No. 872,992. PATENTED DEC. 3, 1907.

J. DANZ, 2D.

SHEET METAL PAIL FOR LARD, &c.

APPLICATION FILED JAN. 21, 1907.

Fig. 2

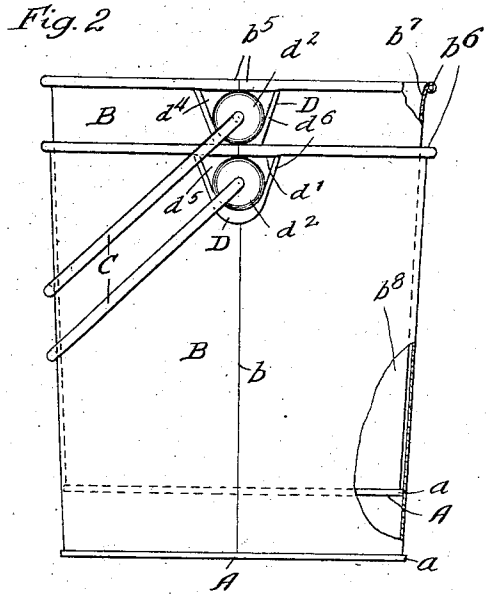


Fig. 7

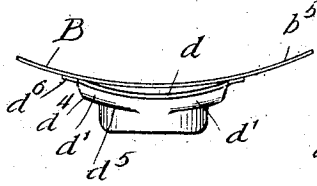


Fig. 8

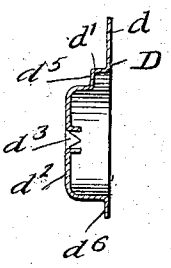


Fig. 3

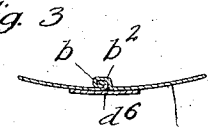


Fig. 4

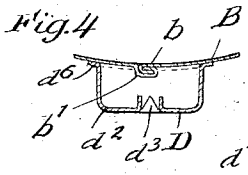


Fig. 6

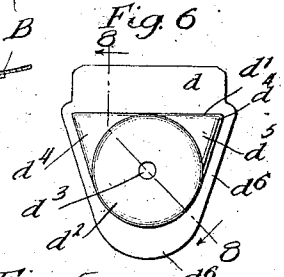


Fig. 1

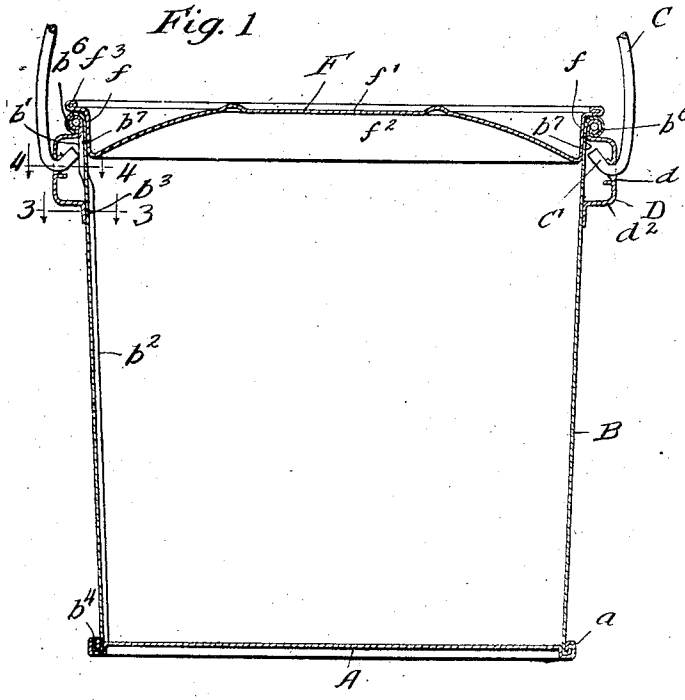
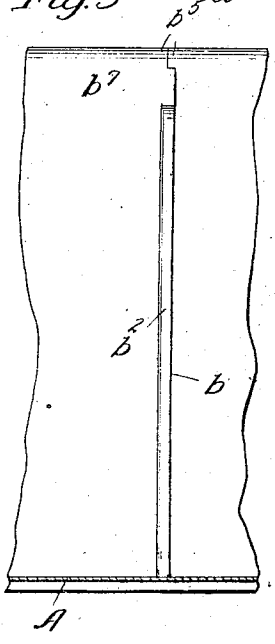


Fig. 5



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UNITED STATES PATENT OFFICE.

