

UNITED STATES PATENT OFFICE.

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SHEET-STEEL VESSEL.

No. 911,084.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES STOLLBERG, a citizen of the United States, residing in Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Improvement in Sheet-Steel Vessels, of which the following is a specification.

My invention relates to improvements in the construction of sheet steel kegs or vessels for shipment and handling of white lead and other heavy materials.

The object of my invention is to provide a sheet steel keg or vessel of a strong, simple, efficient and durable construction, adapted to be tightly closed and conveniently opened, which may be cheaply manufactured and which will be suitable for handling and shipment of white lead or other heavy materials in the customary standard weight packages of a hundred pounds, fifty pounds or other like amounts, and in which the vessel will not be liable to injury, or its cover to displacement when the same are rolled or tumbled about, or even dropped from a wagon or a considerable height upon a stone pavement whether the same strikes upon its bottom or top head, corner or side.

My invention consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described, and by which this object or result is accomplished.

In the accompanying drawing forming a part of this specification, Figure 1 is a central vertical section of a sheet metal or steel keg or vessel embodying my invention. Fig. 2 is an enlarged detail sectional view showing the construction at the upper and lower ends or corners of the vessel and Fig. 3 is a horizontal section on line 3—3 of Fig. 1. Fig. 4 is a partial detail elevation.

In the drawing, A represents the sheet steel body of the vessel, the same being formed from a rectangular blank into cylindrical shape, and having its meeting ends tightly and securely united by an externally projecting folded or lock seam a formed by the interfolded hooks or edge folds $a^1 a^2$ on the meeting ends of the body blank, as will be readily understood from Fig. 3. The lock seam a is made externally projecting so that it will not

interfere with the snug or bracing fit of the bottom head B and cover D within the body A.

The cylindrical body has at its upper end an externally projecting hoop acting curved flange or roll a snugly embracing the reinforcing or bracing circular wire or rod C which externally stiffens and braces the upper end of the body, and coöperates with the cover D to this end. The cover D has a deep countersink cylindric wall d and an outwardly curved cover-seat wall d^1 which snugly fits and embraces the curved cover-seat wall a^3 on the body A, the cover thus affording a tight friction fit removable closure, and also serving to internally stiffen and brace the upper end of the body.

The body A has at its lower end an external seaming flange a^4 which is interfolded with the flange b of the bottom head B into an externally projecting double seam a^5 which secures and embraces as a hoop the lower end of the body A and serves to stiffen and brace it as well as to tightly and securely unite the bottom head and body together. The bottom head B also has a deep countersink cylindric wall b^1 which tightly and snugly fits within the lower end of the body and serves as an internal brace to stiffen and strengthen the lower end of the body. To further stiffen and strengthen the lower end of the body internally and externally it is provided with an externally fitting reinforcing wire or rod C^1 and with a reinforcing or supplemental bottom head F , having a deep countersink cylindric wall f snugly and tightly fitting within the cylindric countersink wall b^1 of the bottom head B and also having an outwardly projecting curved flange or roll f^1 which surrounds and embraces the double seam a^5 uniting head and body and also the outer stiffening wire or rod C^1 ; the extreme edge f^2 of said flange f^1 being forced into engagement with the annular shoulder or crease a^6 between the inner upper corner of the seam a^5 and the body A, so that the curved flange or roll f^1 serves in itself to materially stiffen and strengthen the vessel and also to confine the wire or rod C^1 in snug coöperative relation with the other parts.

To hold the cover D and its countersink wall c and curved seat flange d^1 in snug coöp-

erative bracing and stiffening relation with the body A and its curved cover seat flange a^3 , I provide the curved cover seat flange d^1 of the cover with integral projecting clenching lips or tongues d^2 , which after the vessel is filled and the cover applied are bent or clenched under the external roll or shoulder a^3 at the upper end of the body.

