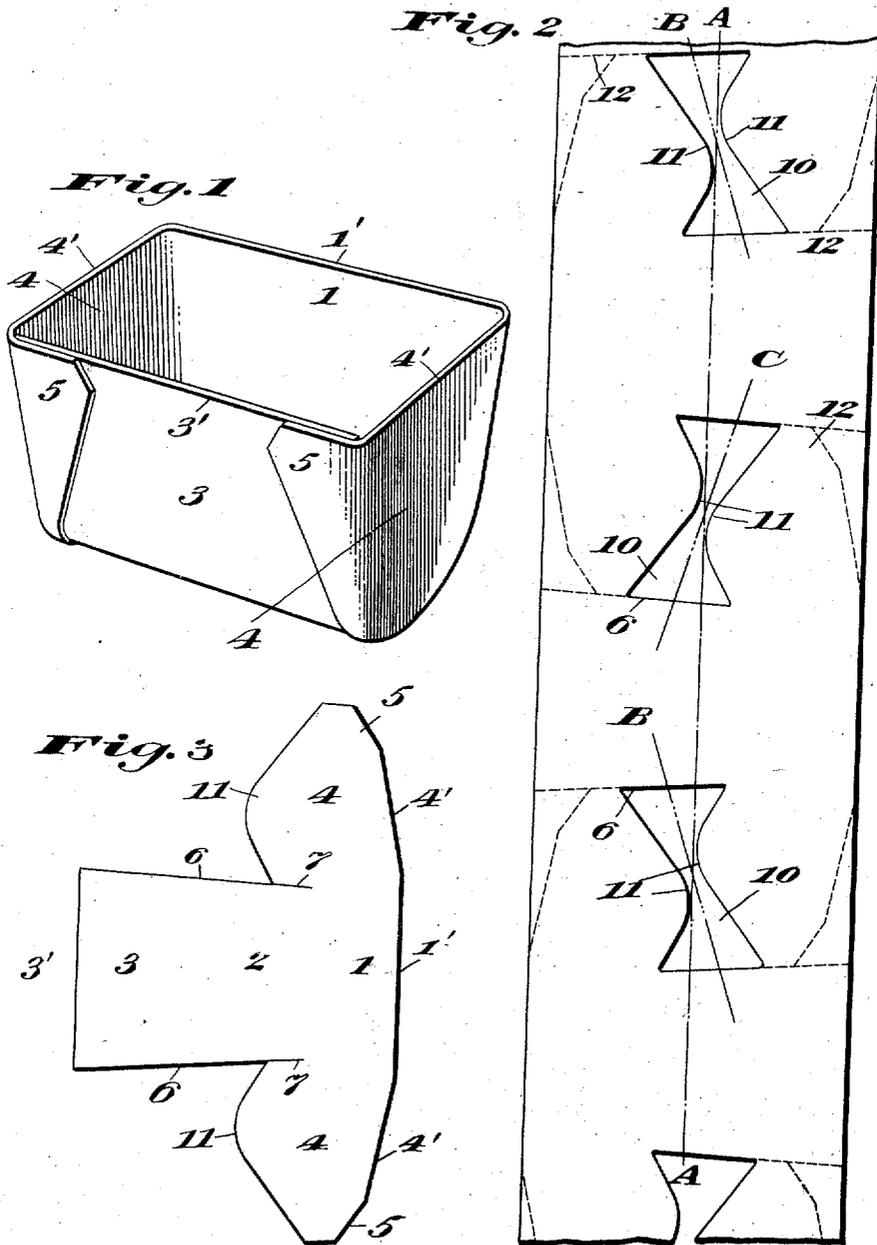


No. 874,515.

PATENTED DEC. 24, 1907.

P. A. LORENZ.
METHOD OF MAKING BUCKET BLANKS.

APPLICATION FILED JUNE 5, 1905.



UNITED STATES PATENT OFFICE.

PETER A. LORENZ, OF CHICAGO, ILLINOIS.

METHOD OF MAKING BUCKET-BLANKS.

No. 874,515.

Specification of Letters Patent.

Patented Dec. 24, 1907.

Application filed June 5, 1905. Serial No. 263,748.

To all whom it may concern:

Be it known that I, PETER A. LORENZ, a citizen of the United States of America, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Methods of Making Bucket-Blanks, of which the following is a specification.

My invention relates to the production of elevator buckets of the kind commonly known to the trade as "Salem" buckets. These are made substantially in one piece which is so cut and bent as to form the front, bottom, back and ends of a completed bucket.

The object of my invention is to produce the blanks for the above stated purpose in an expeditious, simple and inexpensive manner and one which will present the greatest possible economy in the use of material from which the said blanks are formed. By the use of my improved method I avoid the slow and tedious process of shearing the blanks to a pattern on the one hand or the use of a multiplicity of complicated and expensive dies on the other. I am also able to work material of a greater gage or thickness than is practicable by other means.

