **16**.

In accordance with this invention, it is proposed to utilize the tubular rivet **14** in the securement of a pull tab, generally referred to by the numeral **17**, to the tear strip **13** to facilitate the removal of the tear strip **13**. The pull tab **17** is illustrated as including a flat body portion **18** having a rivet receiving opening **19** therethrough adjacent one end thereof, and the opposite end of the body

18 terminates in an upstanding flange 20 which defines a grip element to facilitate the lifting of the pull tab. It is to be understood that in accordance with this invention, the structural details of the pull tab 17 may be varied.

It will be apparent from FIGURES 3 and 4 that the diameter of the rivet receiving opening 19 is such that when the pull tab 17 is initially formed, it is not receivable over the rivet 14. It has been found that when the rivet receiving opening of a pull tab is formed of sufficient size to readily receive a rivet, a relatively loose fit results between the rivet and the pull tab. After the rivet is crimped or headed to secure the pull tab to the tear strip, the pull tab is secured in place solely by the head of the rivet. A relatively large force is required to initiate tearing the tear strip 13 from the end panel 11 and when this force is applied by lifting the free end of the pull tab, considerable pressure is concentrated against the head of the rivet. Should the head on the rivet be improperly formed or weakened during formation, the pull tab may be torn from the rivet prior to the actual opening of the can of which the can end 10 is a part, thereby defeating its purpose.

In accordance with this invention it is proposed to obtain a mechanical interlock between the pull tab 17 and the rivet 14 independent of and in addition to the crimping or heading of the rivet 14. In order to accomplish this, the rivet receiving opening, as mentioned above, is initially sized so that it wll not receive the rivet 14. In order to assemble the pull tab 17 on the rivet 14, the portion of the pull tab 17 surrounding the opening 19 is flared downwardly in the manner shown in FIGURE 5. This downward flaring of the pull tab 17 results in the formation of a downwardly flaring flange 21 and an increase in the diameter of the rivet receiving opening 19. It will be apparent from FIGURES 5 and 6 that the diameter of the rivet receiving opening 19 is thus increased in size to readily receive the rivet 14.

The pull tab 17, being temporarily deformed in the manner shown in FIGURES 5 and 6, then may be loosely assembled over the rivet 14. Reforming or flattening the pull tab 17 back to its original shape shown in FIGURES 2 and 3 results in straightening or removing the flange 20 and decreasing the diameter of or resizing the opening 19 to approximately that shown in FIGURE 3. Since the diameter of the opening 19 is less than that of the rivet 14, it will be readily apparent that flattening the pull tab 17 will compress and construct or neck in the cylindrical wall 15 of the rivet formation at the base thereof in the manner clearly shown in FIGURE 7. This necking in or reforming of the rivet 14 at the base thereof by the reformation of the pull tab causes the previous cylindrical wall 15 to have an upwardly flared configuration, such as would result from a prestaking operation on the rivet. The rivet 14 is then finally crimped over or headed to firmly clamp the pull tab 17 against the end panel 11, as is clearly shown in FIGURES 8 and 9.

It will be readily apparent from the foregoing description that flattening or reforming the pull tab 17 to the position shown in FIGURE 7, forms a strong positive mechanical connection between the pull tab and the side wall of the rivet 14. In certain instances this connection may be sufficient for removing the tear strip 13 by the pull tab 17 without any further deforming operation on the rivet 14 to provide it with a head. However, the primary purpose of this invention is to provide a dual connection for attaching the pull tab to the rivet. It will be apparent that by providing a mechanical connection between the pull tab and the rivet independent of and supplemental to the clamping action of the rivet on the pull tab, the possibility of pulling the pull tab off the rivet during the opening operation on the can end will be greatly decreased or eliminated.

Reference is once again made to FIGURE 7 wherein

there is shown apparatus for effecting both the re-forming of the pull tab and the crimping or heading of the rivet. This apparatus, which is generally referred to by the numeral 22, includes a back-up member 23 on which the end panel 11 is seated with the rivet 14 overlying the back-up member 23. It is unnecessary for the back-up member 23 to have a portion projecting into the rivet 14 because when the pull tab 17 is re-formed, it will firmly grip the base end of the rivet 14 and serve to support the rivet during the crimping or final staking of the rivet. However, if desired, the back-up member 23 could be provided with a short projection which would be received within the rivet 14.

