C. P. MAXFIELD.
Metallic Can.

No. 199,918. Patented Feb. 5, 1878.

Fig. 1.

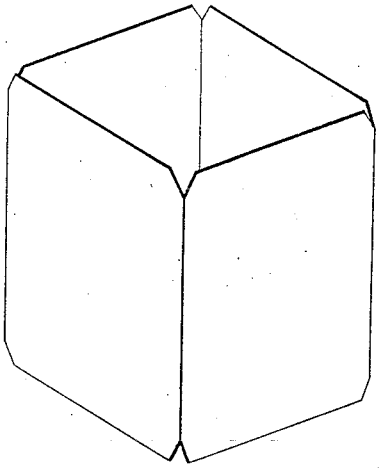


Fig. 2.

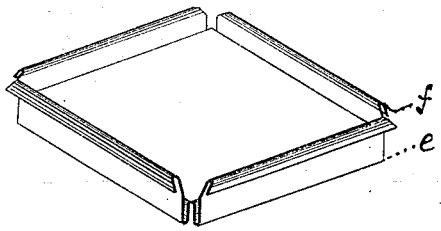


Fig. 3.

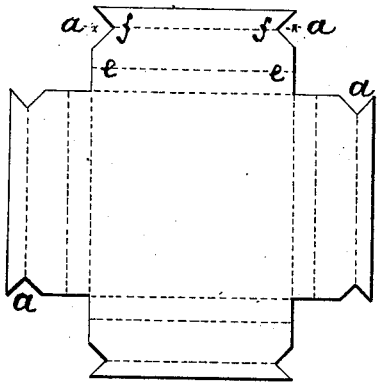


Fig. 6.

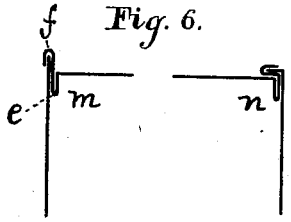


Fig. 4.

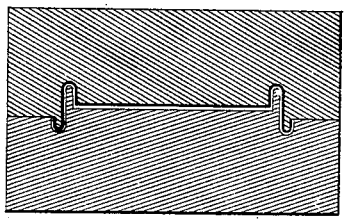
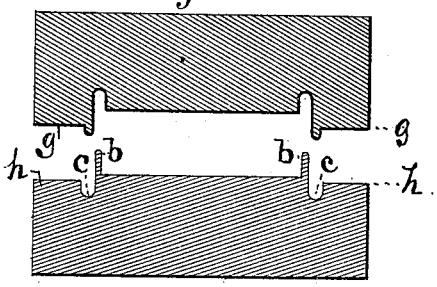


Fig. 5.



Witnesses:
E. A. Brick.
John L. Cordrow

Inventor:
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A. Pollok his atty

UNITED STATES PATENT OFFICE.

CHARLES P. MAXFIELD, OF FAIRHAVEN, ASSIGNOR TO EDWARD T. COVELL, OF NEW BEDFORD, MASSACHUSETTS.

IMPROVEMENT IN METALLIC CANS.

Specification forming part of Letters Patent No. **199,918**, dated February 5, 1878; application filed January 14, 1878.

To all whom it may concern:

Be it known that I, CHARLES P. MAXFIELD, of Fairhaven, in the State of Massachusetts, have invented certain new and useful Improvements in the Manufacture of Metallic Cans or Vessels, of which the following is a specification:

In Letters Patent issued to my assignee on the 6th day of November, 1877, numbered 196,758, reissued on the 25th day of December, 1877, and numbered 8,015, I have described an improved metallic can or vessel, the same consisting, as claimed in said patent, under the second and third clauses of the claims, first, in the union of the body of the can with the heads or ends thereof by means of a seam consisting of the combination, with an internal flange formed at right angles to the body of the can, of a twofold double lap-joint on the head, the one lying internally against the side or body of, and the other externally against the respective heads of, the can, the latter holding confined the flange on the body, as more fully shown and described in the specification accompanying said patent; and, secondly, in the angular interior and exterior double flange formed on the heads or ends of a metallic can or vessel, forming a union with the can-body, as more fully described and shown in the specification and drawings annexed to said Letters Patent.

In said specification I have also described, in general terms, the manner in which this invention may be carried into effect, by forming on the head or end an inwardly-folded or interior double flange, with an extension projecting above the outer surface of said head or end, which projection, being bent outwardly over the edge of the can, is bent down inwardly at right angles to the sides upon the head, as claimed in the first clause of claim of said reissue.