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SHEET-METAL PAIL FOR LARD, &c.

No. 872,992. Specification of Letters Patent. Patented Dec. 3, 1907.

Application filed January 21, 1907. Serial No. 353,303.

To all whom it may concern:

Be it known that I, JACOB DANZ, 2d, a citizen of the United States, residing in St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and useful Improvement in Sheet-Metal Pails for Lard and other Articles, of which the following is a specification.

My invention relates to improvements in sheet metal pails for holding and shipping lard and other materials.

The object of my invention is to provide a sheet metal lard pail of a neat, strong, simple, efficient and durable construction, capable of being manufactured without soldering the parts together, (which is necessary or desirable not only for sanitary purposes, but also for economy of manufacture,) in which the open mouth of the pail may be of the full diameter and free from internal shoulders or projections, in which a tight and secure closure may be effected between the cover and the body of the pail, in which the cover may be readily opened without danger of cutting or injuring one's fingers, in which the bail ears, though unsoldered, will fit snugly against the body of the pail and be securely united thereto, in which the cover will have a central dome or cavity to accommodate the surplus bulk of lard in the pail as the cover is forced home, (a feature which is necessary in lard pails as equal weights of lard vary somewhat in bulk), in which the central dome of the cover may be flush or on a level with the rim of the cover so that the pails can be piled or stacked one on top of another as required, and in which at the same time the empty pails may be conveniently nested together for shipment from the can factory to the butcher or packer without causing the nested empty pails to stick or wedge fast together or causing the inside surface of one nested pail to scrape against the outside surface of another nested pail, and thus mar, scratch or injure the decoration or lithographing on the outside of the pail.

My invention consists in the means I employ to practically accomplish this object or result as herein shown and described and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a central, vertical section through the bail ears of a sheet metal pail embodying my invention. Fig. 2 is a side elevation, partly in vertical section, showing a plurality of nested empty pails embodying my invention. Figs. 3 and 4 are detail cross sections on lines 3—3 and 4—4 of Fig. 1. Fig. 5 is a detail inside elevation partly in section showing the lock side seam from the inside. Fig. 6 is a detail view of the bail ear before it is seamed to the body of the pail and Fig. 7 is a detail top view showing the bail ear and a portion of the pail body before the bail ear is seamed thereto. Fig. 8 is a detail section on the broken line 8—8 of Fig. 6.

In the drawing, A represents the lower or bottom head of a sheet metal pail or vessel embodying my invention, B the body thereof, united to the bottom head A preferably by a double seam *a*.

C is the bail, D the bail ears and F the cover.

The body B of the pail or vessel has its meeting edges seamed or secured together by a folded or lock seam *b*, which has an outwardly projecting portion b^1 at the upper or mouth end of the body B so that the body of the vessel may have a smooth inside friction seat wall at its mouth to tightly fit the external friction seat wall *f* of the cover, and an internally projecting portion b^2 below said externally projecting portion b^1 so that the outside of the body B may have a smooth surface or seat b^3 for the bail ear D to fit against. By providing the body B of the vessel thus with an externally projecting lock seam at its upper portion where the body coöperates with the cover, and with an internally projecting folded or lock seam at its portion below where the can body fits and coöperates with the bail ear, I am enabled to give both the cover and the bail ear a snug close fit with the portions of the body engaged by each.

The lock-seam *b* of the body B terminates at the lower end of the body in a seaming flange or portion b^4 of a single lap or thickness suitable for seaming with the bottom head A, and this lock side seam *b*, which throughout its length is of the customary four thicknesses, terminates at the upper or mouth end of the can body in a seaming flange or portion b^5 of a single lap or thickness, suitable for turning into a roll with the seaming flange *d* of the bail ear D.

To securely unite the bail ear D with the body of the pail without the use of solder rivets or other fastening devices, the bail ear is provided with a seaming flange *d* adapted

to be folded or rolled into an external seam or roll b^6 with the seaming flange b^5 of the body B, and with an extended horizontal shoulder d^1 which fits snugly under and bears directly against the external roll or shoulder b^6 on the body B of the pail or vessel. Each of the bail ears D is furnished with a raised circular boss d^2 having an eye or opening d^3 therein to receive the hook C^1 of the bail C. The bearing shoulder d^1 of the bail ear is preferably substantially tangential with the upper part of the raised portion d^2. The bail ear is preferably of a general triangular shape with rounded lower end. It is of sufficient width or extent horizontally to give the horizontal bearing shoulder d^1 a length of an inch or such matter so that the arc of the horizontal shoulder d^1 will, in connection with the external roll or seam b^6 uniting the bail ear to the body, give the bail ear the requisite stiffness or rigidity to cause it to properly retain its curvature or arch shape corresponding to that of the body B against which it fits, and thus prevent the bail ear from springing away from the body of the vessel at its middle or lower portions, although the bail ear is only seamed or united to the body at its upper end or edge.