The apparatus 22 includes a punch unit which is generally referred to by the numeral 24. The punch unit 24 includes a reciprocating head 25 which may be a part of a conventional punch press. The head 25 carries an inner punch member 26 on which there is mounted for relative sliding movement an outer punch member 27. The outer punch member 27 is tubular and is of a diameter to clear the rivet 14 when it is in its finally crimped or staked position of FIGURE 8. The outer punch member 27 is secured on the inner punch member 26 for limited travel in a conventional manner not shown. The outer punch member 27 is resiliently retained in an outer position with respect to the inner punch member 26 by means of a coil spring 28 which encircles the inner punch member 26 and bears against the head 25 and the outer punch member 27.

In the operation of the punch unit 24, the head 25 is brought down in a normal punching movement with the outer punch member 27 engaging the pull tab 17 around the rivet 14. The pressure exerted by the outer member on the pull tab 17 is sufficient to re-form the pull tab 17 by the flattening of the flange 21. As has been stated above, the flattening of the flange 21 results in the reduction of the diameter of the rivet receiving opening 19 so that the metal of the pull tab 17 surrounding the opening 19 will tightly grip the rivet 14 at the base thereof and form a mechanical connection therewith. It will be readily apparent that the relative diameters of the rivet 14 and the rivet receiving opening 19 is such that a definite constriction of the rivet 14 at the base thereof results and the rivet assumes a prestaked configuration. Further downward movement of the head 25 results in the compressing of the spring 28 while the punch member 26 continues to move downwardly. Since the rivet 14 is already initially staked by the necking in operation, and the body 15 of the rivet is upwardly and outwardly flared, a downward force on the end wall 16 of the rivet by the inner punch member 26 results in the crimping or staking of the rivet 14 in the manner clearly shown in FIGURE 8. The mechanical interlock between the rivet 14 and the pull tab 17 is now complete.

From the foregoing description it will be evident that the invention provides for a better distribution of the force applied to the rivet formation by the pull tab when lifted so that the entire force is not concentrated on the head of the rivet.

Dividing the force between the constriction and head formations of the rivet provides a dual connection that reduces the force applied to the head portion of the rivet. This contributes to avoiding separation of the pull tab from the rivet during the lifting operation that might otherwise occur.

It is to be understood that the relative proportions of the can end, the rivet and the pull tab have been exaggerated so as to clearly illustrate the invention and the manner in which the pull tab and rivet are deformed.

Referring now to FIGURE 10 in particular, it will be seen that there is illustrated another can end, which is generally referred to by the numeral 30. The can end 30 is identical to the can end 10 and differs therefrom only in the relative dimensions of the opening in the pull tab secured thereto. Like the can end 10, the can end 30 in-

cludes an end panel 31 which has been formed with a score line 32 defining a tear strip 33 which is particularly shaped for the dispensing of liquids through the can end. The tear strip 33 is provided adjacent one end thereof, the starting end of the tear strip, with a tubular rivet 34, as is best shown in FIGURE 2. The tubular rivet 34 includes an upstanding cylindrical wall 35 and an upper end wall 36.

In accordance with this invention, the rivet 34 is utilized in the securement of a pull tab, generally referred to by the numeral 37, to the tear strip 33 to facilitate the removal of the tear strip 33. The pull tab 37, like the pull tab 17, is illustrated as including a flat body portion 38 having a rivet receiving opening 39 therethrough adjacent one end thereof, and the opposite end of the body 38 terminates in an upstanding flange 40 which defines a grip element to facilitate the lifting of the pull tab 37 and the exertion of a tear strip removing pull thereon. It will be readily apparent that the structural details of the pull tab 37 may be varied as desired.

The rivet receiving opening 39 is of a diameter to snugly receive the tubular rivet 34 as it appears in FIGURE 11. However, the opening 39 would have to be of a slightly larger diameter than the rivet 34 if it were to be assembled on the rivet 34 in the conventional manner. It has been found that when there is a relatively loose fit between the pull tab and the rivet prior to the crimping of the rivet, the necessary mechanical connection between the pull tab and the tear strip is not always obtainable and as a result, when the pull tab is lifted in an opening operation, in certain instances the pull tab will pull off of the rivet without opening the can.

