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H. SCHRADER ET AL

2,365,112

RIP STRIP CONTAINER

Filed March 17, 1943

FIG. 1.

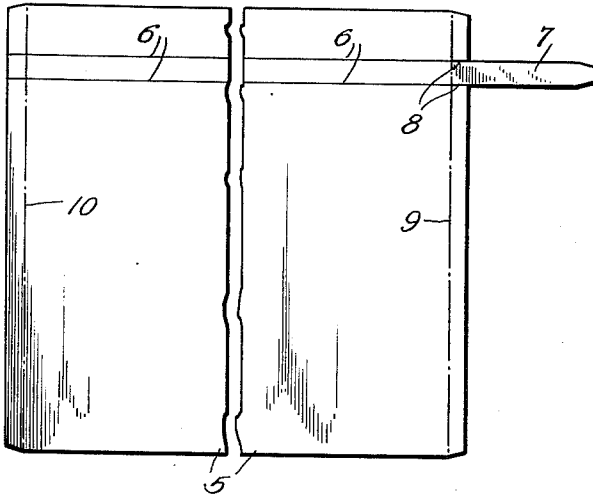


FIG. 2.

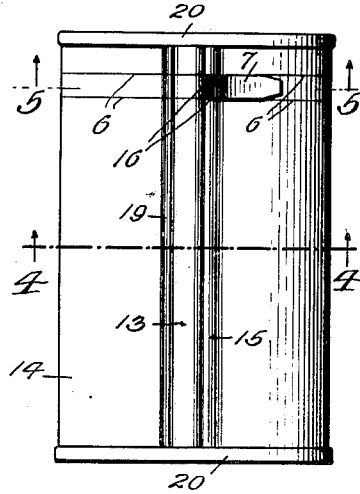


FIG. 3.

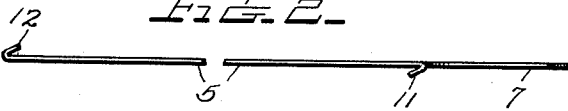


FIG. 4.

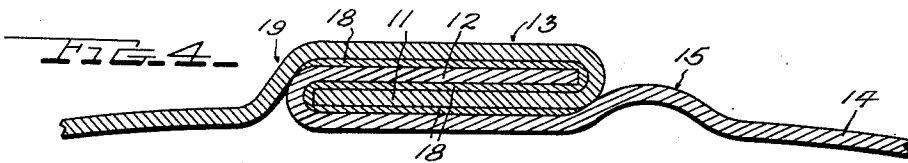
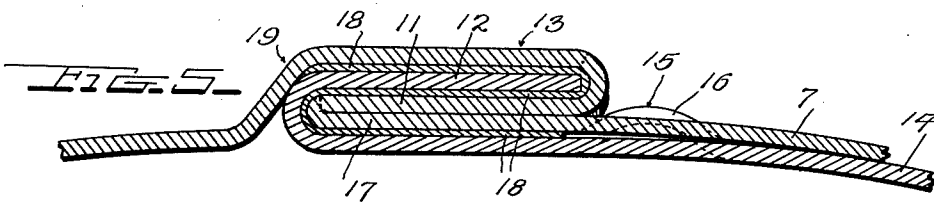


FIG. 5.



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RIP STRIP CONTAINER

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3 Claims. (Cl. 220—54)

The invention relates generally to metallic receptacles and primarily seeks to provide a container structure embodying a novel rip strip equipment.

Containers equipped with rip strips defined by score weakened lines about the container bodies and terminating in tongue extensions intended to be wound on keys for tearing out the rip strip and opening the container are well known, but in such containers some difficulty has been experienced in effecting an efficient sealing of the container at the position at which the rip strip extends from the side seam, it being necessary to break the continuity of one of the hooks in order to provide the rip strip key receiving tongue extension. This difficulty is accentuated when it is attempted to incorporate a rip strip equipment in a container having a doped side seam in which the seal is effected by the dope between the interlocking seam hook portions instead of the usual solder bonding, and it has been impractical, heretofore, to provide a satisfactory container structure of this type. It is the broad purpose of the present invention to provide a container structure in which the problems mentioned are solved and in which practical provision for the rip strip equipment is made with assurance of an efficient seal throughout the length of the seam even in cases in which the seam is doped only and not solder bonded.

