

(No Model.)

E. NORTON.
SHEET METAL CAN.

No. 255,012.

Patented Mar. 14, 1882.

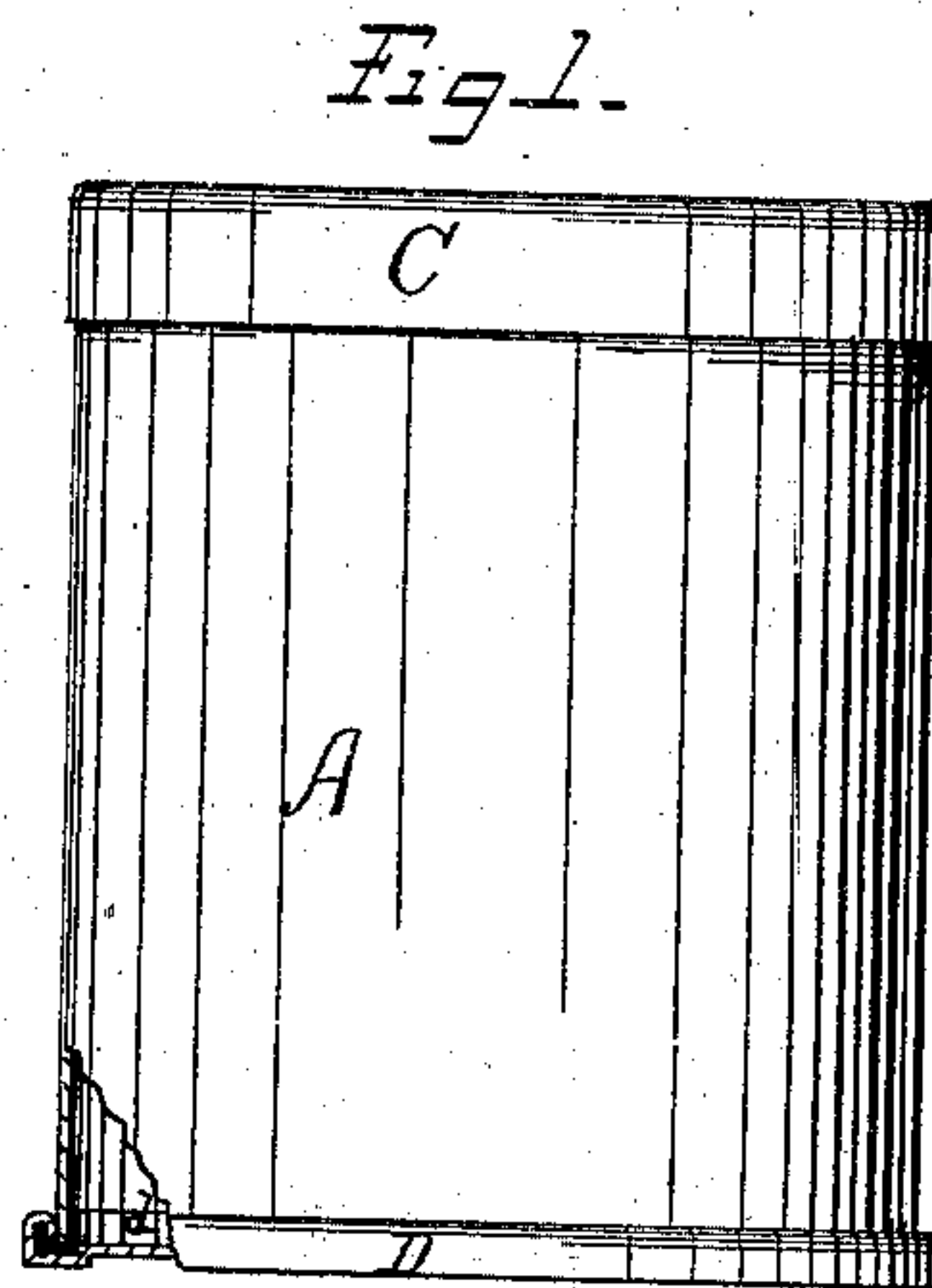
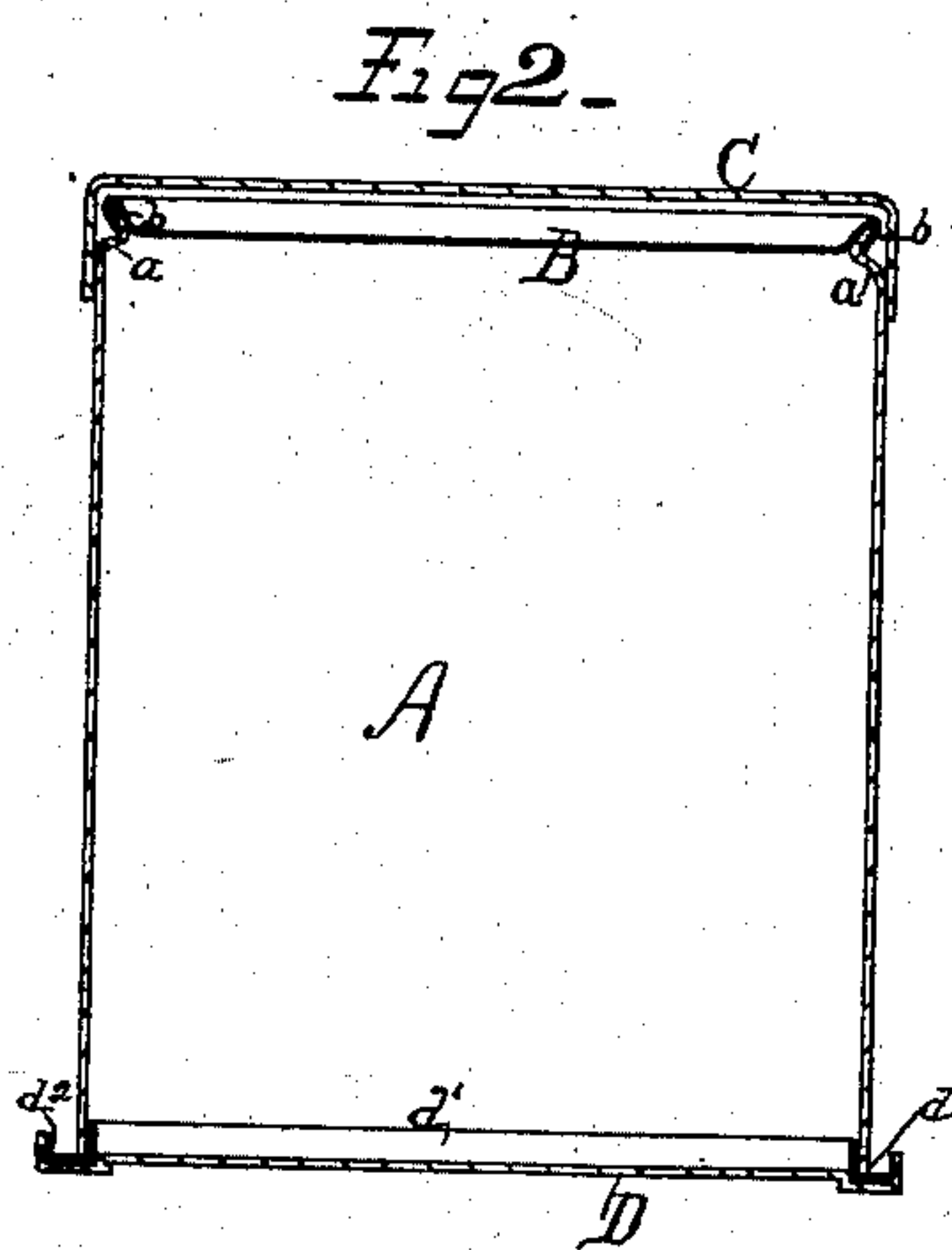