In accordance with this invention, by making the opening 39 slightly smaller than the diameter of the rivet 34, or at least of a diameter to snugly receive the rivet 34; a mechanical connection between the rivet and the pull tab is obtained exclusive of the crimping over of the rivet to clamp the pull tab in place. In order to obtain a secure interlocking between the pull tab and the rivet 34 prior to the crimping or final staking of the rivet, the rivet 34 is initially partially staked to appear as is shown in FIGURE 12. It is to be noted that the cylindrical wall 35 of the original base of the rivet 34 has been foreshortened and flared away from the end panel 31 while the diameter of the end wall 36 has been increased. It is now obvious that the rivet receiving opening 39 cannot possibly receive the rivet 34 in the original form of the pull tab 37, as is shown in FIGURE 12.

In order to position the pull tab 37 on the partially staked rivet 34, the pull tab 37 is mechanically worked by means of a suitable punch mechanism to have a downwardly flaring flange 41 which defines the opening 39. Due ot the downward flaring of the pull tab 37 surrounding the opening 39, the diameter of the opening 39 is increased so as to be of a size to be received over the outer end of the rivet 34. This is clearly shown in FIGURES 13 and 14.

The pull tab 37 is then positioned on the rivet 34, after which the deformed pull tab 37 is re-formed, as is clearly shown in FIGURE 15. By flattening out the pull tab 37 to eliminate the flange 41, the diameter of the rivet receiving opening 39 is decreased back to its original diameter of FIGURE 12 with the result that the pull tab 37 rests upon the end panel 31 and tightly grips the body 35 of the rivet 34 at the base thereof where the rivet 34 joins the end panel 31. The rivet 34 is now mechanically gripped by the pull tab 37 to the extent where a reasonable number of tear strips 33 could be removed utilizing the pull tab 37 without a further staking or crimping of the rivet 34. However, the mechanical connection between the pull tab 37 and the tear strip 33 is increased by exerting a downward pressure on the end wall 36 of the rivet 34 to the final position shown in FIGURE 16. In this position, the rivet 34 is tightly gripped by the pull tab 37 and the clamped portion of the rivet 34 serves to securely clinch the pull tab 37 against the tear strip 33. The mechanical connection between the pull tab 37 and the tear strip 33 shown in FIGURE 16 is such that the possibility of the pull tab 37 being torn from the tear strip 33 prior to the tearing of the tear strip 33 from the end panel 31 is eliminated.

In order to accomplish the securement of the pull tab 37 to the tear strip 33, an apparatus, generally referred to by the numeral 42 is utilized. The apparatus 42 includes a back-up member 43 on which the end panel 31 is seated with the rivet 34 overlying the back-up member 43. It is not necessary that the back-up member 43 have a portion which projects into the rivet 34 in that when the pull tab 37 is re-formed, it will firmly grip the base end of the rivet 34 and serve to support the same during the crimping or final staking of the rivet. However, if desired, the back-up member 43 could be provided with a short projection which would be received within the rivet 34.

The apparatus 42 includes a punch unit which is generally referred to by the numeral 44. The punch unit 44 includes a reciprocating head 45 which may be a part of a conventional punch press. The head 45 carries an inner punch member 46 on which there is mounted for relative sliding movement an outer punch member 47. The outer punch member 47 is tubular and is of a diameter to clear the rivet 34 when it is in its finally crimped position of FIGURE 16. The outer punch member 47 is secured on the inner punch member 46 for limited travel in a conventional manner not shown. The outer punch member 47 is resiliently retained in a projecting position with respect to the inner punch member 46 by means of a coil spring 48 which encircles the inner punch member 46 and bears against the head 45 and the outer punch member 47.

In the operation of the punch unit 44, the head 45 is brought down in a normal punching movement with the outer punch member 47 engaging the pull tab 37 around the rivet 34. The pressure exerted by the outer punch member on the pull tab 37 is sufficient to re-form the pull tab 37 by the flattening of the flange 41. As has been stated above, the flattening of the flange 41 results in the reduction of the diameter of the opening 39 so that the metal of the pull tab 37 surrounding the opening 39 will grip the rivet 34 at the base thereof and form a mechanical connection therewith. Further downward movement of the head 45 results in the compressing of the spring 48 while the punch member 46 continues to move downwardly and having engaged the end wall of the rivet 34, and since the rivet 34 is already initially staked so that the body 35 thereof is outwardly flared, this downward force on the end wall 36 results in the crimping of the rivet 34 in the manner clearly shown in FIGURE 16. The mechanical interlock between the rivet 34 and the pull tab 37 is now complete.

