

F. M. SIMPSON.  
Can and Box.

No. 198,161.

Patented Dec. 11, 1877.

Fig. 1.

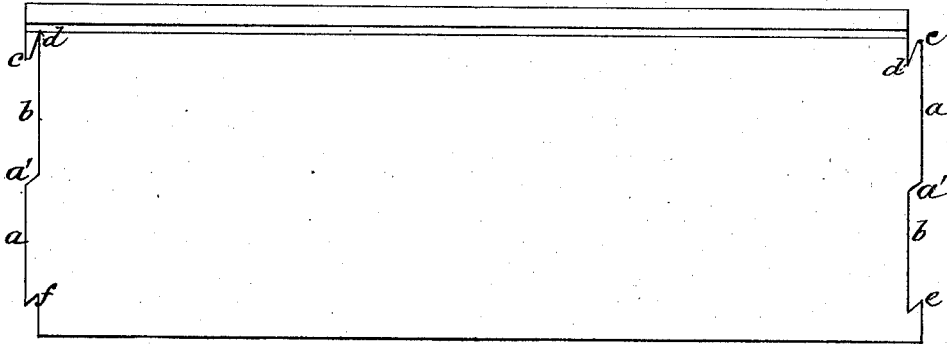


Fig. 2.

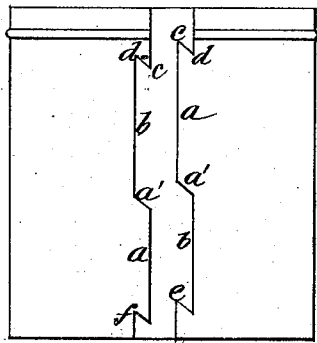


Fig. 3.

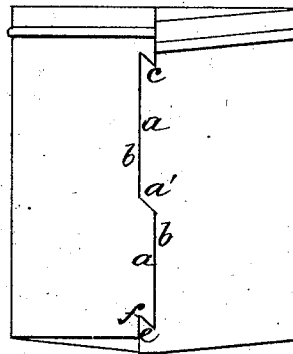


Fig. 4.

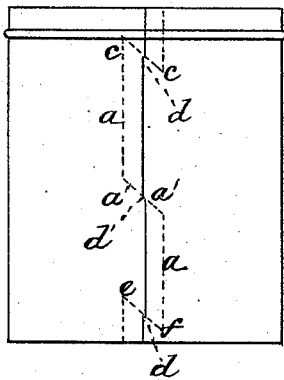
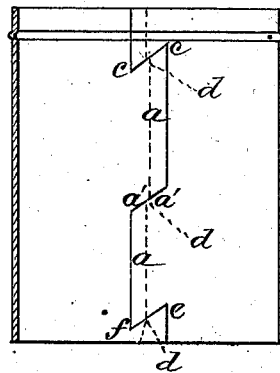


Fig. 5.



Witnesses,  
John B. Berry  
Geo. M. Taylor

Inventor,  
Francis M. Simpson  
by his Attorney R. H. Allen

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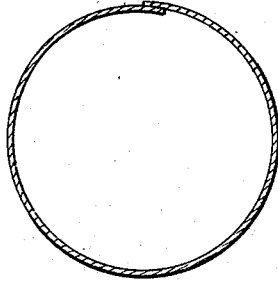


Fig. 7.

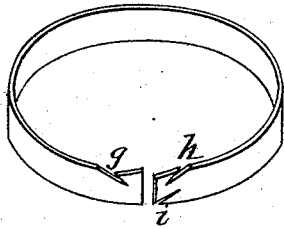
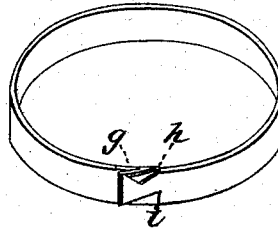


Fig. 8.



Witnesses,  
John B. N. Berry  
Geo. W. Taylor.

Inventor,  
Francis M. Simpson  
by his attorney, C. H. Slicer.

# UNITED STATES PATENT OFFICE.

FRANCIS M. SIMPSON, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN CANS AND BOXES.

Specification forming part of Letters Patent No. **198,161**, dated December 11, 1877; application filed July 5, 1877.

### *To all whom it may concern:*

Be it known that I, FRANCIS M. SIMPSON, of Baltimore city, State of Maryland, have invented a certain new and useful Improvement in the Manufacture of Cans and Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My improved tin box or can is adapted for putting up yeast-powders, mustard, snuff, and the like; also, spices and such articles as will not pass through an unsoldered joint.