Fig 3.

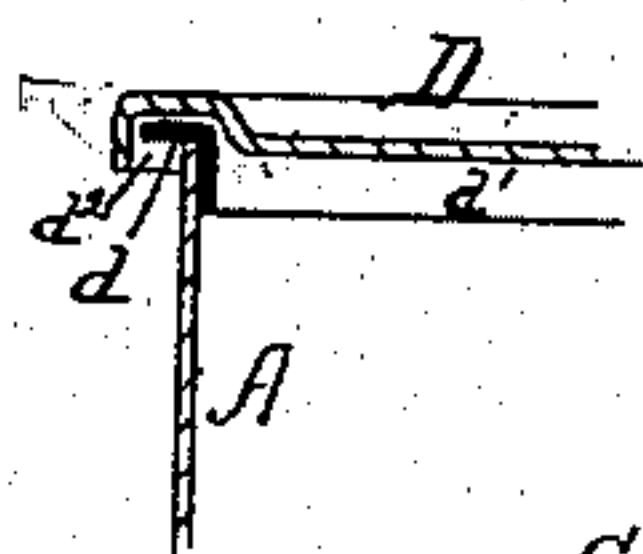


Fig 4.

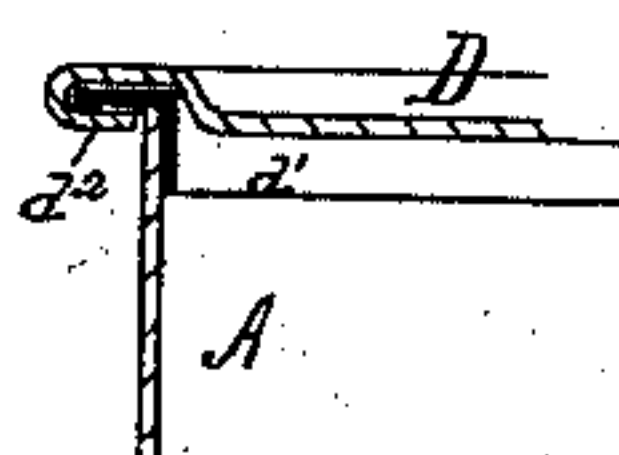


Fig 8.

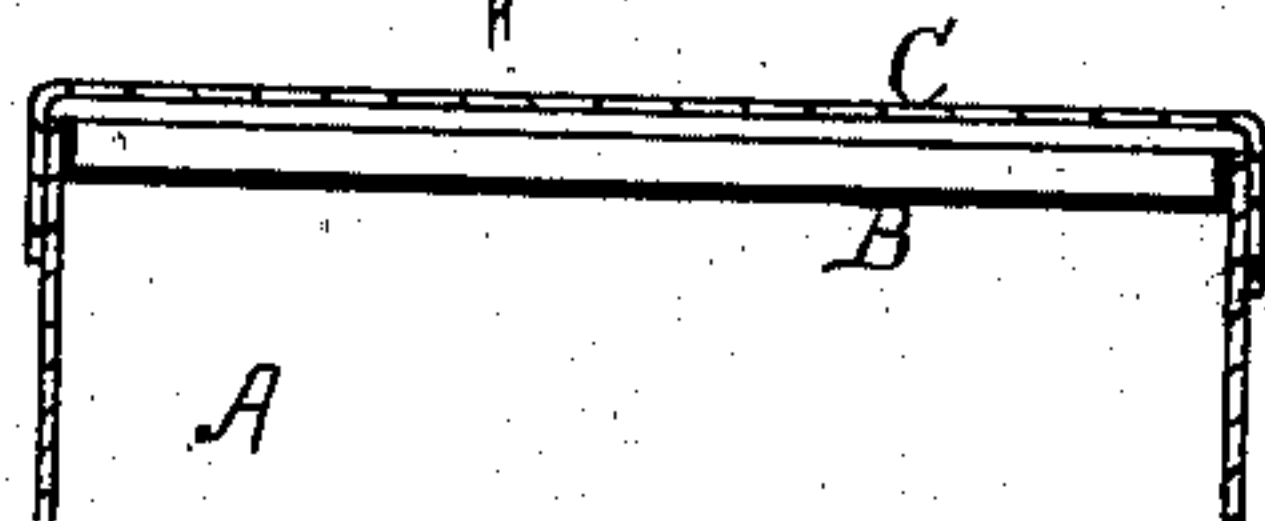


Fig 5.

