

No. 614,698.

Patented Nov. 22, 1898.

F. L. CHASE.  
BOX.

(Application filed Sept. 6, 1898.)

(No Model.)

Fig. 1.

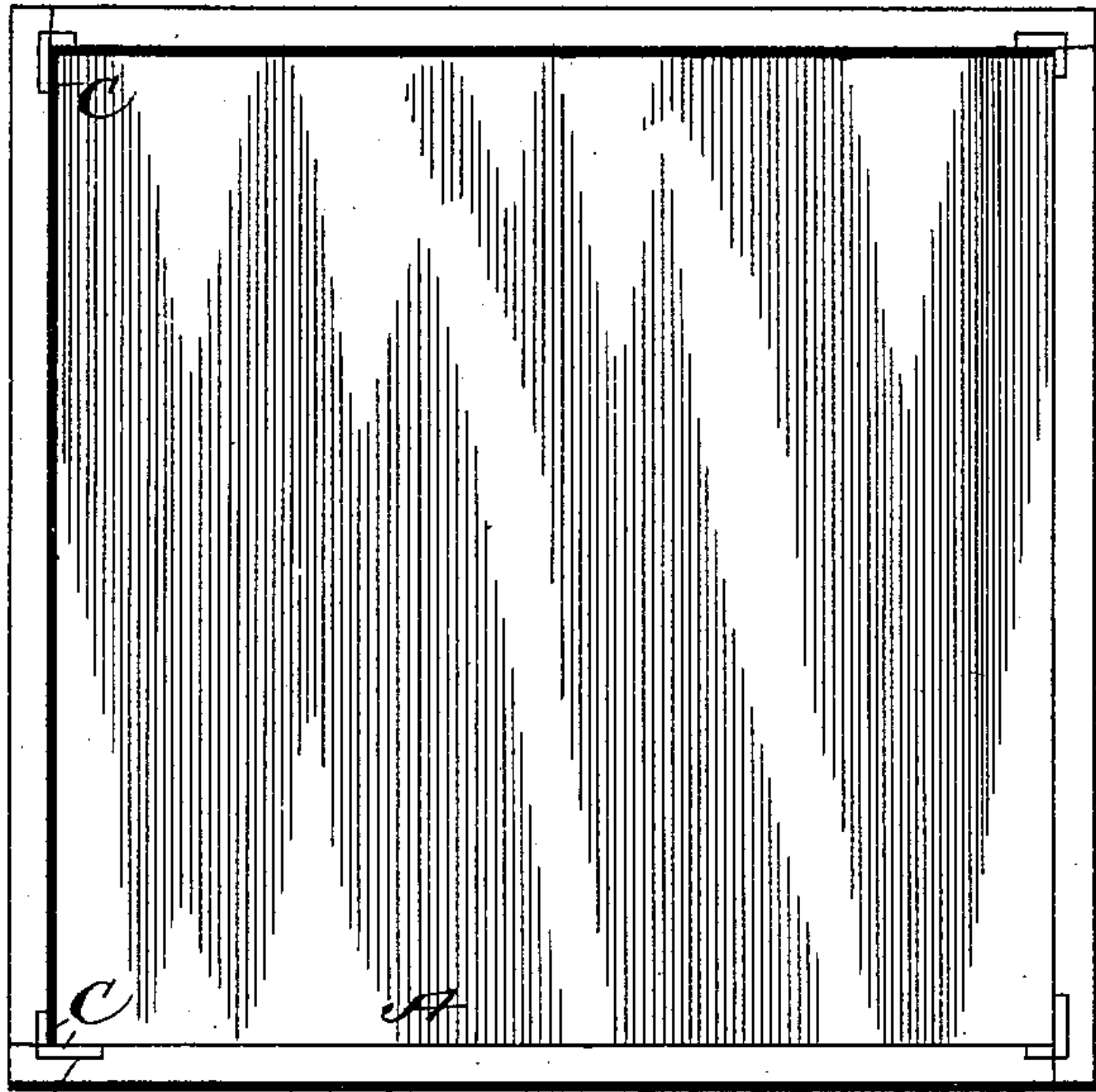


Fig. 2.

