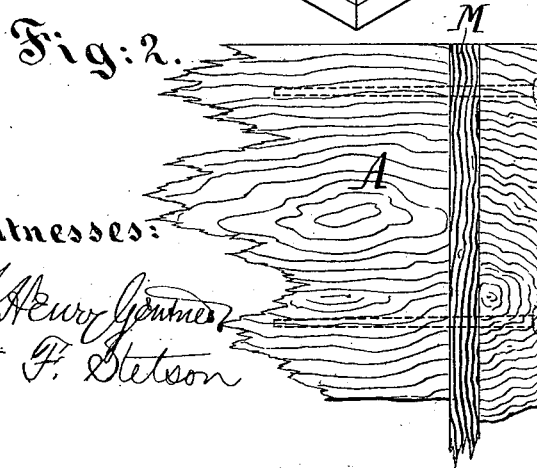
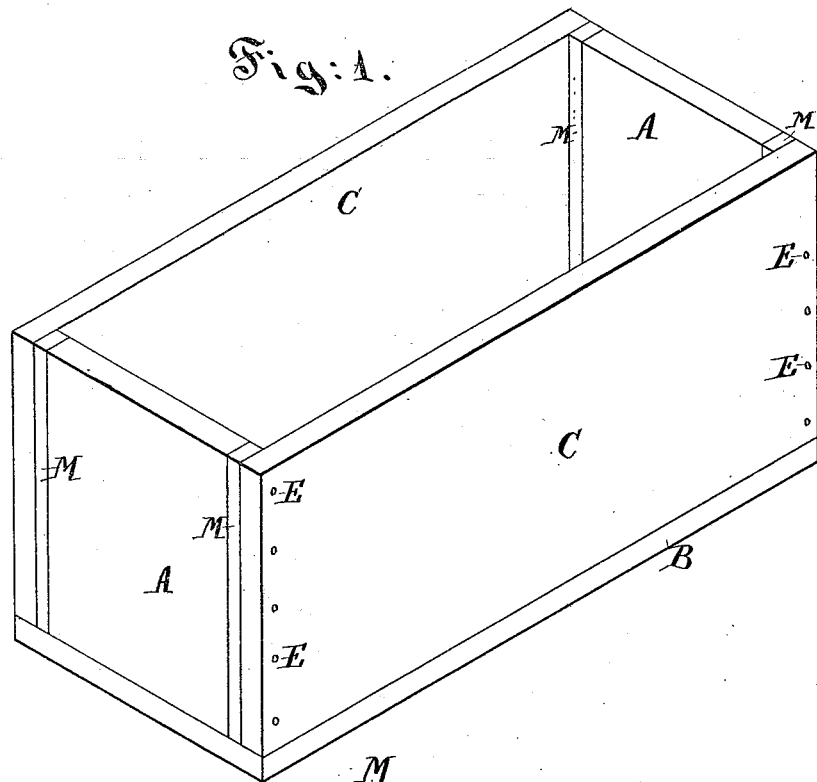


H. C. STONE.  
Manufacture of Boxes.

No. 199,327.

Patented Jan, 15, 1878.



Witnesses:

A. Henry Jones  
W. F. Stetson

Inventor:

H. C. Stone.  
by his attorney  
Thomas D. Stetson  
New York.

# UNITED STATES PATENT OFFICE.

HENRY C. STONE, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN THE MANUFACTURE OF BOXES.

Specification forming part of Letters Patent No. **199,327**, dated January 15, 1878; application filed November 9, 1877.

*To all whom it may concern:*

Be it known that I, HENRY C. STONE, of Brooklyn, county of Kings, in the State of New York, have invented certain new and useful Improvements relating to the Manufacture of Boxes, of which the following is a specification:

In making common wood boxes for packing goods and analogous purposes a fault is found in the liability of the wood to split, which is only imperfectly overcome by extending battens up and down on the inside or outside. In either position they require lumber and occupy room. They furthermore involve a serious addition to the labor of the manufacture.

I have devised a mode of manufacture in which pieces extend up and down and impart strength crosswise of the grain of the main boards without involving any increase of the lumber or occupying any space, and without adding as much as ordinary battens to the labor of the manufacture.

I make the ends smaller than usual, and apply a strip up and down each side of each end, which is of the same thickness as the end, and forms in effect a part thereof. These strips can be readily applied in the ordinary fitting of the parts together, whether the boxes are made by hand or by machinery.

The accompanying drawings form a part of this specification.

Figure 1 represents a perspective view of my improved box without the cover, and Fig. 2 is a part of an end elevation.

Referring to the drawings, A is the end of a box. B is the bottom, and C C are the sides. The parts are secured together by nails E, applied in the ordinary manner.

M M are strips of wood extending up and down. The grain of the wood extends horizontally in the ends A and in the sides C, as well as in the base B and in the top, (not represented,) which is to be added; but the pieces M M, having no greater thickness than the ends, and neither projecting on the interior to occupy useful space within the box, nor projecting on the exterior to interfere with the packing of the boxes together, contribute greatly to the strength of the box without increasing the quantity of material or the weight. Longer nails than usual should be used, so as to take a proper hold of the heads A after passing through the strips M.

The pieces M effectually prevent the splitting of the box, and thus breaking into two, upper and lower, parts. Battens on the interior are objectionable for obvious reasons in packing any kind of goods which extends to the corners. Battens on the exterior are objectionable, particularly in shipping goods for long distances, where the freight is paid for by the cubic foot, as the battens, by holding the boxes apart, materially increase the expense for freight.

My invention does not prevent the addition of battens either on the exterior or interior, or both, in the few cases where they may be required for further strengthening the boxes.

In cases where, as is common in what are known as "oil-boxes," the grain of the end pieces runs up and down, the strips M will be correspondingly extended along horizontally between the ends A and the top and bottom, respectively. I consider this an equivalent construction.

I prefer that the strips M be wood of the same kind and color as the other parts of the box; but I propose in some cases to make the strips M of wood of a different color from the other parts of the box, thus giving an effect which may be considered ornamental.

The material for the strips M costs almost nothing, there being plenty of narrow wood which cannot be made available for other purposes.

The invention allows the sides and even the ends to be each made up of two or more pieces, and the joints in the sides may come directly against joints in the ends without serious mischief.

I claim as my invention—

The within-described improvement in boxes, consisting of the wood strips M, arranged as shown, with the grain running transversely to the grain of the adjacent pieces, as and for the purposes herein specified.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

H. C. STONE.

Witnesses:

THOMAS D. STETSON,  
CHAS. C. STETSON.