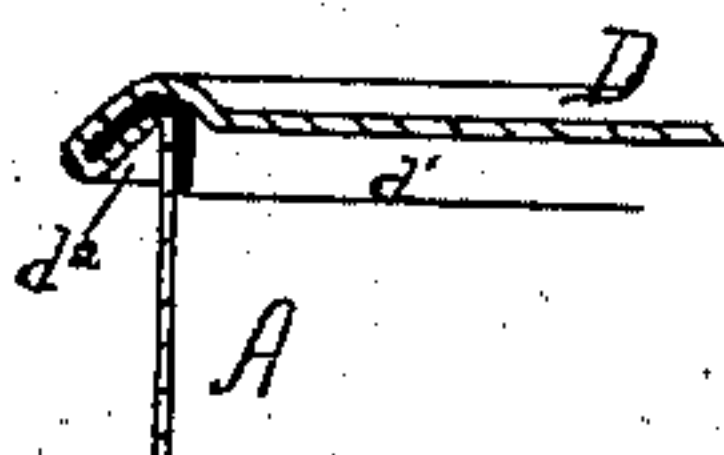
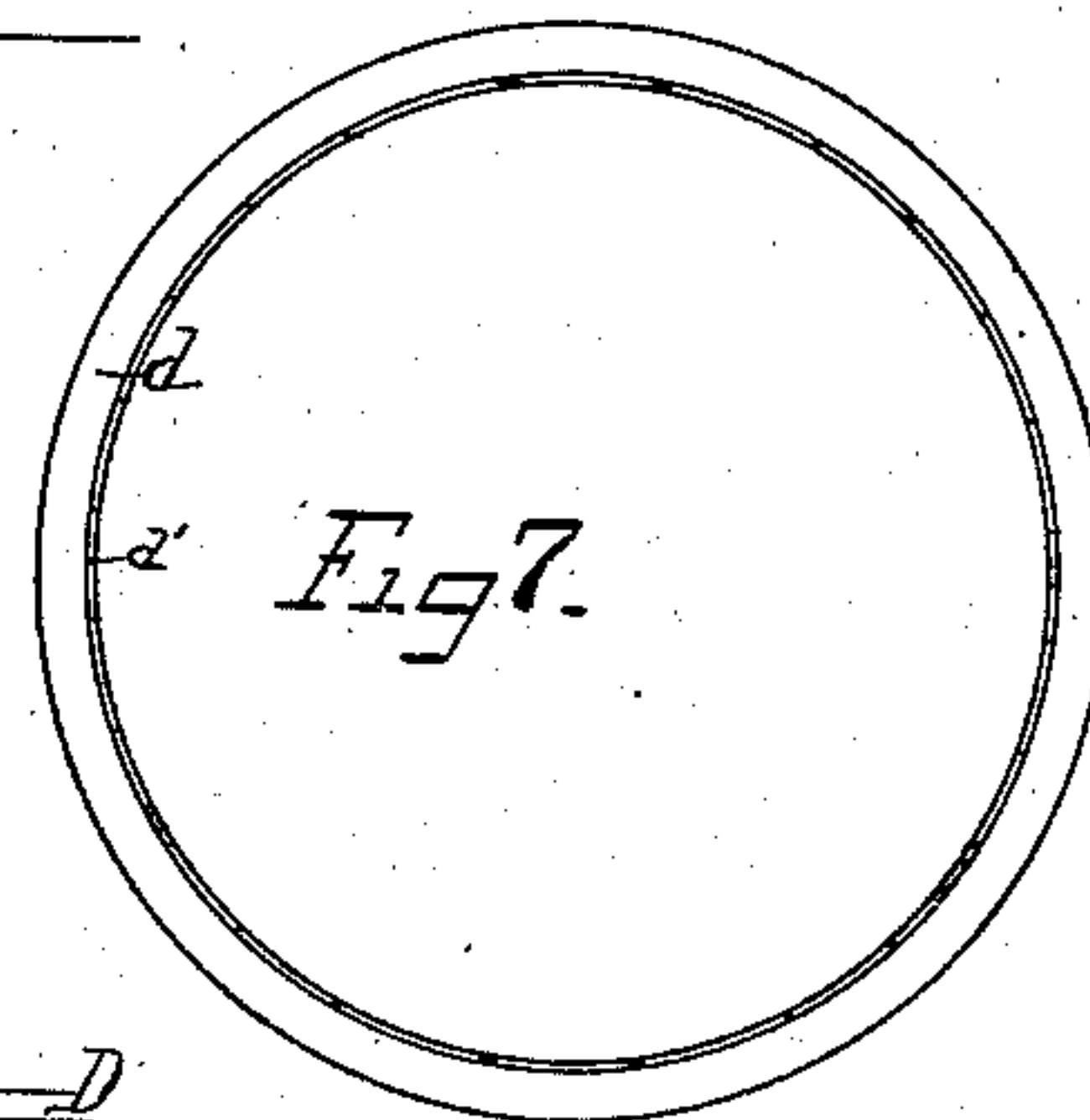
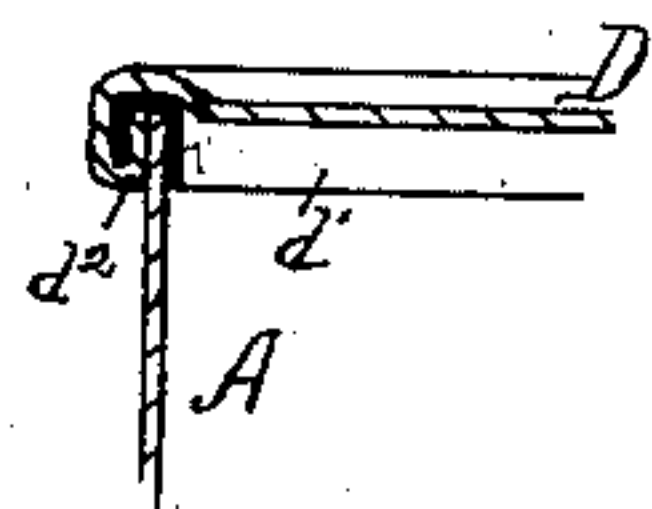


