Sept. 14, 1937. E. LAXO 2,093,199

SIDE SEAM FOR SHEET METAL CONTAINERS

Filed July 28, 1936

FIG. 1.

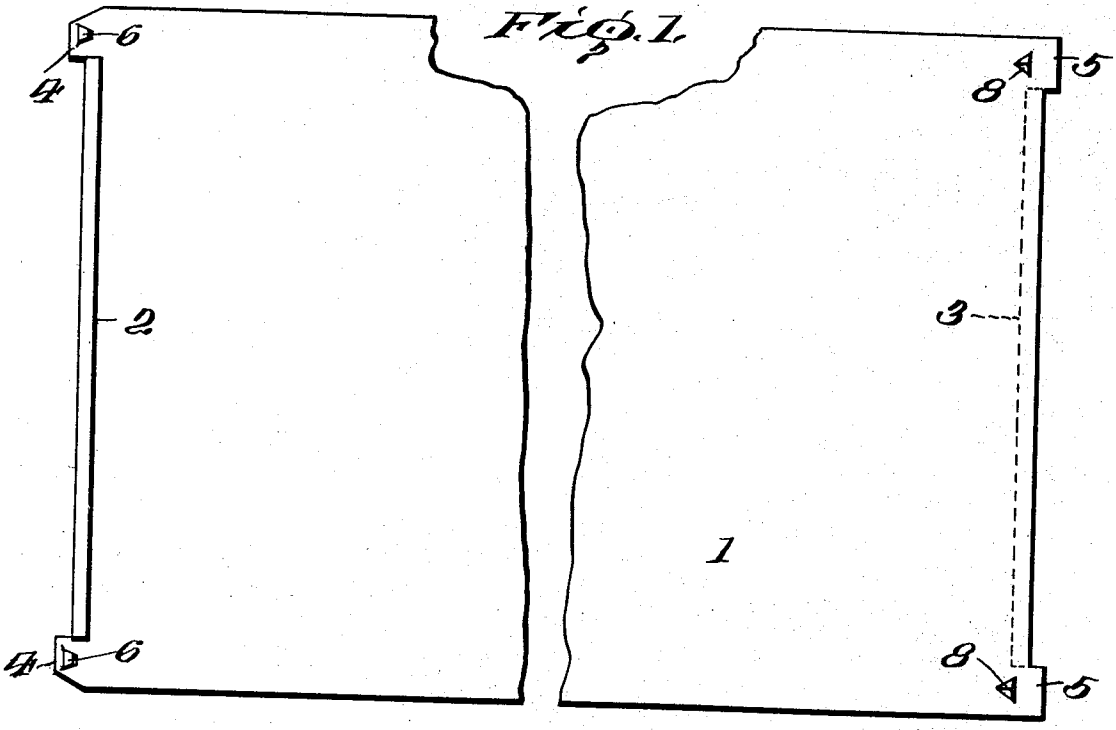


FIG. 2.

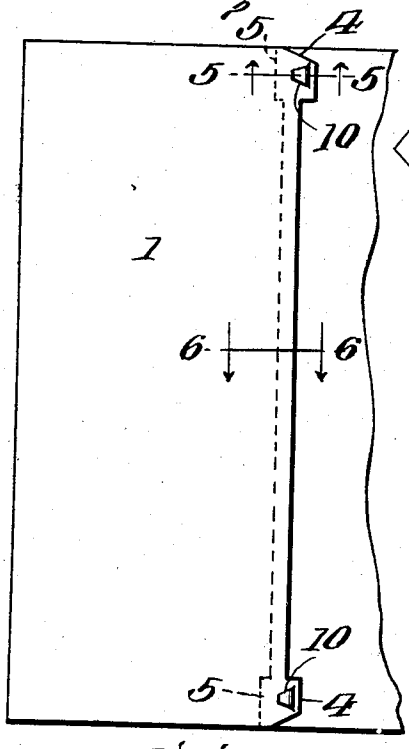


FIG. 3.

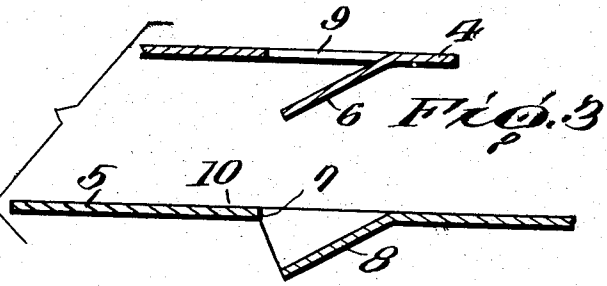


FIG. 4.

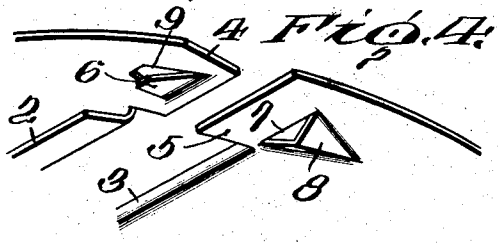


FIG. 5.

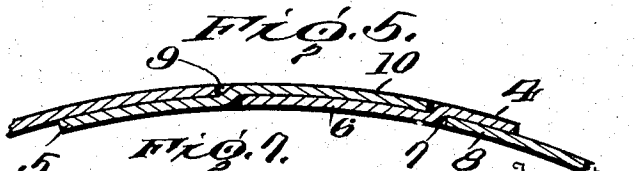


FIG. 6.



FIG. 7.

