(No Model.)

2 Sheets—Sheet 1.

J. S. RICE.

SHEET METAL CAN.

No. 278,271. Patented May 22, 1883.

Fig. 1.

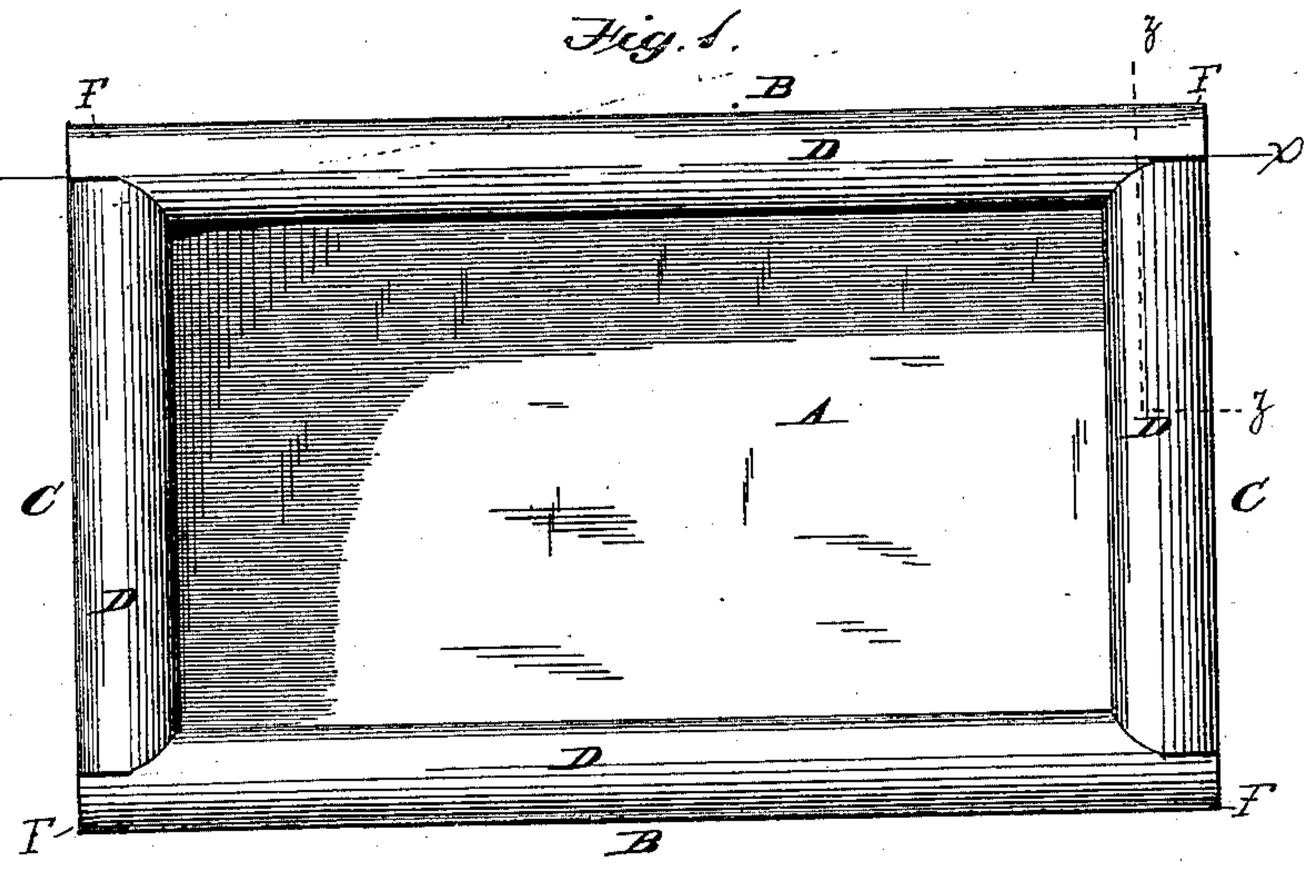


Fig. 1a