The joints of such boxes have been formed by alternate wedge-shaped tongues and notches formed in the joining ends of the blank, the tongues of one end being adapted to pass and lap into the notches of the other end, and the ends then secured by upward and downward projecting locking-tongues at the top only. The wedge form of the tongues, however, will not admit of such upward and downward projecting locking-tongues at the bottom of said box, or intermediately between the top and bottom, which is important in long cans to prevent them from spreading in the middle of the joint or seam. With the wedge form of lapping tongues such upward and downward projecting locking-tongues at the bottom or in the middle of such seam could not be locked in locking the top tongues.

My improvement avoids this objection. I cut the tongues with their shoulders oblique to the length of the box or can, and make each tongue thereby a lock at both ends of the box when the ends of the blank are joined. This plan also renders the tongues more easily lapped in uniting the blank ends. The shoulders of each end of the tongues stand in the same oblique line, and they form at the top and bottom, on each end of the box, acute-angle points, whereby both ends of the box are locked. The rim-piece of the lid is also joined by a peculiar lock, one end having an oblique cut on its upper edge, and the other end a similar oblique top cut, and an under edge cut made in the same direction, but not in the same direction

as the single top cut, whereby the ends of the rim are lapped and locked.

I have described the shoulders of the tongues as all standing in the same oblique direction. I mean by this that such obliquity is across the line of the box's length.

In the drawings, Figure 1 represents the blank, showing the manner of forming the oblique-shouldered tongues; Fig. 2, the box with its ends separated; Fig. 3, a similar view, showing the joint partially formed; Fig. 4, a similar view, showing the oblique tongues united and both ends locked; Fig. 5, an inside view of the same; Fig. 6, a cross-section through one of the lapped locks; Fig. 7, the cover rim before the ends are locked, and Fig. 8 a similar view with the ends lapped and locked by the oppositely-formed oblique cuts.

In making the box I take a sheet of tin or other suitable material, of the size required for the box, and stamp out by dies or suitable machinery the tongues *a a* on each end, the shoulders *a' a' c c e e f* of which stand in the same oblique direction to each end, in such manner that when the tongues *a* are lapped and the blank ends joined all the shoulders will be oblique to the length of the box, as shown in Figs. 4 and 5, and in this way form locks at the meeting-point *d* of each shoulder at the two ends. The acute-angle points *c c* and *e e* at both ends make the locks at these points, while the oblique joining of the middle shoulders *a' a'* make the joining at that point, and thus secure the seam at all points. The oblique tongue of one end laps under corresponding recesses *b* on the other end, and in doing so the oblique shoulders form the lock, and make it very easy to put the ends together. The points of the tongues are slightly bent inward, to render it easier to lap them. The number of the oblique tongues will be according to the length of the box.

The joining of the two ends is made by seizing one end in each hand, and causing the tongues to lap under the corresponding recesses. This is effected by making the shoulders oblique, as described. The ends of the rim are also lapped and locked, but being a narrow band a different form of lock is re-

quired. This is made by an oblique cut, *g*, in the upper edge of one end, and a similar cut, *h*, in the other end, with a lower edge cut, *i*, in the same oblique line as the cut *h*, the cuts *g* and *h* standing in opposite directions. The cuts *g* and *h* are slightly notched to facilitate their interlocking. The point of the tongue made by the cut *g* is slightly bent outward, and the point of the tongue made by the cut *h* is slightly bent inward, to allow of their easy lapping and locking.

The locking of the rim ends is made by seizing one end in each hand and putting the point of the tongue made by the cut *h* under the point made by the cut *g*, then drawing both ends apart and inserting the end having the cut *g* over the point of the tongue made by the cut *i*, when the lock will be made.

The cover is fastened to the rim in the usual

manner, and the bottom of the box is also secured in the usual manner; but the body of the box and the rim of the cover may be put together by unskilled labor.

I claim—

1. The lapping tongues of the meeting ends of the box, constructed with shoulders all standing in the same oblique direction, whereby to form locks, as herein set forth.

2. A box-cover rim having oblique cuts *g h i*, adapted to interlock to form the joint, as set forth.

In testimony that I claim the foregoing I have affixed my signature in the presence of two witnesses.

FRANCIS M. SIMPSON.

Witnesses:

E. H. SLICER,

JOHN B. H. BERRY.