S. AND H. J. SAUVAGE.

METHOD OF FORMING COOKING OVEN ELEMENTS.

APPLICATION FILED SEPT. 25, 1918.

1,403,642. Patented Jan. 17, 1922.

Fig. 1

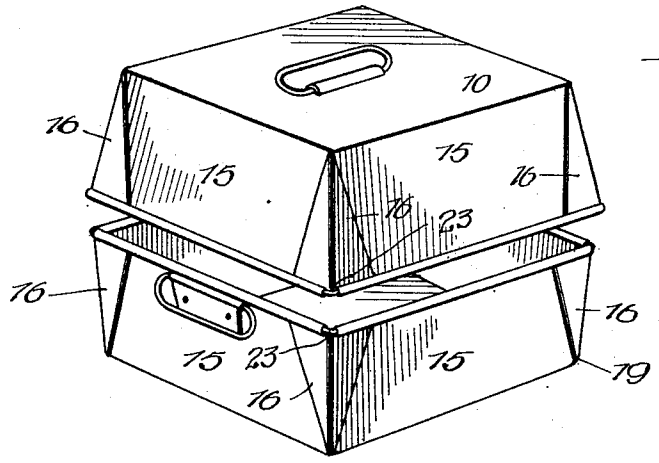


Fig. 2

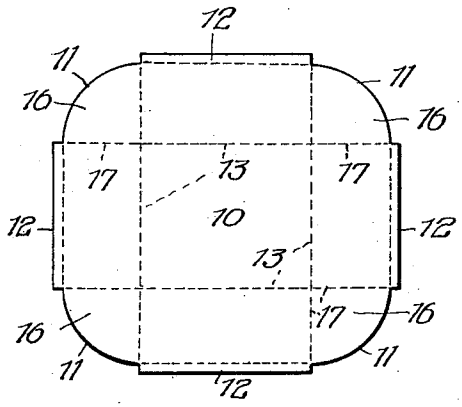


Fig. 3

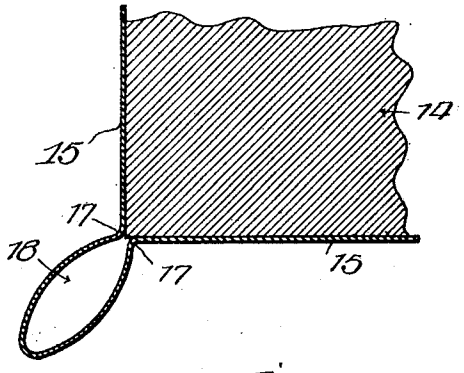


Fig. 4

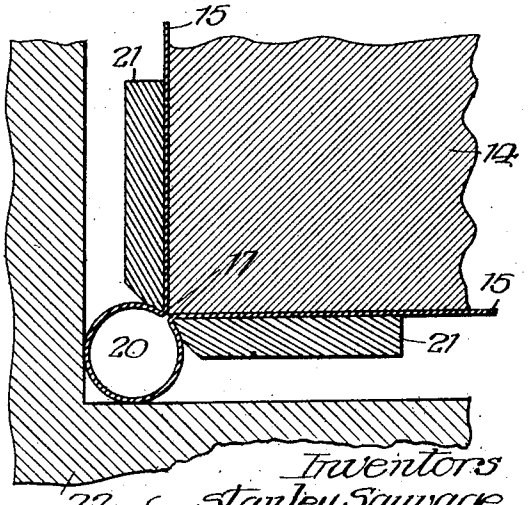
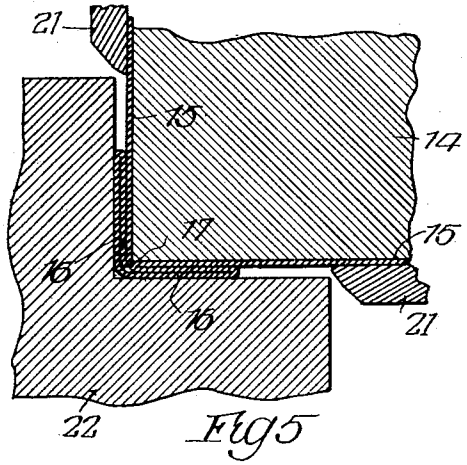


Fig 5



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UNITED STATES PATENT OFFICE.

STANLEY SAUVAGE AND HERBERT J. SAUVAGE, OF CHICAGO, ILLINOIS.

METHOD OF FORMING COOKING-OVEN ELEMENTS.

1,403,642. Specification of Letters Patent. Patented Jan. 17, 1922.

Application filed September 25, 1918. Serial No. 255,543.

To all whom it may concern:

Be it known that we, STANLEY SAUVAGE and HERBERT J. SAUVAGE, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and Improved Methods of Forming Cooking-Oven Elements, of which the following is a specification.