The external reinforcing wire embracing rolls or curved flanges d^1 on the cover and f^1 on the supplemental bottom head F provide the vessel with external raised ribs or annular shoulders of substantially equal size, and one at each end, upon which the heavy vessel of white lead may be conveniently rolled about, thus greatly facilitating the handling of the heavy package.

The deep countersink cylindric walls d of the cover and b^1 of bottom B and f of supplemental bottom F afford also convenient finger holds for lifting the heavy package when that is required.

The supplemental bottom head F may preferably have its central portion cut out or be provided with a central opening F^1 thus leaving the supplemental bottom of annular or ring form. This effects a saving in stock without detriment to the structure as a whole.

To aid in securing tightness of the folded seam uniting the bottom head and body a cement or packing G may be interposed between the bottom head and body. A similar cement or packing G may also be interposed between the cover D and body A.

I claim:—

1. In a sheet metal or steel vessel for handling and shipment of white lead or other heavy material, the combination with a body A, of external reinforcing wires at the upper and lower ends of the body, the body having an external curved flange or roll at its upper end embracing the upper stiffening wire, a cover having a deep countersink cylindric wall fitting within the upper end of the body and provided with an externally projecting curved seat wall fitting the curved flange or roll at the upper end of the body, a bottom head having a deep countersink cylindric wall fitting within the lower end of the body and connected to the body by an external double seam said reinforcing wire at the lower end of the body surrounding and embracing said external double seam uniting said bottom head to the body and a supplemental bottom head having a deep countersink cylindric wall fitting within said countersink wall of said first mentioned bottom head, and an outwardly projecting curved flange surrounding and embracing the stiffening wire at the lower end of the body, substantially as specified.

2. In a sheet metal or steel vessel for handling and shipment of white lead or other

heavy material, the combination with a body A, of external reinforcing wires at the upper and lower ends of the body, the body having an external curved flange or roll at its upper end embracing the upper stiffening wire, a cover having a deep countersink cylindric wall fitting within the upper end of the body and provided with an externally projecting curved seat wall fitting the curved flange or roll at the upper end of the body, a bottom head having a deep countersink cylindric wall fitting within the lower end of the body and united to the body by an external double seam said reinforcing wire at the lower end of the body surrounding and embracing said external double seam uniting said bottom head to the body and a supplemental bottom head having a deep countersink cylindric wall fitting within said countersink wall of said first mentioned bottom head, and an outwardly projecting curved flange surrounding and embracing the stiffening wire at the lower end of the body, said externally projecting curved flange on the cover having integral clenching lips, substantially as specified.

3. The combination with a cylindric body, of a countersunk bottom head fitting therein, an externally folded seam uniting said bottom head and body, a wire surrounding the body at its lower end and embracing said folded seam and a supplemental countersunk bottom head fitting within said first mentioned bottom head and having an outwardly projecting flange curved around and embracing said wire, substantially as specified.

4. The combination with a cylindric body, of a countersunk bottom head fitting therein, an externally folded seam uniting said bottom head and body, a wire surrounding the body at its lower end and embracing said folded seam and a supplemental countersunk bottom head fitting within said first mentioned bottom head and having an outwardly projecting flange curved around and embracing said wire, the extreme edge of said flange fitting in the crease between said body and said externally folded seam, substantially as specified.

5. In a vessel, the combination with a body, of a countersunk bottom head fitting within the lower end of said body, an external folded seam uniting said bottom head and body, a stiffening wire surrounding and embracing said external seam and a countersunk annular head fitting within said bottom head and having a flange surrounding and embracing said stiffening wire and seam, substantially as specified.

6. In a vessel, the combination with a body, of a countersunk bottom head fitting within the lower end of said body, an external folded seam uniting said bottom head

and body, a stiffening wire surrounding and embracing said external seam and a counter-sunk annular head fitting within said bottom head and having a flange surrounding and
5 embracing said stiffening wire and seam, the extreme edge of said flange of said annular head engaging the annular shoulder formed

by said seam which unites the bottom head and body, substantially as specified.

CHARLES STOLLBERG.

Witnesses:

LAWRENCE RAAB,
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