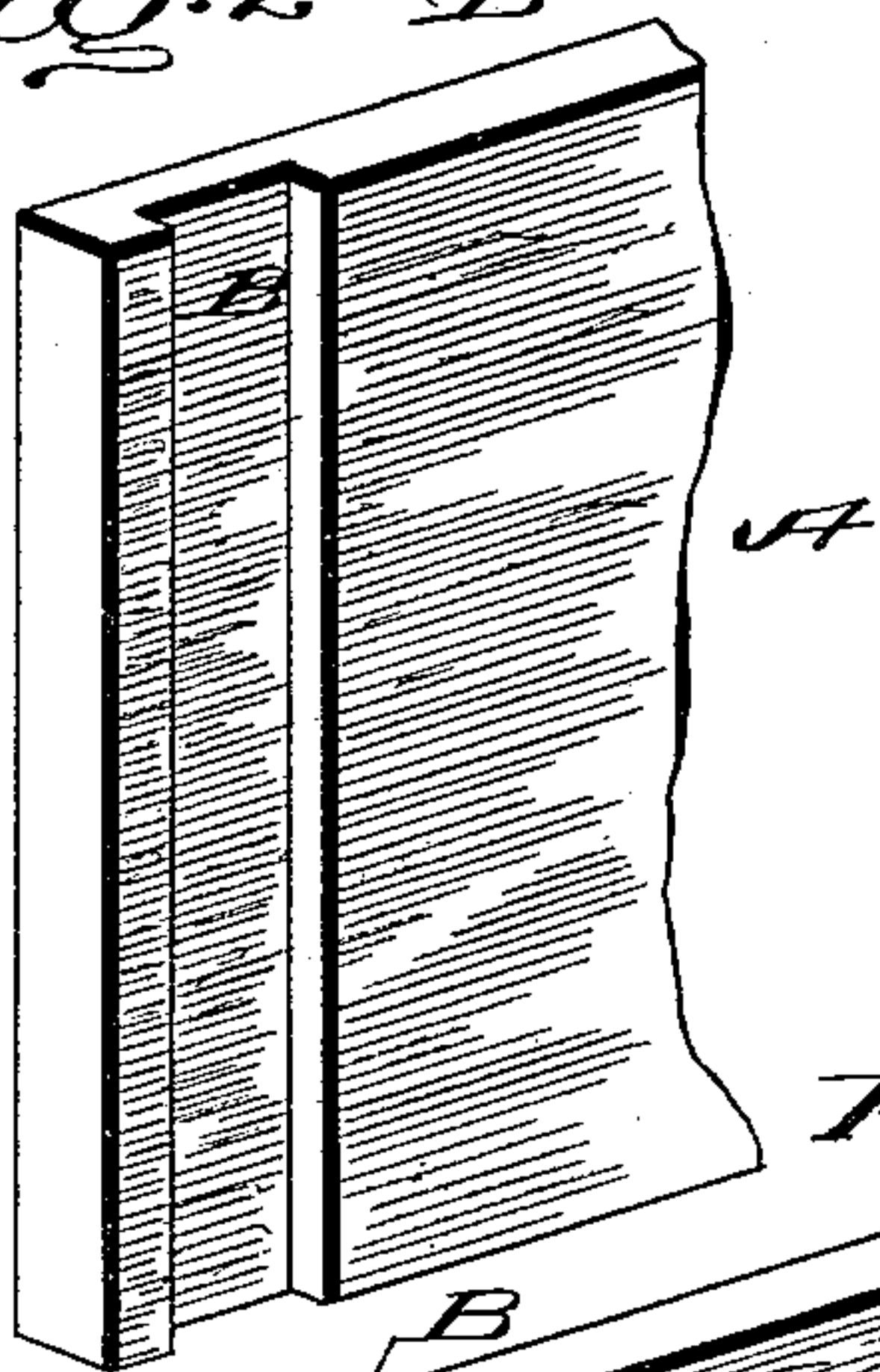


Fig. 3.