A perspective view of a completed bucket is shown in Figure 1. Fig. 2 shows a sheet of metal from which certain portions have been cut and removed, subsequent cuttings or shearings being indicated by dotted lines. Fig. 3 shows one of the completed blanks.

It will be noticed that the bucket illustrated in Fig. 1 presents a curved or U shaped line in cross section, the lines of which separate or flare from the bottom to the top; also that the ends have a similar flare. The blank from which such bucket may be formed is shown in Fig. 3 in which 1, 2, 3 and 4 represent respectively the front, bottom, back and end walls. When the same is folded to make the bucket shown in Fig. 1 the portion 1' forms the top edge of the front, 3' the top edge of the back, and 4' the top edge of the ends. The portions 4' which form the upper edge of the end walls should slant from the back toward the front, and the portions 5 lie flush with the upper wall of the back, when the wing 4 is folded in position to form the end. The edges 6 about and over which the end pieces or wings are folded diverge from the bottom to the top of the completed bucket, establishing the amount of flare which is given to the ends. Slots 7 partly

separate the wings from the bottom portion setting free a portion of such wings which may be folded or swaged over the body to support and strengthen the structure.

Blanks similar to the one described may be prepared by following the steps set out in this specification. To produce them by the minimum of time and waste, a strip of metal should be provided whose width corresponds to the distance from 1' to 3'. The first step should be that of cutting out a portion of the material of the strip on the central line thereof. The openings 10 so made and the material removed therefrom should correspond to the lines 11 which outline the lower part of the wings 4, and the ends of such removed portion should be straight lines crossing the side ones as indicated. While the portions so removed are placed in order upon the central axis A of the strip, the axis of the openings themselves B, C, etc., should be inclined to the line A at uniform angles, but alternately turned to the right or left for the purpose hereinafter indicated. When such openings have been made a strip will be thus provided from which a number of completed buckets, corresponding to the openings, may be made by shearing from the edges into the openings 10 on the line 12 which should be a prolongation of the ends of the openings 10. As these ends are placed at an angle according to the alternate disposition of the openings, the edges thus completed give the diverging lines 6 of the body portion of the blank, whereby the end flare of the completed bucket is secured. The blank can then be finally completed by trimming off the corners on the lines 4', 5 and making the cuts 7, 7.

It will be observed that by varying the distance of the openings 10 in the bucket blank strip from each other the length of the body portion of the completed blank and the bucket to be formed therefrom, may be varied without otherwise changing the dimensions of the bucket. If the openings 10 are made, as I prefer to make them, by a punch of appropriate size and outline, the inclination of the axis of the openings to the axis of the strip may be obtained by appropriately setting the gages to direct the motion of the blank thereunder. When the proper inclination is obtained for one opening the corresponding inclination to the central axis of the strip, but reversed to the inclination of the first opening, may be obtained by turn-

ing the strip over and advancing it under the dies until operated upon thereby. And a series of openings will thus be made, each having the proper inclination. The strip so formed can, by the subsequent steps of my process, be converted into completed and finished blanks.

I claim and desire to secure by Letters Patent:

1. The method of producing, from an elongated strip of metal, a series of blanks of the character described, which consists in forming a series of openings on the central line of the strip whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the wing portions of adjacent blanks, and then separating the blanks on the lines of the end portions of said openings prolonged.
2. The method of producing, from an elongated strip of metal, a series of blanks of the character described, which consists in forming a series of openings on the central line of the strip whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the end or wing portions of adjacent blanks, said openings being disposed at the same angle to the central line of the blank but alternately inclined in opposite directions, and subsequently separating the blanks by shearing on the lines of the end portions of said openings prolonged.
3. The method of producing from an elongated strip of metal, a series of blanks of the character described, which consists in punching a series of openings on the central line of the strip, whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the wing portions of

adjacent blanks, separating the blanks from each other and then trimming the upper edges of the wing portions.

4. The method of producing, from an elongated strip of metal, a series of blanks of the character described, which consists in forming a series of openings on the central line of the strip, whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the wing portions of adjacent blanks, separating the blanks from each other, then shearing the blanks adjacent to the junction of the wings with the body portion and then trimming the upper edges of the wing portions.

5. The method of producing from an elongated strip of metal a series of blanks of the character described, which consists in producing an opening on the central line of the blank whose ends represent edges of the body portion of adjacent blanks and whose sides represent edges of the end or wing portions of adjacent blanks by feeding the strip to a punch of appropriate form at an angle to the axis of the strip, then turning the strip and feeding the same to the said punch at the same angle as before, whereby the adjacent openings are given the same angle to the axis of the strip, but oppositely inclined thereto, then separating the blanks from each other on the lines of the end portions of said openings prolonged.

In witness whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

PETER A. LORENZ.

Witnesses:

C. K. CHAMBERLAIN,
A. S. PHILLIPS.