T. Evans,

Making Tin Cans.

No. 30,806. Patented Dec. 4, 1860.

Fig. 2.

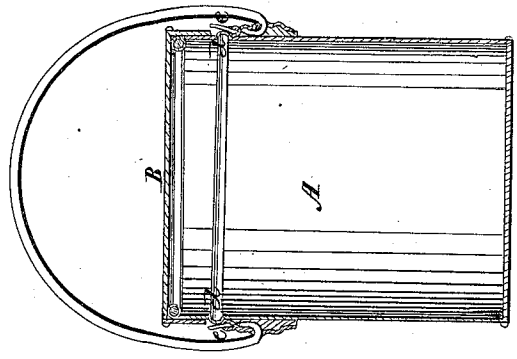
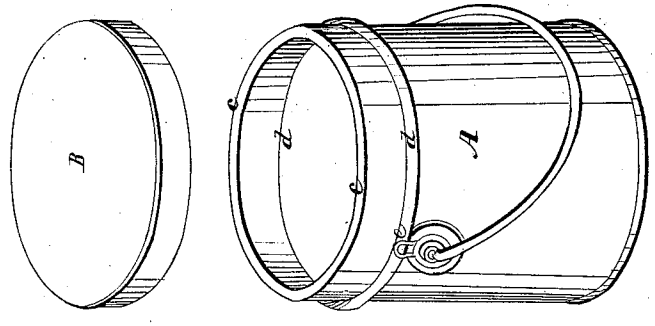


Fig. 1.



Witnesses:
L. B. Bartlett
S. J. Willis.

Inventor:
Thos. Evans
By his attorney.
J. Fraser

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS EVANS, OF WATKINS, NEW YORK.

IMPROVEMENT IN WIRING TIN CANS.

Specification forming part of Letters Patent No. **30,806**, dated December 4, 1860.

To all whom it may concern:

Be it known that I, THOMAS EVANS, of Watkins, in the county of Schuyler and State of New York, have invented a new and Improved Method of Wiring Tin Cans; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a view in perspective of a can constructed after my improved method with the cover detached. Fig. 2 is a vertical section of the same with the cover on, and also shown in section.

Like letters designate corresponding parts in both figures.

The object of my invention is to form cans and other similar articles of tin or sheet-metal manufacture so that a closely-fitting cover may be applied to the outside thereof, thereby rendering these utensils useful for a greater number of purposes, and better for all purposes, inasmuch as they have greater strength than when made in the usual manner, and are neater and more becoming in appearance.

The ordinary method of wiring cans, pails, and similar articles of manufacture is that of bending or turning the edge of the tin or other metal at the top of the utensil over a wire fitting around the exterior surface thereof. Consequently the diameter of the utensil is increased an amount equal to the thickness of the wire and that of the metal plate combined. This necessitates the placing of the cover, if one is used, upon the inside of the utensil—that is, the flange by which the cover is connected with the body of the article must be inserted within the can—as it is impossible to connect it by having this flange on the outside and make a finished and acceptable piece of work. The disadvantages of having the flange of the cover on the inside are obvious when the contents are of a fluid nature, and more especially when they are viscous and glutinous, as in the case of oils, paints, molasses, &c.

My improvement consists in turning the edge of the sheet metal inward and inserting a wire ring, the diameter of which is less than that of the exterior of the can, being, in fact, just equal to the interior thereof. This leaves the outside plain and smooth, as shown in the drawings, so that a tight-fitting cover may be placed upon the outside, as shown in Fig. 2. The edge of the sheet metal is neatly turned in around the wire, so as to cover and protect it entirely, which can be done more perfectly than when the wire is outside. Placing the wire inside makes the can much stronger than when the same is outside, as will readily be seen, as the metal plate becomes thickened and "upset" by the compression which it necessarily undergoes in turning it inwardly, whereas the reverse is the case when it is turned outside, the thin plate having to be drawn still thinner in order to encompass a body of larger diameter. The operation is performed in the same manner by mechanical means, but more power is required for the inside process. This is of no importance, however, as the operation does not require much force, but the increase of the strength of the article which is the result is of vast importance, affecting its durability and application to many new purposes. A simple test of the superiority of one method over the other is afforded by an attempt to extricate the wire from both.

As represented in the drawings, A is a can, and B the cover thereof.

The wire is indicated by *c*, and a bead turned in the tin plate just below the termination of the flange of the cover is designated by *d*.

The model is provided with my improved pail-ear, but any other kind of ear is equally applicable. An eye, *e*, is attached to the top of the ear for the convenience, if desired, of passing a wire over the top of the cover from one side to the other to fasten it on. The bead *d* is not absolutely necessary, nor does it form a part of my invention, but its use is common to strengthen the side of the can and give a better appearance.

One important use to which these cans are applied is that of containing mixed oil-paints, in which it is almost indispensable that the cover should be applied to the outside. Before my invention this could only be accomplished by leaving the top of the can with a "raw edge"—that is, unfinished. This was objectionable from want of strength, and many attempts have been made to remedy it, and among others the soldering of a wire on the inside of the can within a bead, like that of *d*,

placed around the body and below the cover. This partially secured strength to the utensil, but left it weak in the most important point, the top, while the objection to the sharp edge of the tin, which was even dangerous from its liability to cut the hands of those using it, still remained to be overcome. A still greater objection existed in the impossibility of cleaning the crevices left on each side of the wire, which could not, from its situation, be covered or protected. By my improvement no additional mode of strengthening beyond beading is required, and that can well be dispensed with in cans of small size. It requires no more time and is not otherwise more expensive than the other different methods, while its greater usefulness and superiority in all respects are indisputable.

What I claim as my invention, and desire to secure by Letters Patent, is—

The described method of strengthening and improving tin cans and other articles formed of sheet metal by turning the wire upon the inside of the top, whereby the outer surface is left on a plane with the body or neck thereof, substantially in the manner and for the purposes set forth.

THOMAS EVANS.

Witnesses:
ARCHIBALD ROBBINS,
GEORGE I. WARREN.