F. C. FLEMING.

SHEET-METAL CANS.

No. 189,891. Patented April 24, 1877.

Fig. 1

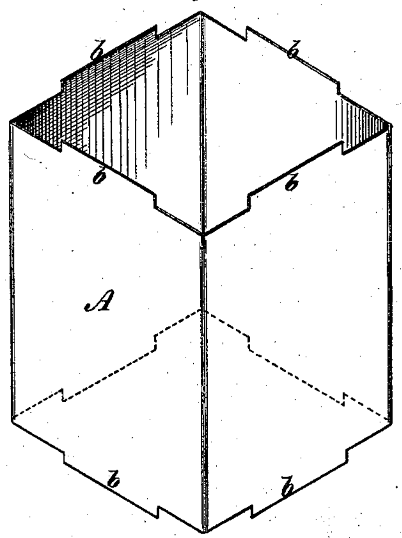


Fig. 3

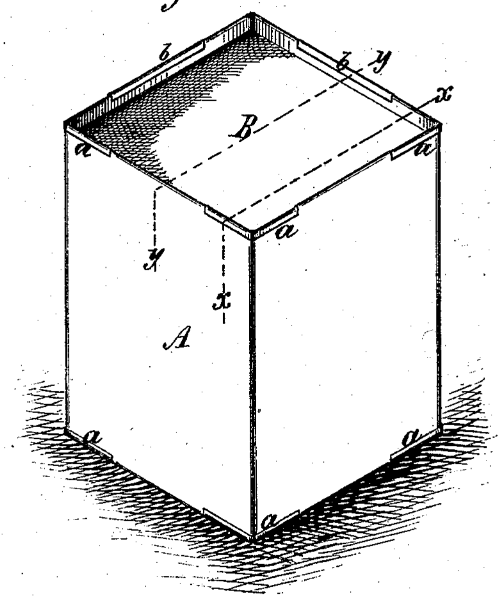


Fig. 2

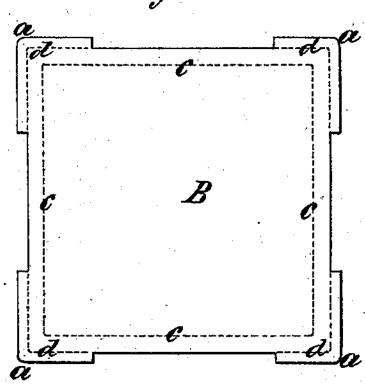


Fig. 5

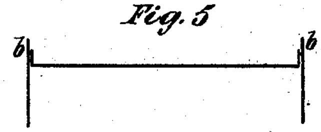


Fig. 6

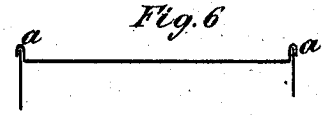


Fig. 4

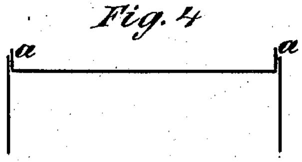
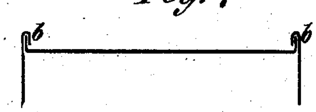


Fig. 7



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UNITED STATES PATENT OFFICE.

FRANCIS C. FLEMING, OF NEW YORK, N. Y.

IMPROVEMENT IN SHEET-METAL CANS.

Specification forming part of Letters Patent No. **189,891**, dated April 24, 1877; application filed April 3, 1877.

To all whom it may concern:

Be it known that I, FRANCIS C. FLEMING, of the city, county, and State of New York, have invented a new and useful Improvement in Sheet-Metal Cans, of which the following is a specification:

The invention consists of a sheet-metal can whose heads are united to the body thereof by lapping the edges of the head over upon the contiguous edges of the body throughout a portion only of their line of contact, while throughout the remaining portion the edges of the body are lapped or turned over the contiguous edges of the heads.