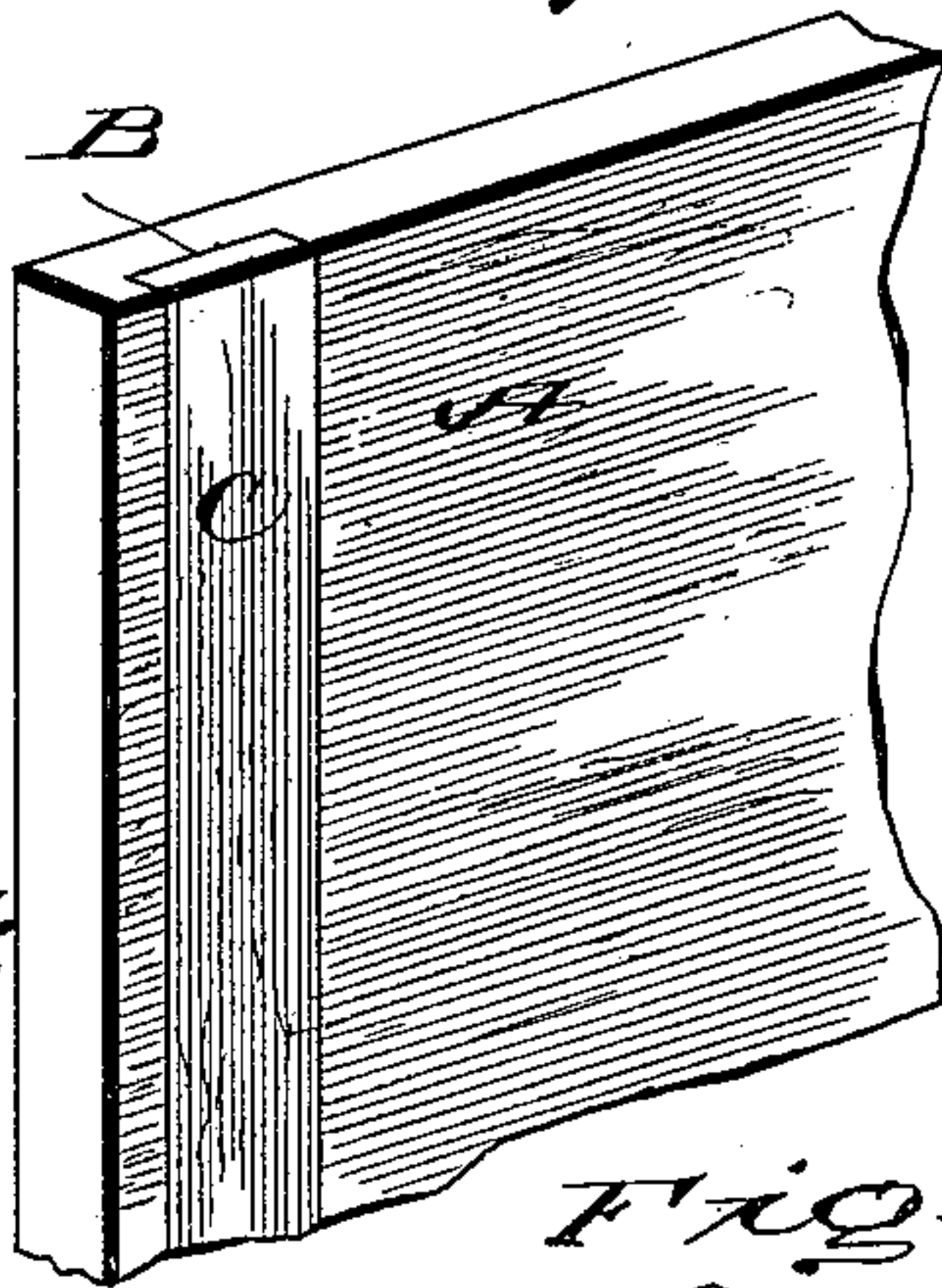


Fig. 4.

