

J. C. JOHNSON.
 METAL TIERING AND FLAP RETAINING MEANS FOR BOXES.
 APPLICATION FILED OCT. 7, 1915.

1,241,633.

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Fig. 1.

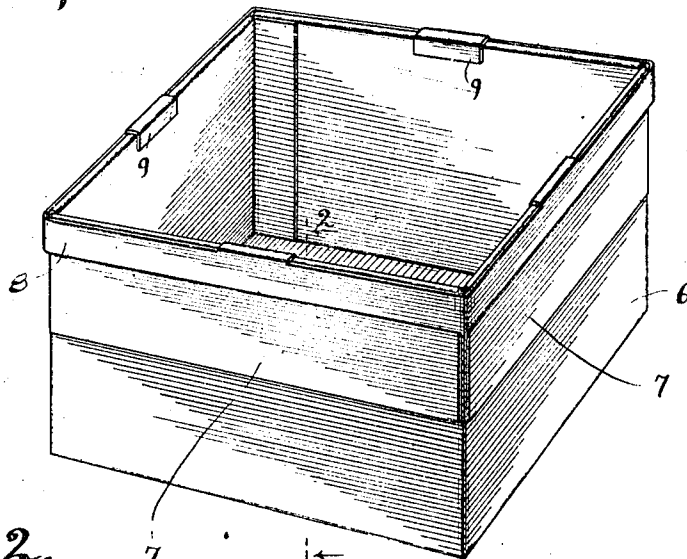


Fig. 2.

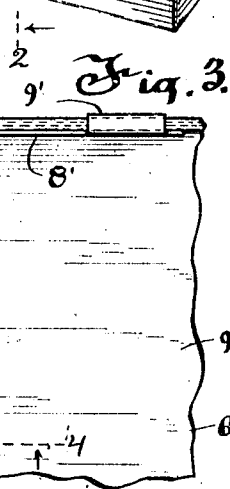
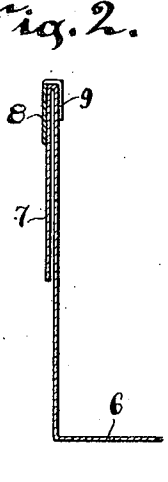


Fig. 3.

Fig. 4.

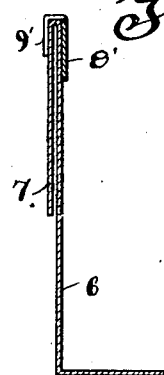
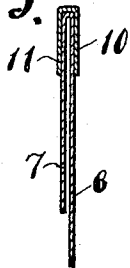


Fig. 5.



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METAL TIERING AND FLAP-RETAINING MEANS FOR BOXES.

1,241,633.

Specification of Letters Patent.

Patented Oct. 2, 1917.

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To all whom it may concern:

Be it known that I, JOHN C. JOHNSON, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Metal Tiering and Flap-Retaining Means for Boxes, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The invention has relation to improvements in metal tiering and flap retaining means for boxes.

In the well known forms of fiber-board, pulp-board or corrugated boxes or cartons the opposite ends of the box, or in other words, the top and bottom of the box are closed by means of flaps. There are usually four of these flaps at each of said ends.

In the process of canning, after the cases have been filled with canned goods or similar commodities, it is customary to pile or tier the cases, one on top of the other, in such a manner that the tops of the cases are outermost, with their closing flaps turned back to open position, so as to expose the contents of the boxes through the open tops thereof, so as to permit the inspector or stock-man to detect bulgy or leaky cans. This tiering is accomplished by laying the cases on their sides, one case superimposed upon the other, a vertical tier usually being made of from ten to fifteen cases.

It will be understood that before the boxes or cases are thus tiered, the flaps on the bottom of each case are closed and sealed by gluing in the usual manner before the goods are placed in the cases, and consequently the bottom of each case is very rigid and will hold up under the weight of the superimposed cases. The cases or boxes, however, as previously stated, are tiered with the flaps of the top or open portion unsealed, in order to permit inspection. Heretofore, there has been no device employed to render this unsealed end rigid and capable of supporting the weight of the filled cases above.