The construction of the can is clearly shown in the accompanying drawing, in which—

Figure 1 is a view, in perspective, of the blank forming the body of the can; Fig. 2, a view of the blank for one of the heads of the same; Fig. 3, a view, in perspective, of the completed can; Fig. 4, a section through the line *x x* of Fig. 3, before the lap is formed by bending the flange of the head over the wall of the body; Fig. 5, section through the line *y y* of Fig. 3, before the lap is formed; Fig. 6, section through the line *x x* of Fig. 3, after the lap is formed; and Fig. 7, section through the line *y y* of Fig. 3, after the lap is formed.

In the figures, A represents the body of the can; B, one of the heads thereof; *a a a*, &c., portions of the edge of the head overlapping the wall of the body; and *b b b*, &c., portions of the edge of the body overlapping the head.

The blanks for the body and heads of the can may be struck out of tin, zinc, or other thin metal by means of dies shaped to give the required form to the blanks. The body of the can may be composed of one or more blanks, and their edges united in any of the usual ways.

To render the can most serviceable it is generally desirable that the heads should be countersunk, as shown in the drawing. This permits of closer contact between the overlapping edges of the heads and the body of the can, and thereby a stronger and tighter joint is formed. To accomplish this result a flange is turned up all around the head-blank, preferably at right angles to the plane thereof, leaving the central portion of the blank of such form and size as will fit closely within the body of the can where it is to be secured. In the blank shown in Fig. 2 of the drawing, *c c c c* represent dotted lines along which the flange is to be turned up. *d d d*, &c., represent dotted lines at which the projecting flanges are to be turned outward over the edges of the body of the can, while *e e e*, &c., represent those parts of the upturned flange of the head over which the projecting parts of the body are to be turned or lapped.

The blank which forms the body of the can is so formed that its edges will be the reverse in elevation and depression to the corresponding edges of the head, so that when the head is brought into place the higher parts of the turned-up flange of the head and the higher parts of the edge of the body will be substantially the same height, and will encircle the can.

Figs. 4 and 5 show, in section, the relative position of the edges of the head and body before the lap is formed.

When the head and body are thus brought together, the flange of the head in those parts where it is the higher is lapped closely over upon the wall of the body, and the wall of the body lapped over the edge of the head wherever the wall of the body is higher, thus forming an interlocking of the edges of the head and body of the can.

By the use of machinery of the proper construction the edges of the head and body can be lapped over and drawn into close contact with great facility.

Cans of this construction have great advantages over those in which the heads are united to the body by lapping the edge of the head over upon the body alone, or by lapping the edge of the body over upon the head alone. Cans thus formed are prepared to withstand resistance or force only in the direction in which they are braced or bound together by means of the overlapping metal, and are extremely liable to give way in the opposite direction, while by the construction herein described and claimed the can is braced and bound together by the interlocking of the parts in such a way as to resist both internal and external pressure and force. This is a very desirable feature in cans used for the shipment of products, especially of liquids, inasmuch as such cans are liable to be thrown

and pressed against each other by the roll of vessels, while their contents, being thrown from side to side against the interior, tend to loosen the solder and to force the sides outward. The present construction guards against this liability, and presents an effective resistance both to external and internal force.

Another advantage of the interlocking lap of the heads and body, as shown in the present invention, is the increased ease and facility of handling the cans after the parts have been assembled in the process of construction, but before the cans are fully finished. There exists no liability of the parts becoming displaced, and no such care is required in handling the cans for the purpose of soldering them, or otherwise, as is absolutely necessary when the joints are formed by a lap in one direction only. In fact, for many purposes, the can, when constructed on the present plan, will be serviceable without the use of any solder to seal the joints.

It is not designed to limit this invention to the form of the interlocking edges shown in the drawings; but it may embrace any construction in which the edges of the heads and the body of a can mutually interlock with or overlap each other.

What I claim as new is—

A can in which the edges of the head and body are mutually interlocked and overlapped, substantially as and for the purpose set forth.

F. C. FLEMING.

Witnesses:

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