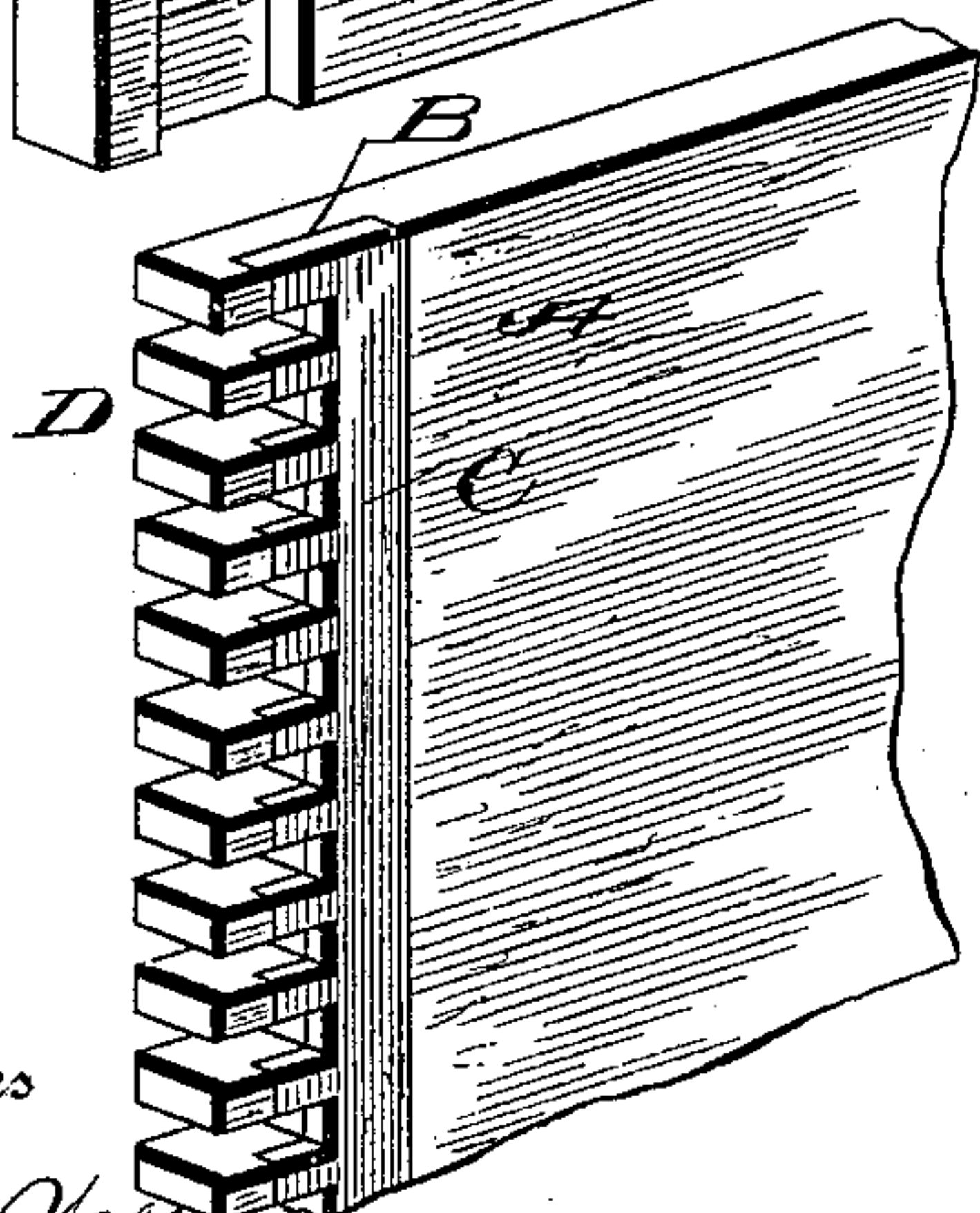
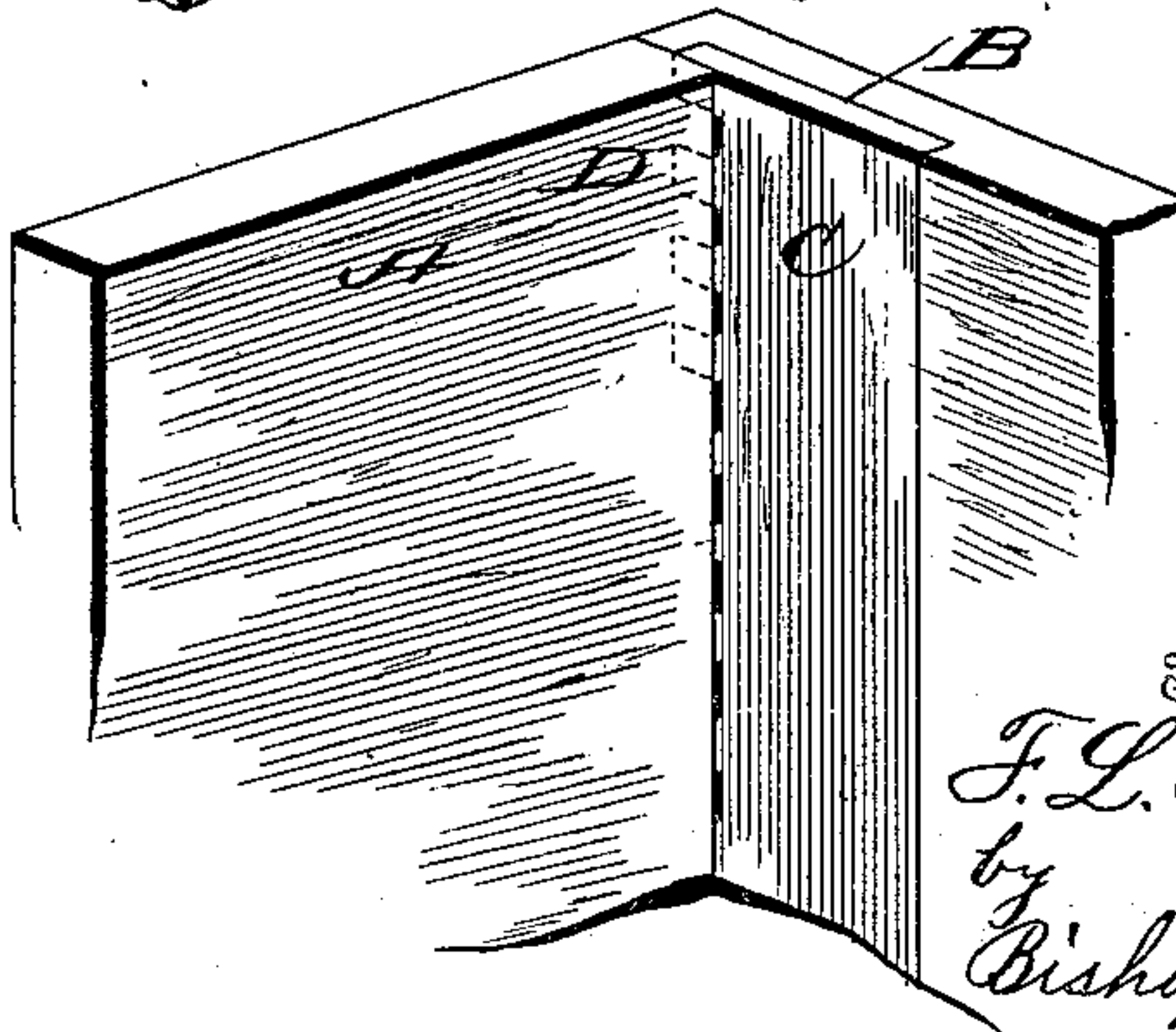


