

No. 697,956.

Patented Apr. 15, 1902.

W. THOMPSON.

SOLDERLESS SIDE SEAM FOR SHEET METAL VESSELS.

(Application filed Nov. 26, 1901.)

(No Model.)

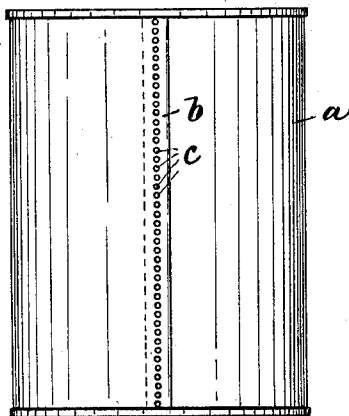


Fig. 1.

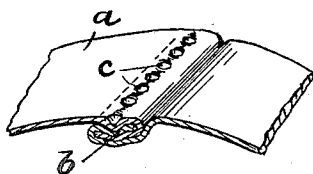


Fig. 2.

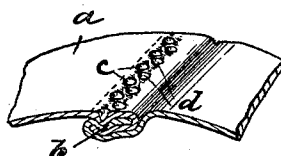


Fig. 3.



Fig. 4.

WITNESSES:

W. J. Bell.
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UNITED STATES PATENT OFFICE.

WALTER THOMPSON, OF TORONTO, CANADA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE PACKERS' SANITARY CAN COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SOLDERLESS SIDE SEAM FOR SHEET-METAL VESSELS.

SPECIFICATION forming part of Letters Patent No. 697,956, dated April 15, 1902.

Application filed November 26, 1901. Serial No. 83,707. (No model.)

To all whom it may concern:

Be it known that I, WALTER THOMPSON, a subject of the King of England, residing in Toronto, in the Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Solderless Side Seams for Sheet-Metal Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to the manufacture of tin cans and other sheet-metal receptacles, and has reference particularly to the forming of the side seams or joints for the same.

The object of the invention is to form an improved solderless side seam for tin cans and other sheet-metal vessels or receptacles, which side seam will not only be hermetically tight, but will be absolutely proof against unrolling, the joint thus being rendered strong, permanent, and durable and able to withstand rough usage, as in shipping, &c.

The invention consists in the improved tin can, its solderless side seam, and in the combination and arrangement of the various parts, as will be hereinafter more fully described and finally embodied in the clauses of the claim.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in the several views, Figure 1 is a side view of a tin can provided with my improved solderless side seam; Fig. 2, an enlarged detail perspective view of the side seam shown in Fig. 1; Fig. 3, a view similar to Fig. 2, showing a slight modification of the seam; and Fig. 4, an enlarged detail longitudinal sectional view through a portion of the seam.

In said drawings, *a* represents a can, and *b* its side seam, which in the present case is of the type of the ordinary "lock-joint." The seam is provided in its longitudinal central portion with a series of conical-shaped inwardly-extending indentations *c*, spaced very

little from each other—i. e., at distances approximating their own width—so as to form narrow ridges *e*, as clearly shown in Figs. 1, 2, and 4. With other words, alternating with the conical-shaped indentations *c* are outwardly-curved partitions or ridges *e*, approximating them in widths.

In the modified form (illustrated in Fig. 3) the lock-joint *b* is provided with two closely-disposed parallel rows of conical-shaped inwardly-extending indentations *c* and *d*, arranged alternately or in staggered disposition, whereby the ridges and indentations in one row reinforce the indentations and ridges of the other row, as will be manifest.

Heretofore attempts have been made in the manufacture of metal tubing to prevent the slipping of the joint by providing in said joint a series of indentations spaced a considerable distance apart and which in that case merely acted as rivets for the joint, and reference may be made to United States Letters Patent No. 107,731, of September 27, 1870, and United States Letters Patent No. 277,427, of May 8, 1883. In both of said patents the indentations are considerably spaced from each other and, as above stated, are intended to merely act as or take the place of rivets, preventing the slipping of the parts, but not providing an hermetical seal. To accomplish the forming of an hermetical seal, the said indentations should be disposed in substantially that close relation above set forth, thus producing ridges alternating with the indentations and by consequence causing the portions of the surfaces of the layers of the joint throughout the length thereof in line with said indentations and ridges to stand in intimate and unbroken contact with each other. This effect is materially enhanced, moreover, by the fact that in forming the indentations and ridges the metal is left by the stamping-tool thickest at the tops of the ridges and gradually thinner toward the bottoms thereof.

I do not intend to limit myself to two parallel rows of conical-shaped indentations, as three or more rows could be arranged without deviating from the spirit of my invention.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. A solderless lock-joint for sheet-metal vessels provided with a series of conical indentations arranged longitudinally of the joint, any two adjoining indentations being spaced a distance approximating their width to thus form alternating ridges and effect an unbroken contact between the surfaces of the layers of the joint throughout the length of said series to form a continuous undulating seam, substantially as described.

2. A lock-joint for sheet-metal vessels provided with conical-shaped indentations arranged in close proximity to each other and forming curved ridges, the layers of the joint being thickest at the top of the ridges and thinnest at the point of the conical-shaped indentations, substantially as described.

3. A solderless lock-joint for sheet-metal vessels provided with a series of conical indentations arranged longitudinally of the joint, any two adjoining indentations being spaced a distance approximating their width to thus form intermediate ridges and effect an unbroken contact between the surfaces of the layers of the joint throughout the length of said series to form a continuous undulating seam, and said series of indentations being arranged in parallel rows, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of November, 1901.

WALTER THOMPSON.

Witnesses:

ALFRED GARTNER,
ROBERT J. POLLITT.