It is a primary object of my invention to provide a means whereby the unsealed and open end is made rigid and capable of holding the weight of the filled boxes above, and thus maintaining intact, and without sag, the tier arrangement.

It is also desirable to have the flaps out of the way, while the cases are being han-

dled, and my device contemplates this as a further object.

With the above and other incidental objects in view, the invention consists of the devices hereinafter described or the equivalents thereof.

In the accompanying drawing, Figure 1 is a perspective view of a paper board box with my improved flap retaining device engaging the upper portion of said box, and holding the flaps against the outer sides of the box;

Fig. 2 is a vertical section on the line 2—2 of Fig. 1, looking in the direction of the arrows;

Fig. 3 is a plan view of a fragment of a box, showing a modified form of flap retaining device applied thereto;

Fig. 4 is a vertical section on the line 4—4 of Fig. 3, looking in the direction of the arrows; and

Fig. 5 is a vertical section of one side of the box, showing another modified form of flap retaining means applied thereto.

In the drawing a rectangular form of fiber-board box 6 is shown, each side of said box at its upper end being provided with a flap 7.

The flap retaining device shown in Figs. 1 and 2, consists of a continuous hollow frame 8, preferably of metal, which is of a form corresponding to the form of the box, being shown of rectangular form in the drawing to conform to the contour of the sides and corners of the box. The upper edge of this frame is formed or provided with a plurality of intumed hooks 9, there preferably being one hook for each side of the frame, each hook extending over the edge of said side, preferably over the central point of said edge.

In adjusting the device to the box, the flaps of the box are turned against the sides of the box and the frame 8 is then adjusted around the upper portion of the box and against the folded end flaps with the hooks 9 engaging over the upper edges of the box and against the inner sides thereof.

Figs. 3 and 4 show a modified form in which there is a reversal of parts, that is to say, the frame proper, indicated by the numeral 8', is adjusted against the inner sides of the box, and the hooks, indicated by the numeral 9', are on the outside of the box and clamp the flaps 7 to the outer sides of the

box, the flaps being confined between the outer sides and the hooks.

The modified form of device, illustrated in Fig. 5, consists of a frame which is of an inverted U-shaped form in cross section. This U-shaped frame is adapted to be adjusted over the upper edge of the box, with the inner sides 10 of the U lying against the inner sides of the box, and the outer sides 11 of the U against the inturned flaps 7, thereby clamping the said flaps against the outer sides of the box.

From the foregoing description, it will be seen that I provide a most simple and inexpensive form of device which accomplishes the useful functions previously mentioned, and overcomes the difficulties which have heretofore existed, and which are herein fully pointed out.

What I claim is:—

1. An article of the character described, comprising an endless metal hollow frame adapted for detachable and snug engagement entirely around the open mouth of a goods container made of material incapable of supporting the weight of a plurality of said containers filled with goods, whereby the open mouth of said container is made temporarily rigid to support the load im-

posed upon it, and means formed integral with said hollow frame and to detachably engage the sides of the container to retain said hollow frame in position adjacent the open edge of the container.

2. An article of the character described, comprising an endless metal hollow frame adapted for detachable and snug engagement entirely around the open mouth of a goods container having closing flaps and made of material incapable of supporting the weight of a plurality of said containers filled with goods, whereby the open mouth of said container is made temporarily rigid to support the load imposed upon it, and means embodying a plurality of members formed to lie parallel with the sides of said hollow frame and integral therewith and adapted to retain said hollow frame in position adjacent the open edge of the container and clamp said closing flaps against the sides of the container.

In testimony whereof, I affix my signature, in presence of three witnesses.

JOHN C. JOHNSON.

Witnesses:

GEO. E. McEWEN,
E. F. JOHNSON,
EDGAR WM. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."