(No Model.)

# D. M. WELLS & A. Q. ALLIS.

## ANTIRUST WARE.

No. 526,357. Patented Sept. 18, 1894.

Fig. 1.

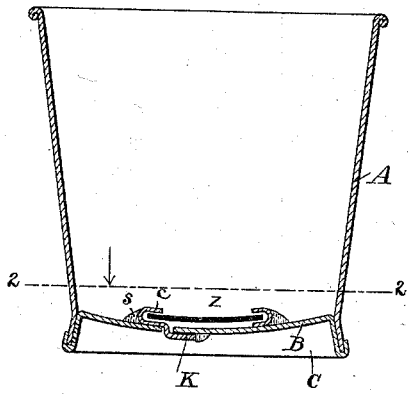



Fig. 6.

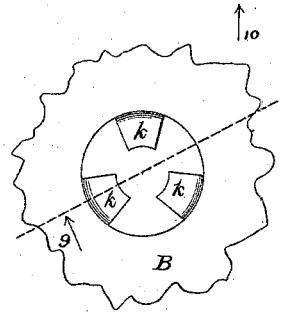



Fig. 2.

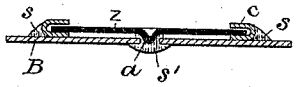



Fig. 3.

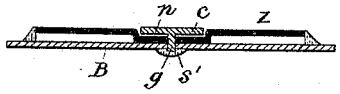



Fig. 4.

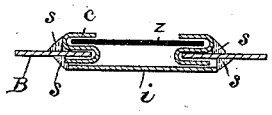
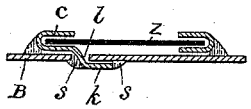



Fig. 5.




Witnesses
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# UNITED STATES PATENT OFFICE.

DAVID M. WELLS, OF CLIFTON SPRINGS, AND ABRAM Q. ALLIS, OF PLATTSBURG, NEW YORK.

## ANTIRUST-WARE.

SPECIFICATION forming part of Letters Patent No. 526,357, dated September 18, 1894.

Application filed September 23, 1893. Renewed August 23, 1894. Serial No. 521,130. (No model.)

*To all whom it may concern:*

Be it known that we, DAVID M. WELLS, of Clifton Springs, county of Ontario, and ABRAM Q. ALLIS, of Plattsburg, county of Steuben, State of New York, have invented a new and useful Improvement in Antirust-Ware, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

The object of our invention is to provide better means for preventing the rusting of tin ware than has heretofore been employed, the same being hereinafter fully described and more particularly pointed out.

In this invention we employ a duplex or compound anti-rusting part or body secured to a suitable part of the vessel, said part or body being composed of sheets of zinc and copper, preferably circular in form, in contact and firmly joined by being hammered or pressed together, and secured to the vessel by soldering.

In the accompanying drawings which illustrate our invention, Figure 1 is a sectional elevation of a vessel with our invention applied. Figs. 2, 3 and 4, are sectional views of modifications. Fig. 5 is a detail of the anti-rust body as shown in Fig. 1; and Fig. 6 is a bottom view of the form shown in Fig. 5.

Referring to the parts shown, A represents a pail, dipper or other tin vessel, B being the bottom, and C the foot. The bottoms of these vessels are usually made to sag or curve downward, the anti-rust body or attachment being placed at the center. These anti-rust bodies or attachments may be made in various forms as, for instance, such as shown in the detail figures.

In the form shown in Figs. 1, 5 and 6, a disk of zinc *z* is covered at its edge by folded copper plates *c*, formed with extended flaps *k*, which pass through annular openings *l* in the bottom of the vessel. These flaps are then bent inwardly under the bottom of the vessel and secured thereto as by the solder *s*.

In Fig. 2, a disk of zinc *z* has bent around its edge a strip of copper, the disk projecting downwardly through an opening *a* in the bottom of the vessel, being held in place by the solder *s'* applied upon the outer side of said bottom. The copper strip will thus be held in place by the zinc disk, but may be further secured by the solder *s*.

In the form shown in Fig. 3 the disk of zinc *z* and the bottom of the vessel are both perforated to correspond, the zinc being formed with a central recess, *n*, around the perforation therein. A disk of copper *c*, is placed in the recess in the zinc, which piece of copper is formed with a stem *g*, adapted to pass through the holes in the zinc and the tin, as shown. A drop of solder *s'*, is placed to cover the end of the copper stem and the contiguous tin.

In the form shown in Fig. 4, an imperforate disk of zinc *z* has its periphery covered by a strip of copper folded thereon, the lower edge of which copper extends through an opening *h*, in the bottom of the vessel and is folded back or outward thereunder, against the tin, as shown. In this form the copper is in a double fold, one fold covering the edge of the zinc and the other the inner edge of the tin, the copper being **S**-shaped in cross section, as shown. At its under surface the copper is covered by a disk of tin *i*, which also covers the opening *h*, said tin disk being soldered, at *s*, to the bottom of the vessel.

It will be observed that in but one of these forms—that shown in Fig. 3—the solder is in contact with the zinc, in each of the other forms the copper or the tin disk or both of them being soldered directly to the bottom of the vessel. The soldering of the copper to the tin makes a much more durable construction for the zinc being a weaker metal and expanding and contracting more rapidly than tin from changes of temperature, is apt to disintegrate and give way next to the solder.

Experiments have proved that the combination of zinc and copper in some simple form herein shown and described as applied to preventing the rusting of vessels has great advantages over the means heretofore used, not only in its superior quality for preventing or retarding rust, but also in strength of construction, copper being a strong metal.

In the drawings, the space between the various plates is greatly exaggerated in order to avoid confusion and to afford a clearer idea of the relation of the several parts, but in practice the zinc and copper parts are ham-

mered firmly down together and upon the tin of the vessel, so all shall be in close contact.

What we claim as our invention is—

1. In anti-rust ware, a metallic vessel provided with an opening in one of its walls, a plate passing through said opening and secured upon one side of the wall, and a second plate of different polarity from the first plate clamped upon the other side of the wall by the free portion of the first plate, substantially as described.

2. In anti-rust ware, a tin vessel provided with an opening in one of its walls, a plate of copper passing through said opening and secured upon the outer side of the wall, and a plate of zinc clamped upon the inner side of the wall by the inner portion of the plate of copper, substantially as described.

3. In anti-rust ware, a tin vessel provided with a plurality of openings in one of its walls, a plate of copper passing through each of said openings and secured upon the outer side thereof, each of said plates being upon the inner side of the vessel bent along the wall of the vessel in a direction away from the common center of said openings to form seats, and a plate of zinc resting upon the seats thus formed and held in place by means of the plates of copper being bent over upon said zinc plate, substantially as described.

In witness whereof we have hereunto set our hands, this 1st day of August, 1893, in the presence of two subscribing witnesses.

DAVID M. WELLS.
ABRAM Q. ALLIS.

Witnesses:
C. W. LA DU,
THOMAS WELLS.