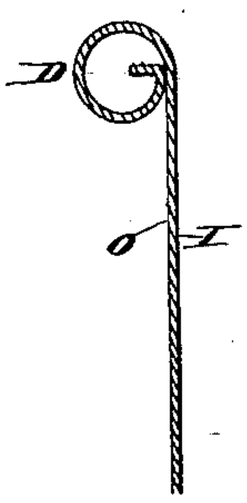


Fig. 2

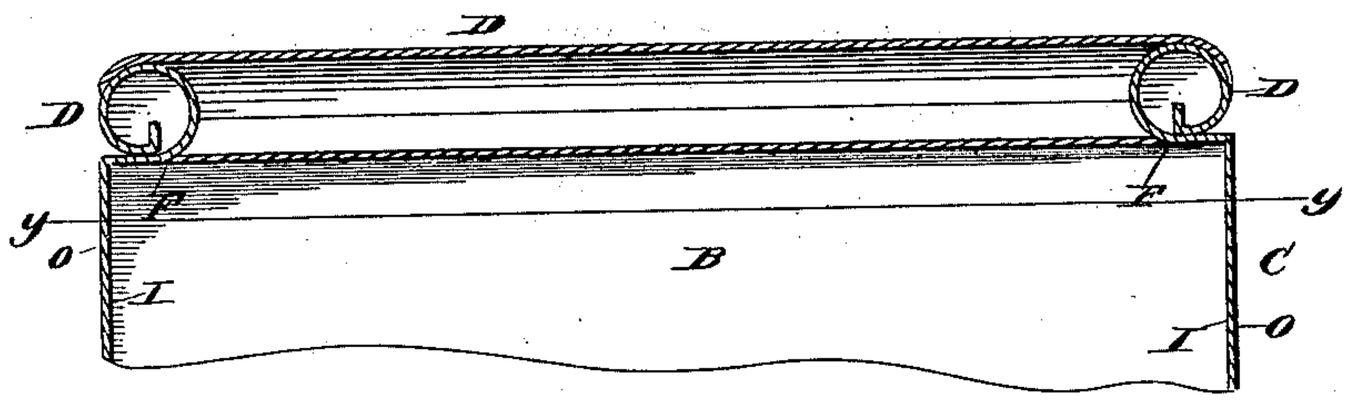


Fig. 1b

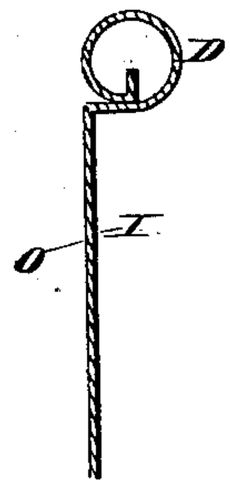
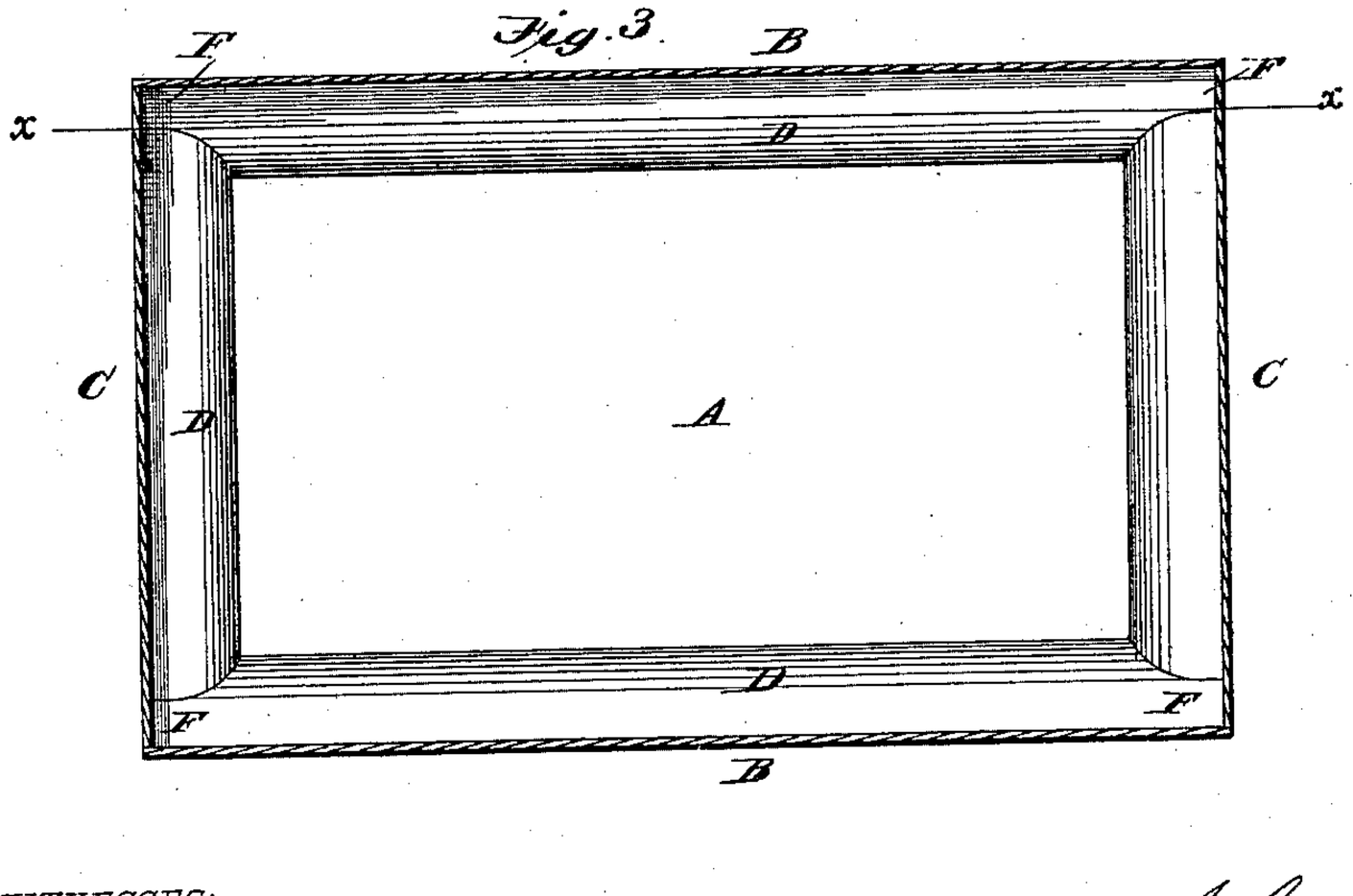