To cause the bail ear to more closely and snugly and firmly hug or fit the body B and to prevent the pressure of the seaming tools in the operation of seaming the bail ear on the body from causing the lateral edges of the bail ear to tend to spring away from the body, I prefer to make the curvature of the bail ear somewhat sharper than that of the body against which it is to fit, so that when the bail ear is seamed to the body, the pressure of drawing the parts together will cause the side portion of the bail ear to snugly hug or clamp the body of the vessel. This will be readily understood from Fig. 7 of the drawing which shows the parts before being seamed together.

The cover F has an external friction seat wall or flange f, tightly fitting the corresponding internal friction seat wall b^7 at the upper end or mouth of the body so as to form a tight closure therewith. The cover F is also provided with a raised central dome f^1 to form a cavity f^2 to accommodate the surplus bulk of the lard or material in the pail when the cover is forced home. This is necessary in lard pails, as a fixed quantity by weight is required to be in each pail and as the bulk of equal weights of lard varies to some considerable extent owing to various conditions, so that the pails fill with the lard to various extents, and in the fuller pails when the cover is forced home, unless surplus space is afforded by the dome shape of the cover, the lard will be forced out by the cover or prevent the cover from being snugly and fully seated or forced home on the body of the vessel, thus preventing a tight closure. The dome shaped cover F is provided with a folded horizontally projecting rim f^3, affording an annular shoulder which fits against the annular shoulder b^6 on the body of the vessel and gives a smooth finish to the vessel as a whole and strengthens and reinforces the rim of the cover and provides it with an external projection or shoulder, which, with the shoulder or roll b^6 on the body of the vessel forms an annular crevice f^5 between the rim of the cover and the external shoulder on the body that enables the friction fit cover to be readily removed by any suitable blade-like tool. The annular rim f^3 of the cover is flush or on a level with the central dome of the cover so that the filled lard pails may be piled or stacked one on top of another, as required for shipment or storage.

To enable the empty pails to be properly nested together for shipment from the can factory to the butcher or packer, the bail ears are so located in relation to the conical or tapering bodies of the vessels so that the lower portion of the bail ear boss on each pail will act as a stop shoulder by engagement with the annular roll b^6 of the pail within which it is nested to limit the extent to which the pails can nest or telescope together, and thus prevent the outer or decorated surface b^8 of the inner pail from scraping against the inner surface of the pail within which it is inner surface of the pail within which it is nested, and thus prevent marring or injuring of the lithographing or decoration b^8 of the pails. This is a matter of considerable importance, as lard pails are ordinarily lithographed on the outer surfaces of the bodies.

The bosses of the bail ears, by limiting the extent to which the empty pails can nest together, also prevents them from becoming stuck or wedged together so that they cannot readily be removed one from the other without injury.

The bearing shoulder d^1 at the upper portion of the bail ear D forms a supplemental boss d^4 of a general truncated triangular form which is less in depth than the circular bail eye boss d^2. The face d^5 of the supplemental boss d^4 like the bearing shoulder d^1 is preferably curved to conform to the curvature of the pail body B upon which the bail ear fits. As the bail ear is made of a slightly sharper curvature than the body, the operation of seaming the bail ear on the body puts the bail ear under a clamping tension and causes its side flanges d^6 to snugly hug or clamp the curved surface of the body B.

I claim:—

1. In a solderless sheet metal lard pail, the combination with a body having an externally projecting lock seam at its upper mouth portion, and an internally projecting lock seam below said mouth portion, and provided at its upper end with an external annular roll, of an internal friction fit cover provided

with a raised or dome shaped center and a folded rim flush with the raised center, and bail ears having seaming flanges at their upper ends embraced by the annular roll on the body to unite the said ears to the body without solder, said bail ears having a horizontally extending bearing shoulder fitting against the external annular roll at the upper end of the body and furnished with raised eye bosses to receive the hooks of the bail, and marginal bearing flanges fitting against the smooth exterior of the pail body, substantially as specified.