This invention relates to improvements in cookers of the oven type, but more specifically refers to the manner of constructing the same, whereby an oven element or a receptacle may be formed from a single piece of sheet material, bent into shape and so constructed that the corners formed by the proximate ends of adjacent walls will be secured together and reinforced by a portion of the blank, whereby a rigid structure will be produced and the cost of manufacture will be materially reduced.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts, hereinafter more fully described and claimed and shown in the accompanying drawings illustrating this invention, and in which

Figure 1 is a perspective view of a cooker constructed in accordance with the principles of this invention and showing the oven elements slightly separated.

Figure 2 is a diagrammatic view of a blank from which the oven element is formed.

Figure 3 is a view showing one corner of the oven element illustrating the first step in the operation of the formation of the element.

Figure 4 represents the second step.

Figure 5 represents the third step.

Referring more particularly to the drawing, the numeral 10 designates a blank of any suitable sheet material, preferably metal, from which the oven element is formed. This blank is of any desired size and is preferably of a rectangular configuration, having the corners thereof cut away and rounded as at 11, the periphery of the rounded portions terminating short of the plane of the outer edges 12 of the blank.

In the process of forming the oven element, the blank 10 is deflected along the lines 13 to form upstanding walls, of any desired height, and these walls are so formed over a die or mandrel 14, by any suitable mechanism, to produce the walls 15 of the element. During the formation of the walls 15, the portion 16 of the blank will be bent along the lines 17 to form a loop shaped portion designated by the reference numeral 18 in Figure 3, preferably of an eliptical shape, so that the proximate ends of adjacent walls 15 will be formed along lines 17, which stand in close proximity to each other.

This loop shaped portion 18 will be of a conical configuration extending from the point 19 at the base of the walls 15. After the completion of this first step in the operation, a suitable mandrel is inserted in the loop 18 in any desired or suitable manner so as to cause the loop shaped portion to assume a configuration which is substantially circular in cross section, and at the same time dies 21 are brought into operation along the lines 17 at the base of the loop 18 to compress the portions 17 so that they will stand in close proximity to each other. This will cause the loop shaped portions to remain intact until the adjacent edges of the walls are brought into close proximity by the dies 21. This will insure a smooth joint when the loops are compressed and deflected inasmuch as the inner wall of the loop will not pucker when deflected. The loop 18 is given a substantially circular configuration by means of a suitable die 22 brought into operation so as to press against the outer face thereof at about the same time that the dies 21 compress the base of the loop. After the parts have been thus formed, the mandrel is withdrawn from the loop, the dies 21 retracted and simultaneously therewith, the die 22 is caused to exert its pressure upon the loop 20 so as to deflect or flatten the loop against the corner of the element as shown in Figure 5, so that the flattened portion will rest against the outer faces of adjacent walls and extend on both sides of the corner formed by the proximate ends 17 of the adjacent walls 15.

When the parts are thus formed, the curved portions 11 at the corners of the blank will form the tops of the looped portions which are flattened over the corners of the element, and the upper edges of these flattened portions terminate short of the edges 12 of the walls 15, so that a reinforcing element 23 may be arranged to encompass the upper edges of the walls of the element and the said edges, above the ends of

the flattened portions, and at the edges of the walls are flanged over the element 23 to secure the latter in position, and thereby reinforce the entire structure.

With this improved construction it will be manifest that a rigid element will be formed without the use of any other fastening means and without the necessity of seaming any of the edges, at the same time the loop shaped portions which have been flanged over the proximate edges of the adjacent walls, will not only form a closure for the space between the said edges but will reinforce the corners of the element.

What is claimed as new is:

1. The method of forming a cooking oven element from a single rectangular shaped blank of sheet material, which consists in flanging the edges of the blank to form walls angularly disposed with relation to each other and with the proximate edges of adjacent walls disposed in close relation to form loops intermediate the said proximate edges, then changing the shape of the said loops from the inside of the loops and at the same time compressing the edges of the loop into close proximity and from the outer faces of the loops, and then applying pressure on the outside of the loops to flatten the said loops against the outer faces of the walls and across the respective corners to extend equally on opposite sides of the corners.

2. The method of forming a cooking oven element from a single rectangular shaped blank of sheet material, which consists in flanging the edges of the blank to form walls angularly disposed with relation to each other and with the proximate edges of adjacent walls disposed in close relation to form loops intermediate the said proximate edges, then changing the shape of the said loops from the inside of the loops and at the same time compressing the edges of the loop into close proximity and from the outer faces of the loops, and then applying pressure on the outside of the loops to flatten the said loops against the outer faces of the walls and across the respective corners to extend equally on opposite sides of the corners, then securing an encompassing reinforcing band to the structure adjacent the edge of the element by flanging the edges of the walls over said band.

In testimony whereof we have signed our names to this specification on this 10th day of September, A. D. 1918.

STANLEY SAUVAGE.
HERBERT J. SAUVAGE.