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

J. S. RICE.

SHEET METAL CAN.

No. 278,271. Patented May 22, 1883.

Fig. 4.

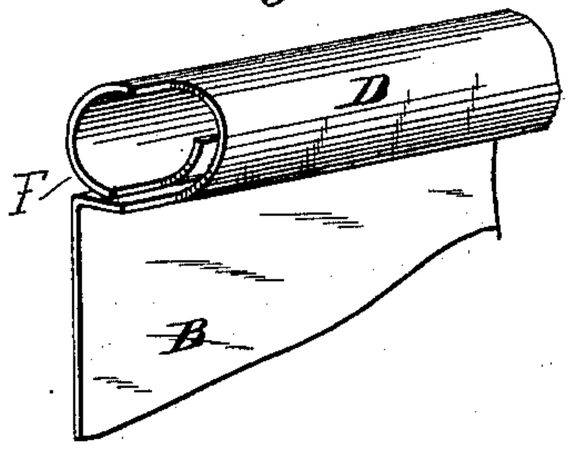


Fig. 5.

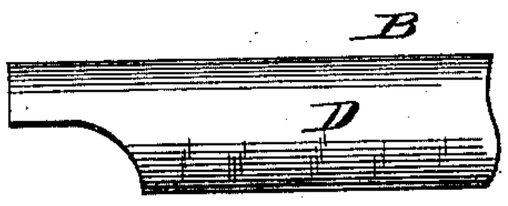


Fig. 6.

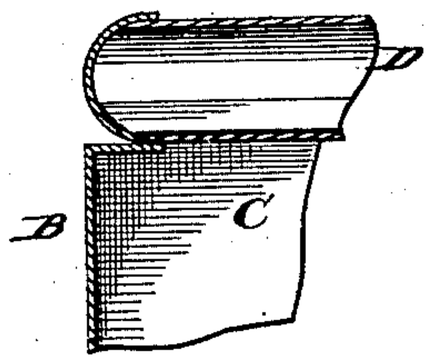


Fig. 7.