Fig 6.



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UNITED STATES PATENT OFFICE.

EDWIN NORTON, OF CHICAGO, ILLINOIS.

SHEET-METAL CAN.

SPECIFICATION forming part of Letters Patent No. 255,012, dated March 14, 1882.

Application filed December 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWIN NORTON, of Chicago, Cook county, State of Illinois, have invented certain new and useful Improvements in Sheet-Metal Cans, of which the following is a specification.

My invention relates to cans for packing caustic alkali and similar substances wherein it is essential to have an air-tight and perfect can in order to be secure against danger of leakage and prevent the usual loss and injury incident to the transportation and storage of such substances; and my invention consists in uniting either the cover or the bottom of the can to the can-body by means of an improved double seam composed of an exterior seamless flange on the can-body interlocked and folded with the can-cover in the ordinary manner into a double seam.

Heretofore the flange on the can-body forming part of the double seam has been drawn out and formed from the body of the can, so that the metal of the flange is much weakened and destroyed in texture, rendering it liable to break or crack when it comes to be further drawn and folded by the tools in the operation of forming the double seam, thus causing an aperture through which the contents of the can may leak, and the action of the tools also, in laying off this flange, frequently opens the side seam of the can at the flange, and even when this does not happen the laps or folds of the side seam make an uneven place in the flange, through which air may find its way through the double seam after it is formed.