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

FRANK L. CHASE, OF LOUISVILLE, KENTUCKY.

## BOX.

SPECIFICATION forming part of Letters Patent No. 614,698, dated November 22, 1898.

Application filed September 6, 1898. Serial No. 690,283. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK L. CHASE, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Boxes, of which the following is a specification.

My invention relates to improvements in wooden boxes; and it consists in certain novel features hereinafter described and claimed.

While my improvements are applicable to all wooden boxes, they are designed more especially for lock-cornered or dovetailed boxes in which plug-tobacco is packed, stored, and transported and other boxes subject to severe pressure from their contents or rough treatment in shipment. Boxes of this character have a tendency to split either during packing or afterward, and various means have been heretofore employed or devised to overcome this tendency, but none of them has proved entirely efficient. One method employed was the construction of the sides of the box in layers or plies with the grain of one of the layers or plies running at right angles to that of the others; but this method was objectionable because, aside from the great cost, the different layers would separate, especially if the box was exposed to moisture, and the box was consequently rendered useless; also, the corner in this construction was weakened to the extent of the thickness of the layer or ply which has its grain running at right angles to the side of the box, and the corner of the completed box is unfinished in appearance and not pleasing to the eye on account of the edges of the various plies being visible. Another method of overcoming this tendency to split was the use of battens glued in grooves in the side of the box; but this method has been found practically inefficient, because it left the corners of the box without any reinforcement, and the splitting generally commences at the corners. Furthermore, the battens were held merely by the glue and frequently became loose and therefore of no value for the purpose intended. Furthermore, the moisture from the glue caused a slight swelling, which resulted in a bowing or bending inwardly of the sides of the box, which is objectionable in boxes requiring exact dimensions. Still another