It is to be understood that the rivet 34, as shown in FIGURE 11, may be drawn from the metal of the end panel 31 in any desired manner and the rivet 34 will normally be completely shaped, as shown in FIGURE 11, prior to the scoring of the end panel 31 to form the score line 32 which defines the tear strip 33. It is also to be understood that the relative proportions of the rivet 34, the thickness of the end panel 31 and the pull tab 37 and the depth of the flange 41 have been exaggerated relative to each other so as to provide a mechanical connection shown in FIGURE 16 which is positive as to details. The height of the rivet 34, as well as the depth of the flange 41, will be less than that illustrated.

Although only two preferred embodiments of the invention have been specifically illustrated and described herein, it is to be understood that minor variations may be made in the connection and method of this invention within the spirit and scope therof, as defined by the appended claims.

I claim:

1. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular

rivet having a free end and a base end connected to the container member with the rivet free end being of a larger diameter than the rivet base end, forming a flared flanged opening in the pull tab of a diameter to pass over the rivet free end, positioning the pull tab on the rivet, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

2. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having a free end and a base end connected to the container member with the rivet free end being of a larger diameter than the rivet base end, forming an opening in the pull tab of a diameter to snugly receive the rivet base end, deforming the pull tab around the opening therein to define a flared flange surrounding the opening with the opening being offset from the original position thereof and the diameter of the opening increased to receive the rivet free end, positioning the pull tab on the rivet, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

3. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having a free end and a base end connected to the container member with the rivet free end being of a larger diameter than the rivet base end, forming an opening in the pull tab of a diameter to snugly receive the rivet base end, deforming the pull tab around the opening therein to define a flared flange surrounding the opening with the opening being offset from the original position thereof and the diameter of the opening increased to receive the rivet free end, positioning the pull tab on the rivet flange first, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

4. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having a free end and a base end connected to the container member with the rivet free end being of a larger diameter than the rivet base end, forming a flared flanged opening in the pull tab of a diameter to pass over the rivet free end, positioning the pull tab on the rivet flange first, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

5. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having a free end and a base end connected to the container member, partially staking the rivet to flare the rivet with the diameter of the rivet free end being increased to be larger than the diameter of the rivet base end, forming a flared flanged opening in the pull tab of a diameter to pass over the rivet free end, positioning the pull tab on the rivet, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

6. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having a free end and a base end connected to the container member, partially staking the rivet to flare the rivet with the diameter of the rivet free end being increased to be larger than the diameter of the rivet base end, forming a flared flanged opening in the pull tab of a diameter to pass over the rivet free end, positioning the pull tab on the rivet flange first, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

7. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having a free end and a base end connected to the container member, partially staking the rivet to flare the rivet with the diameter of the rivet free end being increased to be larger than the diameter of the rivet base end, forming a flared flanged opening in the pull tab of a diameter to pass over the rivet free end, forming an opening in the pull tab of a diameter to snugly receive the rivet base end, deforming the pull tab around the opening therein to define a flared flange surrounding the opening with the opening being offset from the original position thereof and the diameter of the opening increased to receive the rivet free end, positioning the pull tab on the rivet, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

8. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having a free end and a base end connected to the container member, partially staking the rivet to flare the rivet with the diameter of the rivet free end being increased to be larger than the diameter of the rivet base end, forming a flared flanged opening in the pull tab of a diameter to pass over the rivet free end, forming an opening in the pull tab of a diameter to snugly receive the rivet base end, deforming the pull tab around the opening therein to define a flared flange surrounding the opening with the opening being offset from the original position thereof and the diameter of the opening increased to receive the rivet free end, positioning the pull tab on the rivet flange first, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, and crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

9. A method of securing a pull tab to a tear strip of a container member, said method comprising the steps of shaping the container member to have an integral tubular rivet having free end and a base end connected to the container member, forming an opening in the pull tab of a diameter to snugly receive the rivet base end, deforming the pull tab around the opening therein to define a flared flange surrounding the opening with the opening being offset from the original position thereof and the diameter of the opening increased to receive the rivet free end, positioning the pull tab on the rivet, flattening the flange of the pull tab to reduce the diameter of the pull tab opening with the pull tab gripping the rivet base end, said crimping the rivet free end over the pull tab around the pull tab opening to further and securely attach the pull tab to the container member.

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