An object of the invention is to provide, in a container having a side seam structure including a lock portion formed by the interlocking of inner and outer hooks, a rip strip equipment comprising score lines extending around the container body and defining the rip strip, and a winding key receiving tongue extending from the side seam in line with and as a part of the rip strip and folded upon itself in the seam so as to avoid interrupting the continuity of the seam lock portion at the position of the rip strip.

Another object of the invention is to provide a container structure of the character stated in which the side seam structure is composed of interlocking hooks extending the full length or substantially the full length of the container and is sealed by a dope incorporated between the interlocking hooks, and in which the winding key receiving tongue extends from the outer hook which is slit transversely throughout its depth so as to place the base of the tongue at the juncture of the hook with the container body and thus free said tongue so that it can readily be pulled out of the seam into which it has been folded when the container is opened by winding of the rip strip on the key.

Another object of the invention is to provide a container structure of the character stated in which the interlocked hooks are held against relative movement in a seam opening, body collaps-

ing direction by presenting the seam outwardly of the body circle, thereby providing a hook movement preventing heel or shoulder and an uninterrupted cylindrical chamber within the container, and by providing an outwardly pressed bead or rib along the side of the seam in position for cooperating with said heel or shoulder in holding the hooks in interlocked relation.

Another object of the invention is to provide a container of the character stated in which the hook confining rib or bead terminates against and at each side of the winding key receiving tongue so as to facilitate the provision of an efficient seal at the location of the tongue and also provide a clearance through which said tongue projects.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more fully 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 of a blank from which the body of the container can be formed.

Figure 2 is an end elevation of the blank with the hooks bent to shape.

Figure 3 is a side elevation of a completed container embodying the invention.

Figure 4 is an enlarged fragmentary cross sectional view taken on the line 4—4 on Figure 3.

Figure 5 is an enlarged fragmentary cross sectional view taken on the line 5—5 on Figure 3.

In the example of embodiment of the invention herein illustrated the container body is formed from a sheet metal blank as is disclosed in detail in Figures 1 and 2. The blank 5 is equipped with rip strip defining score lines 6 and a rip strip tongue extension 7 extending from one side of the blank in line with the score line defined rip strip. At the position of the rip strip tongue extension, the blank edge preferably is transversely slit throughout the depth of the hook to be formed in that edge portion of the blank as indicated at 8 so as to place the base of the tongue at the juncture of the hook with the container body proper. The base of the hook at the side of the blank from which the tongue 7 projects is indicated by the fold line 9, and the comparable fold line at the opposite side of the blank is indicated at 10, it being understood that when the hooks are folded in the usual manner along the fold lines 9 and 10 the provision of outer and inner hooks respectively designated at 11 and 12 will result. While it is preferred that the blank be slit as at 8 so as to completely free the inner extremity of the tongue 7, it should be understood that the invention is broad enough to embrace mere weakening of the body metal at the position of the slits 8 so as to permit tearing

or ripping out of the inner extremity of the tongue 7 rather than complete freeing thereof from the body metal at the hook portion.

When the can body is made up and the side seam thereof is formed by bringing the hooks together into interlocking relation in the manner illustrated in Figures 3 and 4 the completed seam generally designated 13 will be provided throughout the length of the body generally designated 14. This seam structure 13 preferably is formed in a manner for projecting the multiple thickness portions of the seam outwardly of the main body circle so as to provide an uninterrupted cylindrical interior chamber in the container. The seam is completed by bumping in the usual manner and during the formation of the seam an outwardly extended rib 15 is formed therein in position for lying closely against the side seam along one side thereof in the manner clearly illustrated in Figures 4 and 5. The rib terminates as at 16 at each side of the tongue projection 7 for a purpose that will become apparent as this description progresses.