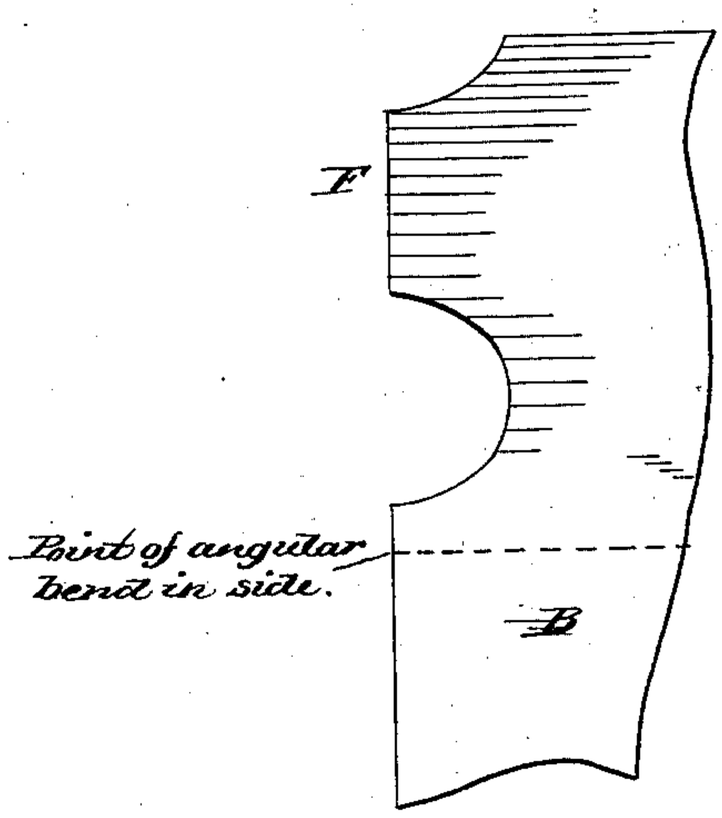
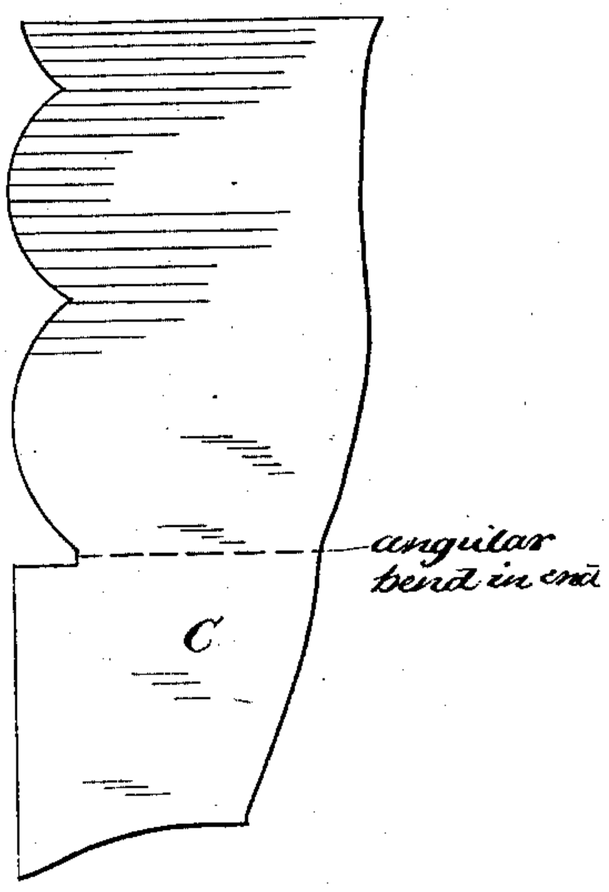


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN S. RICE, OF CAMBRIDGE, MASSACHUSETTS.

SHEET-METAL CAN.

SPECIFICATION forming part of Letters Patent No. 278,271, dated May 22, 1883.

Application filed October 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. RICE, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Sheet-Metal Cans, of which the following is a specification.