2. In a sheet metal pail, the combination with a body having an externally projecting lock seam at its upper or mouth portion, and an internally projecting lock seam there below, said body having a seaming flange or portion at its upper end, of a bail ear having a seaming flange at its upper end formed into a roll or seam with the seaming flange at the upper end of the body; said bail ear having at its upper part a horizontally extending shoulder bearing against the external annular shoulder or roll by which the bail ear is united to the body, substantially as specified.

3. In a sheet metal pail, the combination with a body having an externally projecting lock seam at its upper or mouth portion, and an internally projecting lock seam there below, said body having a seaming flange or portion at its upper end, of a bail ear having a seaming flange at its upper end formed into a roll or seam with the seaming flange at the upper end of the body, said bail ear having at its upper part a horizontally extending shoulder bearing against the external annular shoulder or roll by which the bail ear is united to the body, and the bail ear having a marginal bearing flange fitting against the body of the pail, substantially as specified.

4. In a sheet metal pail, the combination with a body having an externally projecting lock seam at its upper or mouth portion, and an internally projecting lock seam there below, said body having a seaming flange or portion at its upper end, of a bail ear having a seaming flange at its upper end formed into a roll or seam with the seaming flange at the upper end of the body, said bail ear having at its upper part a horizontally extending shoulder bearing against the external annular shoulder or roll by which the bail ear is united to the body, and the bail ear having a marginal bearing flange fitting against the body of the pail, said bail ear being normally of a sharper curvature than the pail body to which it is applied to cause its marginal bearing flange to snugly hug or clamp against the body of the pail, substantially as specified.

5. In a sheet metal pail, the combination with a pail body having an external annular roll at its upper end, of a bail ear having a seaming flange at its upper end embraced by said roll on the body to unite the bail ear to the body, said bail ear having a supplemental external raised portion forming at its upper part a curved bearing shoulder to engage the external roll on the pail body, and provided with a circular bail eye boss or raised portion to receive the hook of the bail, substantially as specified.

6. A bail ear having a seaming flange at its upper end, a truncated triangular supplemental boss forming a horizontally extending curved bearing shoulder, and provided with a raised additional boss to receive the hook of the bail, substantially as specified.

7. A bail ear having a seaming flange at its upper end, a truncated triangular supplemental boss forming a horizontally extending curved bearing shoulder, and provided with a raised additional boss to receive the hook of the bail, said bail ear having a marginal bearing flange to fit against the body of the pail, substantially as specified.

8. A pail body having a lock seam externally projecting at the mouth portion of the body, and internally projecting below said mouth portion, the said lock seam at both its external and internal portions being composed of inter-engaging hooks on both members substantially as specified.

9. In a sheet metal pail, the combination with a pail body having a folded or lock side seam externally projecting at the mouth portion and internally projecting there below, of an inside fitting cover and an outside fitting bail ear bearing at its lower part against the smooth exterior of the pail body where the folded side seam is internally projecting, the said lock seam at both its external and internal portions being composed of inter-engaging hooks on both members substantially as specified.

10. In a sheet metal pail, the combination with a pail body having an external roll at its upper end, of a bail ear having a seaming flange or portion at its upper end embraced by said external roll on the pail body and provided with a horizontally extending curved shoulder fitting and bearing against said external roll on the body, substantially as specified.

11. In a sheet metal vessel, the combination with the body, of a bail ear, an outwardly turned seam uniting the bail ear and body at the upper ends thereof, said bail ear having a horizontally extending curved shoulder fitting and abutting against the external seam uniting the bail ear to the body, substantially as specified.

12. In a sheet metal vessel, the combination with the body, of a bail ear, an outwardly turned seam uniting the bail ear and body at the upper ends thereof, said bail ear having a horizontally extending shoulder fitting and abutting against the external seam uniting the bail ear to the body, said bail ear having a raised portion forming said bearing

shoulder and a further raised portion to receive the hook of the bail, substantially as specified.

13. In a sheet metal vessel, the combination with the body, of a bail ear seamed to the body at its upper end and fitting against the body at its side seam and bottom portions, said body having an internally projecting lock side seam at the portion thereof against which the lower part of the bail ear fits, and said bail ear being provided with a horizontally extending bearing shoulder fitting against the external seam uniting the bail ear to the body at the upper ends thereof, substantially as specified.

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