In the formation of the side seam the tongue extension 7 is folded into the side seam in the manner clearly illustrated in Figures 3 and 5 of the drawing, the tongue being folded upon itself to form a rebent portion 17 clamped in the side seam structure and forming a continuation of the interlocked portion of the outer seam hook 11. The seam is efficiently sealed by a dope or sealing compound 18 incorporated within the interlocked portions of the hook, the dope being applied to the blank in any suitable manner prior to the making up of the finished can body.

The outward projection of the seam structure as illustrated in Figures 4 and 5 results in the provision of a heel or abutment shoulder 19 extending along that portion of the side seam opposite the position of the bead or rib 15, and the rib 15 and the shoulder 19 cooperate in so confining the hooks as to prevent separation thereof by movement of one hook out of the other.

It will be readily understood that should the winding key receiving tongue 7 be extended over the external surface of the body 14 by direct projection from the outermost thickness of the seam structure 13, that is, from the base of the tongue or the juncture thereof with the main body of the container, the continuity of the interlocked portion of the outer hook 11 would be destroyed at the position of the tongue 7 and seam leakages would occur at this point. By folding the tongue upon itself in the seam structure in the manner clearly illustrated in Figure 5 the continuity of the interlocked wall of the outer hook 11 is maintained and leakages in the seam structures at the position of the rip strip and tongue extension are avoided. When it is desired to open the container, the key is applied to the tongue 7 in the usual manner and by winding the tongue onto the key the tongue is first pulled free of the rebent fold 17 incorporated in the seam structure and then the rip strip proper will be ripped out progressively

commencing at the juncture of the tongue 7 with the main body of the container. By terminating the rib portions 15 against and at each side of the infolded tongue 7, clearance for the tongue projection is provided and the rib ends serve to crowd the infolded tongue portion and facilitate the sealing of the seam at the position thereof.

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

We claim:

1. In a container, a body having a side seam formed at least in part of interlocked hooks and score lines extending about the body thereof at the position of said interlocked hooks and defining a rip strip, and a winding key receiving tongue extending from the defined rip strip and folded upon itself in and extending freely from the side seam, said tongue being extended from the outermost one of the interlocking hooks and defined in part by slits traversing said outermost hook to and terminating at the juncture thereof with the body so as to leave the infolded part of the tongue free to be pulled out of the seam upon winding of the tongue upon a key while maintaining an unbroken exterior along said side seam.

2. In a container, a body having a side seam formed at least in part of interlocked hooks and score lines extending about the body thereof at the position of said interlocked hooks and defining a rip strip, and a winding key receiving tongue extending from the defined rip strip and folded upon itself in and extending freely from the side seam, said tongue being extended from the outermost one of the interlocking hooks and defined in part by slits traversing said outermost hook to and terminating at the juncture thereof with the body so as to leave the infolded part of the tongue free to be pulled out of the seam upon winding of the tongue upon a key while maintaining an unbroken exterior along said side seam, and in which the interlocked hooks are sealed by a dope incorporated in the seam structure.

3. A container structure as defined in claim 2 in which the seam structure formed by the interlocked hooks projects outwardly from the body so as to provide an uninterrupted cylindrical interior in the container and an abutment shoulder at one side of the seam confining the inner hook against movement inwardly out of the outer hook, in which there is included an outwardly projected rib equipment at the side of the seam opposite the abutment shoulder and cooperating therewith in confining the hooks against movement out of each other, said rib terminating against and at each side of the infolded tongue so as to provide a clearance for the projecting tongue and so as to crowd the infolded tongue portion and facilitate the sealing of the seam at the position thereof.

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