This invention relates to the manufacture of that class of rectangular sheet-metal cans or boxes in which the upper edges of the side pieces are rolled to form hollow tubes, which are connected at the corners of the can or box, and to form a continuous tubular rim around the upper edge thereof. Heretofore the upper ends of the side pieces have been rolled inwardly, so that the cracks or fissures formed where the rolled portions met the sides of the can are in direct communication with the interior of the can, and enable crumbs and dust and also water used in washing the can to find access through such cracks into the tubular space inclosed by said rolled top, especially as the sides of the rolled portion, in connection with the straight inner surfaces of the can, form V-shaped spaces leading directly to said cracks. Heretofore the ends of the tube formed on each side of the piece have been formed so as to abut against the ends of the tubes on the adjacent pieces. In this construction it is difficult to solder the ends of the tubes firmly together without "loading" or accumulating the solder over the joints to a considerable thickness, thereby involving considerable expense for solder, and giving the joints a somewhat bungling appearance.

My invention has for its object, first, to prevent the cracks or fissures above named from communication with the interior of the can, and thereby prevent the access of crumbs, water, &c., into said rolled top; and, secondly, to provide an improved construction whereby the ends of the tubes can be more firmly and neatly united than heretofore, and by the use of a smaller quantity of solder.

To these ends my invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top view of a rectangular can or box embodying my improvements. Figs. 1^a and 1^b are edge views of one of the side pieces, showing the method of bending. Fig. 2 represents a vertical section on line x x, Figs. 1 and 3. Fig. 3 represents a horizontal section on line y y, Fig. 2, looking toward the top of the can. Fig. 4 represents a perspective view of a part of one of the sides of the can. Fig. 5 represents a top view of the same. Fig. 6 represents a vertical section on line z z, Fig. 1. Figs. 7 and 8 represent, respectively, views of portions of the blanks from which the sides shown in Figs. 4 and 6 are made.

The same letters of reference indicate the same parts in all the figures.

In the drawings, A represents a rectangular can or box, the walls of which are formed of four side pieces, B B C C, of sheet metal.

D represents the hollow tube or rolled top, formed, as heretofore, by rolling the upper edge of each side piece; but instead of rolling said side pieces inwardly, so that the edges of the rolled portions will bear against the inner surfaces of the side pieces, as heretofore, I roll the side pieces outwardly, so that the edge of each rolled portion will bear against the outer surface, O, of the side piece on which it is formed, as shown in Fig. 1, the tube or rolled portion projecting wholly outside of the plane of the outer surface of the side piece, and then bend the side piece substantially at right angles at a point below the rolled top, to offset the latter and cause it to project, mainly, inside of the plane of the inner surface, I, of the side piece, as shown in Fig. 2. By this construction it will be seen that the crack or fissure formed in making the rolled top is located at the exterior of the can, and has no communication with the interior, so that the access of crumbs, dust, and water from the can into the rolled top is impossible. I form the blanks from which the sides B B are made in such manner that the ends of the tubes D formed on said sides will be adapted to receive the ends of the tubes formed on the sides C C, or, in other words, will partially overlap the upper and lower surfaces of the tubes formed on the sides C C, said overlapping surfaces being capable of being strongly united by a comparatively small amount of solder. To this end I provide the sides B with tongues F, which are arranged to project under the tubes formed on the sides C C, as clearly shown

in Figs. 2 and 3. I also form the sides B so that the ends of the tubes on the sides C can extend partially under the upper surfaces of the tubes on the sides B and abut against the sides B, as shown in Fig. 6, the ends of the tubes on the sides C being curved so as to fit the curvature of the sides B. The described features will be secured by giving the blanks from which they are made the form shown in Figs. 7 and 8, which I prefer to do by means of suitable dies.

I have found that by the described construction great strength can be obtained at the corners of the can by the employment of about one-third of the amount of solder required by the construction formerly adopted.

I do not limit myself to the precise outline for the blanks shown in Figs. 7 and 8, as the same may be variously modified without departing from the spirit of my invention.

I claim—

1. The combination, with the sides B C of the box A, of the tubular rim D, formed as described, whereby the crack or fissure in said rim is located on the exterior of the can, and said rim is made to project within the plane of the sides, as and for the purposes set forth.

2. In the metal box A, the combination of the sides B, provided with tubular rims cut away at F, and the sides C, having tubular rims cut away at their ends, in the manner described, whereby the ends of the tubular rims of sides B overlap those of sides C, for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 18th day of September, A. D. 1882.

JOHN S. RICE.

Witnesses:
C. F. BROWN,
A. L. WHITE.