In the present invention I form the exterior flange, which constitutes part of the double seam, from an annular seamless blank by stamping or turning its inner edge at right angles to form a shoulder, whereby the flange may be soldered to the can-body, such shoulder preferably being adapted to fit inside the same. In this way it will be observed that the metal constituting the flange has in no way been disturbed by the forming tool or stamp and retains its original texture, so that when the same is subjected to the action of the tools in forming the double seam there will be no danger of its giving way or breaking, and thus forming an aperture for leakage, and also that the flange is seamless and of a single un-

broken thickness of sheet metal throughout, and therefore affords a perfectly smooth and even bearing for the cover, and insures an absolute uniformity in every part of the double seam when the two parts are lapped and folded together by the action of the seaming-tools, and produces with certainty a perfect can every time, and one that can be relied upon with safety.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a central vertical section of the same, showing the bottom in position to be secured. Figs. 3, 4, 5, and 6 are detail sectional views, enlarged, showing the double seam at various stages of completion; and Fig. 7 is a detail plan view of the seamless flange.

In the drawings, A represents the body of the can, which is of the usual construction, excepting that a crimp or shoulder, *a*, is formed at its top edge, so that when the thin inner cover, B, is crimped over the same and soldered or otherwise united thereto the seam *b*, joining the two parts, will only be flush, or a little less than flush, with the exterior cylindrical surface of the can-body, in order that the removable slip-cover C may fit over said seam and have a smooth bearing upon the can-body, the same as in cans having no inner cover.

The inner cover, B, is made of thin soft metal, so as to be easily cut away when it is desired to use the contents of the can, and the outer slip-cover, C, is provided as a protection to this thin cover, and because frequently only a portion of the contents of the can are used at once, when it is desirable to have a removable cover as means of closing the can after the inner cover has been cut away. To the other end of the can, the end through which it is filled, is soldered a seamless flange, *d*, consisting of an annular piece of sheet metal having its inner edge turned or stamped up at right angles to form a shoulder, *d'*, adapted to fit inside the can-body, and whereby the flange *d* is soldered to the can-body. The bottom or cover D for this end of the can is provided with an annular groove, *d*², in its outer edge, which is adapted to fit over and interlock and be folded in with the seamless flange *d* of the

body by the successive action of the tools in forming the double seam, as illustrated in Figs. 3, 4, 5, and 6 of the drawings. As the stock of the seamless flange d has not been previously injured or disturbed by the stamp, which acts only upon the inturned edge d' of the same, a very tight and perfect double seam can be formed in this way with certainty every time, and the can when thus closed can be relied upon with safety.

It is obvious that some of the advantages of my invention may be secured by employing a seamless can-body, in which case the seamless flange d could be drawn out or formed on the edge thereof.

As shown in the drawings, my improved can is intended to be filled through the bottom end, the thin inner cover, B, being first soldered to the body, and the slip-cover C applied, the bottom or cover D being double-seamed on after the can is filled. When it is desired to open the can the slip-cover is first removed, when the thin inner cover may be readily cut away with a knife or other suitable instrument.

If the thin inner cover be made to fit inside the can-body, instead of over it, as shown, the crimp a in the top edge of the can may be dispensed with, as in that case the seam uniting the inner cover to the can-body will not prevent the slip-cover being pressed upon the can in the ordinary manner. This modified construction is shown in Fig. 8; but I prefer the construction first described, as I consider the same both neater and cheaper.

I am aware that seamless flanges have heretofore been used on can-bodies for strengthen-

ing the can and other purposes; and I wish to be understood as making no claim thereto generally, but only to the same as forming an element of my improved double seam.

It will be observed that in my improved double seam the seamless flange on the can-body is an exterior one, and thus adapted to be acted upon by the ordinary rollers or tools used in forming a double seam, and whereby the flange and cover may be properly compressed and folded together, so as form a tight and perfect joint; and I am aware that heretofore, where internal flanges have been used on can-bodies for the purpose of strengthening the can, covers have sometimes been secured to such flange by a seam or joint formed by applying direct pressure on the top of the can after the can has been filled; and I make no claim to a seam or joint thus formed, but only to my improved double seam, as shown and described.

I claim—

1. In a sheet-metal can, the improved double seam consisting in a seamless exterior flange on the can-body, interlocked and folded with the can-cover, substantially as shown and described.

2. The combination of a can-body with an exterior seamless flange, d , provided with inturned edge d' , soldered to the can-body, and cover D, folded with said flange into a double seam, substantially as and for the purpose specified.

EDWIN NORTON.

Witnesses:

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