method consisted in inserting a kerf formed in the end of the piece constituting the side of the box. This construction, however, was objectionable for many of the reasons which apply to the construction of the sides of different layers or plies, as noted above, as the effect was to form the corner of different layers; also, there was considerable mechanical difficulty in this construction in inserting the batten in the kerf. The corners were weakened by the kerf and the thin outer layer was easily chipped or broken off in transportation; also, as in the construction with different layers mentioned above, the corner of the box was unfinished in appearance and not pleasing to the eye. All of these objections are overcome by the use of my device, which is fully illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a box constructed in accordance with my invention. Fig. 2 is a detailed perspective view of the end of one side of the box prepared for the batten. Fig. 3 is a similar view showing the batten in place. Fig. 4 is a similar view, the end of the side being prepared for engagement with the abutting side; and Fig. 5 is a perspective view of one corner of the box, showing a slight modification.

In carrying out my invention the side of the box A is constructed of a single piece of wood with the grain running longitudinally. Near the end of the side on the inner face of the same I form the vertical shallow groove B, and in this groove I insert the batten C, having its grain running longitudinally of itself, and consequently at right angles to the grain of the side. The batten may be glued in the groove; but the use of glue is not absolutely essential to the success of the device. After the batten has been fitted in the groove the dovetail tenons D are formed in the end of the side A and at the same time formed in the edge of the batten, the groove being so located that the inserted batten will slightly overlap and interlock with the abutting side, as clearly shown in Fig. 4. The box is then fitted together in the usual manner.

It will be seen at once from this description, taken in connection with the annexed drawings, that my improvements provide a



batten at the corner where the splitting always commences and that the grain of the batten is so disposed as to resist the tendency to split. Furthermore, the batten is inter-  
5 locked with the dovetail joint, which connects the meeting sides of the box and is therefore securely held in place without the use of glue. Furthermore, the corner is not  
10 weakened by inserted plies or kerfs and the corner in the completed box has a solid or finished appearance, there being no batten or layers in evidence. In boxes used for holding plug-tobacco the bottom is fitted in a longitudinal groove formed in the inner faces of  
15 the sides near the lower edges of the same, and when tobacco is packed therein a splitting frequently occurs at the corners under the pressure which is applied to the bottom of the box and transmitted through the same  
20 to the sides. The use of my construction overcomes this defect, as the pressure thus applied is exerted directly against the grain of the batten and thereby rendered nugatory. The side of the box being in one piece there  
25 is no separation of plies and the cost is kept down to a minimum. The corner is strengthened instead of being weakened.

I prefer to secure the greatest possible efficiency by employing a batten at each end  
30 of each side of the box; but a cheaper box or a box for use where the pressure is not excess-

ive may be constructed by employing the battens only at the ends of the opposite sides, as shown in Fig. 5. The interlocking of the tenons in the corner-joints will cause the  
35 pressure to be transmitted to the battens from the sides which are without battens sufficiently to resist the tendency to split.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is— 40

1. A wooden box having its sides each formed of a single ply or layer and provided with grooves in its inner face near its ends, and battens in said grooves, the sides being  
45 connected by interlocking joints and the battens passing into the same.

2. A wooden box having each of its sides formed of a single ply and having two opposite sides provided with grooves in their inner  
50 faces near their ends, and battens in said grooves the sides being connected by interlocking joints and the battens passing into the joints.

In testimony whereof I have hereunto set  
55 my hand in the presence of two subscribing witnesses.

FRANK L. CHASE.

Witnesses:

T. V. JOHNSON,  
W. D. STURM.