Numerous experiments have led to the adoption of a plan or mode of operation, which, having been found to answer every requirement and to be eminently practical and well adapted for manufacturing purposes, is made the subject of these Letters Patent.

The object of the present invention is, therefore, to provide means for the more expeditious and perfect manufacture of cans—subject-matter of the before-said patent and reissue; and the same consists in the peculiar formation of heads to be united with the body of the can, in the manner hereinafter described.

To this effect the head is made of a sheet of metal large enough to form both the head and the flanges in one piece. The sheet of metal is then notched or cut out at the corners the depth of the strip of metal necessary to make therefrom the flanges—or, in other words, to leave on each of the four sides of the head a quadrangular strip of metal, of which the peculiarly-formed flange is made.

For nice work I prefer to further notch or cut out a rectangular triangle at the outer corners of the flange-strips of the sheet of metal, the rectangle of the triangle being bisected by the line of the last fold, while the opposite two angles are respectively at the outer edge and the third or middle fold of the flange, as shown at *a* in Fig. 3. This cutting out of the corners of the sheet may be effected, by means of shears, dies, or other machinery, successively or simultaneously at the four corners. The sheet of metal thus prepared is then placed into a corrugating-die, the bed of which corresponds in form or configuration to the top or outer surface of the head when formed with its flanges, while the follower corresponds in shape and configuration to the interior side of the head when so formed.

To this effect the bed is provided with a quadrangular ridge, *b*, of a height corresponding to the depth of the interior fold of the flange. Around this ridge is formed a quadrangular recess or groove, *c*, of a depth, with respect to the ridge *b*, equal to the distance between the two folding edges *e* and *f*. The body of the die surrounding the last-described groove is of an elevation equal to the depth of the last exterior fold of the flange—that is to say, is of so much less elevation than the central portion of the die which corresponds to the head proper, whose position, with respect to said flange, is, as shown in the drawing, Fig. 6, considerably lower. The top or follower is made, in all respects, similar to and a counterpart of the bed-die, the parts only being reversed. Those which are projections in the

bed-die correspond to and fit into depressions in the follower, and vice versa. It is well to say that when the dies are closed—*i. e.*, when the face *g* shall rest upon the face *h*—there will be a small but throughout uniform free space between the male and female portion of the die, which space corresponds, as nearly as may be practicable, to the thickness of the sheet of metal to be corrugated, so that a sheet of metal subjected to the action of these dies will receive a form always the same, and always accurately conforming to the shape of the dies. The head thus formed will be ready to be applied to the body of the can, which, for the purpose of perfect closing and nice work, should have the corners cut away to conform to the bias cut on the last and exterior fold of the flange. The heads may then be placed upon the bodies in the manner shown in the drawing—that is to say, with the outer fold of the flange hooking over the upper and lower edges of the body—and when so put together these parts are carried to a machine or apparatus for turning over the flange—such, for instance, as is described in Letters Patent issued to Edwin R. Bowie on 8th day of January, 1878.

The top flange, forming a hook, will properly gage the penetration of the head of the can into the body thereof, by which means no uncertainty as to the proper relative position of the can body and heads will be experienced, and no devices, implements, or tools are necessary to hold the head in its proper position in the body of the can, to properly turn the upper flange over the ends of the body.

In the aforegoing specification reference has been had to the annexed drawing, in which—

Figure 1 is a perspective view of the body of the can; Fig. 2, a perspective view of one of the heads of the same. Fig. 3 is a plan view of the sheet of metal preparatory to being corrugated to form the flanges thereon. Figs. 4 and 5 are sectional views of the die, shown respectively closed and open; and Fig. 6, diagrams of the manner in which the head is applied to the body of the can, *m* showing the union of these parts before, and *n* after, the can is closed.

Having thus described my said invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. A head constructed for application onto the body of a can in the manner shown and described—that is to say, provided with a double interior and exterior flange, the latter being sufficiently open to admit of the insertion therein of the ends of the body of the can, substantially as set forth.

2. The method of uniting the can-body with a head, such as is described and claimed, by first placing said head, with its double exterior flange, upon the ends of the can-body, and by then bending inwardly upon the heads the said exterior flange, together with the ends of the can-body which are inserted therein, all substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHAS. P. MAXFIELD.

Witnesses:
A. EDWIN CLARKE,
N. J. ASHTON.