

A. R. PRITCHARD.
SHEET METAL VESSEL.
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1,012,276.

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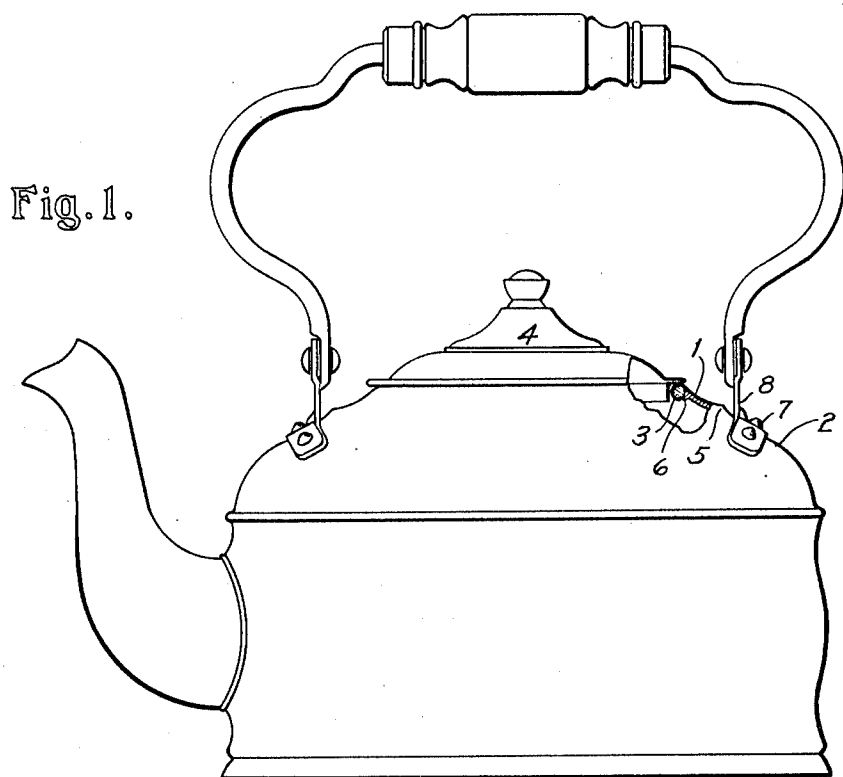


Fig. 2.

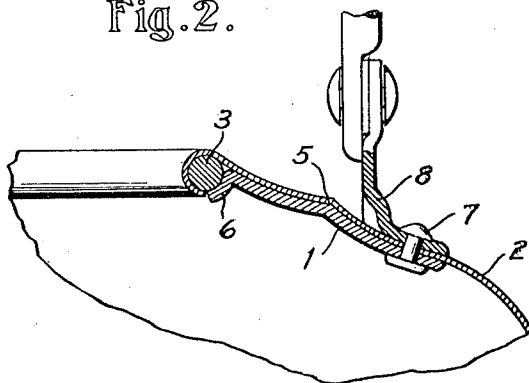
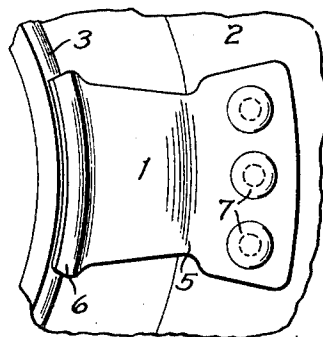


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT R. PRITCHARD, OF ROCHESTER, NEW YORK.

SHEET-METAL VESSEL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALBERT R. PRITCHARD, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Sheet-Metal Vessels, of which the following is a specification.

This invention relates to sheet-metal vessels, such as tea-kettles and the like, having convex tops to which bails or handles are secured.

The object of the invention is to reinforce the top of such a vessel against the upward pull of the bail or handle so as effectually to resist the tendency of such pull to distort the top of the vessel. To this end I employ a reinforcement connected with the bail or handle and fixed to the top of the vessel, this reinforcement being so formed and arranged as to operate in the manner of a strut and to effectually resist the upward pull of the handle by translating the bending strain into tension and compression strains.

In the drawings:—Figure 1 is a side-elevation of a tea-kettle embodying the present invention, with a part shown in vertical section; and Figs. 2 and 3 are, respectively, a vertical section and a bottom-view, on a larger scale, of the portion of the tea-kettle in which the invention is embodied.

The drawings illustrate the invention as applied to a tea-kettle having the usual convex sheet-metal top provided with a central filling-opening, which is closed, in the usual manner, by a cover 4. The handle or bail of the tea-kettle is connected with the top 2 by means of ordinary sheet-metal lugs 8 fastened in place by means of rivets 7, and the edge of the top, adjacent the filling-opening, is reinforced by rolling the sheet-metal around a wire ring 3.

The invention resides particularly in the use of a sheet-metal plate 1 which lies against the inner surface of the top 2 and extends from the bail-lug 8 to the edge of the filling-opening. This plate conforms to the contour of the top, and its outer and lower end is fixed to the top and to the bail-

lug 8 by means of the rivets 7 by which the bail-lug is fixed to the top. The upper and inner end of the reinforcing plate 1 abuts against the wire 3, and is preferably provided, as shown, with a downwardly-bent flange 6 which engages the wire and is curved to conform thereto.

The reinforcing plate 1 operates in a novel manner to resist the upward pull of the bail-lug 8. The pull of the bail-lug upon its outer end tends to swing this end upwardly around the fulcrum provided by the wire 3. This tendency is resisted, however, owing to the inclined position of the plate, by the tensile strength of the sheet-metal of the top 2, and the plate 1 thus acts as a strut, the upward pull of the bail-lug being transmuted to a longitudinal thrust in the plate, which is resisted by the wire 3. Accordingly, the tendency to bend the top upwardly is resisted by tension and compression strains which the sheet-metal is adapted to bear without substantial distortion, and a rigid structure is produced which cannot be seriously distorted even when the kettle is filled with water so that the top is subjected to a considerable upward pull by the bail-lugs in the act of lifting the kettle.

I am aware that it has been previously proposed to reinforce the top of a sheet-metal vessel by means of a plate applied to the under surface thereof at the point of attachment of a bail-lug, but in such previous construction the reinforcing plate has been employed merely to distribute the bending strain over a greater area of the sheet-metal, and has not been adapted or intended to operate as an inclined strut in the manner of the present invention.

I claim:—

1. In a sheet-metal vessel having a convex top and a handle attached to the top, a reinforcing strut located beneath and fixed to said top and extending upwardly and inwardly from the point of attachment of the handle to a point nearer the center of the vessel, the top being provided with an abutment engaged by the inner end of the strut.

2. In a sheet-metal vessel with a convex
top having a central opening with a rein-
forced edge, handle-lugs fixed to the top,
and struts located beneath the top, each
5 strut being fixed, at one end, to the top be-
neath the point of attachment of one of
the handle-lugs and extending upwardly

and inwardly, close to the lower surface of
the top, with its inner end engaging the re-
inforced edge of the opening.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
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