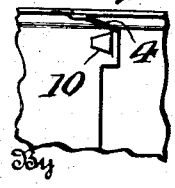
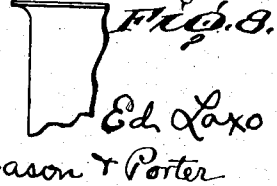


FIG. 8.



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UNITED STATES PATENT OFFICE

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SIDE SEAM FOR SHEET METAL CONTAINERS

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Application July 28, 1936, Serial No. 93,099

3 Claims. (Cl. 220—76)

The invention relates to new and useful improvements in a sheet metal container, and more particularly the side seam for the body portion thereof.

In a container where the ends are to be double-seamed to the body portion, it is the usual practice to lap the end portions of the side seam and depend solely upon the solder bond joining the same to stand the strain incident to flanging and double-seaming. The bending and expanding of the metal during these operations sometimes ruptures the solder bond causing leaks.

An object of the present invention is to provide a mechanical lock for the lap portions of the side seam which is so disposed and constructed as not to interfere with the flanging of the body and double-seaming of the ends thereto.

The invention will be more particularly explained in connection with the accompanying drawing, in which—

Figure 1 is a plan view, partly broken away, of a blank from which a container body is to be made, with the ends of the blank slit and notched for a lock and lap seam, and also cut to provide a mechanical lock for the lap portions of the side seam;

Fig. 2 is a side elevation of a can body before the ends are flanged;

Fig. 3 is an enlarged section of adjacent portions of the side seam before they are joined, showing the locking means to which the invention pertains;

Fig. 4 is an enlarged perspective view of one end of the seam, before it is joined;

Fig. 5 is an enlarged section taken on the line 5—5 of Fig. 2;

Fig. 6 is an enlarged section taken on the line 6—6 of Fig. 2;

Fig. 7 is a view showing more or less diagrammatically a portion of a can body after the same has been flanged and as viewed from the outside and in the region of the lap portion of the side seam, and

Fig. 8 is a similar view showing the overhanging flange.

The invention as illustrated is applied to the container body wherein the side seam joining the edge portions of the body blank 1 includes hooks 2 and 3 and lap portions 4 and 5. The hooks are interlocked in the usual way.

The lap portions overlie each other so as to provide two thicknesses of metal throughout substantially their entire extent, and at the same time they are mechanically interlocked by the novel construction embodying the present invention.

The lap portions at both ends of the side seam are similarly constructed and the description of one will answer for both. The outer lap portion 4 is provided with a tongue 6 which is formed by slitting the metal. This tongue 6 extends in a direction away from the edge of the blank and is initially shaped so as to project inwardly and at an angle to the plane of the metal forming an opening 9 in the lap portion. The other lap portion is slit at 7 and the metal away from the edge of the blank is offset inwardly as indicated at 8.

When the body is formed about the bumping horn and the hooks placed for engagement, the tongue 6 will be positioned against the offset portion 8 so that upon the expanding of the body the tongue will slide beneath the portion 10 of the lap portion 5. The seam is then bumped and the tongue 6 will force the portion 10 into the opening 9 formed in the lap portion 4, which opening was initially occupied by the tongue. The offset portion 8 will be forced back into the plane of the lap portion 5. After the seam is bumped it is solder bonded in the usual way.

It will be noted from Figure 6, which shows the seam after being bumped, that the lap portions have, in effect, two interengaged hooks which carry part of the strain incident to flanging and double-seaming, and this prevents the rupturing of the solder bond between the lap portions.

The interengaging members of the lap portions are so disposed that they lie just below the base of the flange formed in the can body preparatory to the double-seaming of an end thereto. Furthermore, the interengaging members lie wholly within the two thicknesses of metal forming the lap portions, and therefore, the flanged end of the can body can be readily rolled into the double seam joining the closure end thereto.

It is obvious that minor changes in the shaping of the interengaging parts of the lap sections and the arrangement of the same relative thereto can be made without departing from the spirit of the invention as set forth in the appended claims.

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

1. A sheet metal container comprising a body portion having the edges thereof joined by a side seam including interlocking hooks and lap por-

tions at each end thereof, and a solder bond extending throughout the limits of the lock and lap portions, one of said lap portions having a portion offset laterally therefrom and the other having a recess adapted to receive said offset portion so as to prevent rupturing of the solder bond joining the lap sections under strain incident to flanging and double-seaming.

2. A sheet metal container comprising a body portion having the edges thereof joined by a side seam including interlocking hooks and lap portions at each end thereof, and a solder bond extending throughout the limits of the lock and lap portions, one of said lap portions being cut so as to form a tongue and the other of said lap portions having a slit with the metal adjacent the slit shaped so as to permit the inserting of the tongue through said slit when the hooks of the side seam are interlocked, said tongue and the portion of the other lap section with which it contacts when the seam is bumped being disposed within the thickness of the lap portions.

3. A sheet metal container comprising a body portion having the edges thereof joined by a side seam including interlocking hooks and lap portions at each end thereof, and a solder bond extending throughout the limits of the lock and lap portions, one of said lap portions being cut to form a tongue which is initially bent out of the plane of the lap portion leaving an opening therein, the other of said lap portions being slit and having the metal adjacent the slit offset so as to permit the insertion of the tongue through the slit and beneath the portion of the metal on the opposite side of the slit from said offset portion whereby when said seam is bumped, the metal beneath the tongue is offset into said opening and said opening placed within the limit of the thickness of the lap portions.

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