(No Model.)

J. M. BAKER.

BOX.

No. 476,121. Patented May 31, 1892.

Fig. 1.

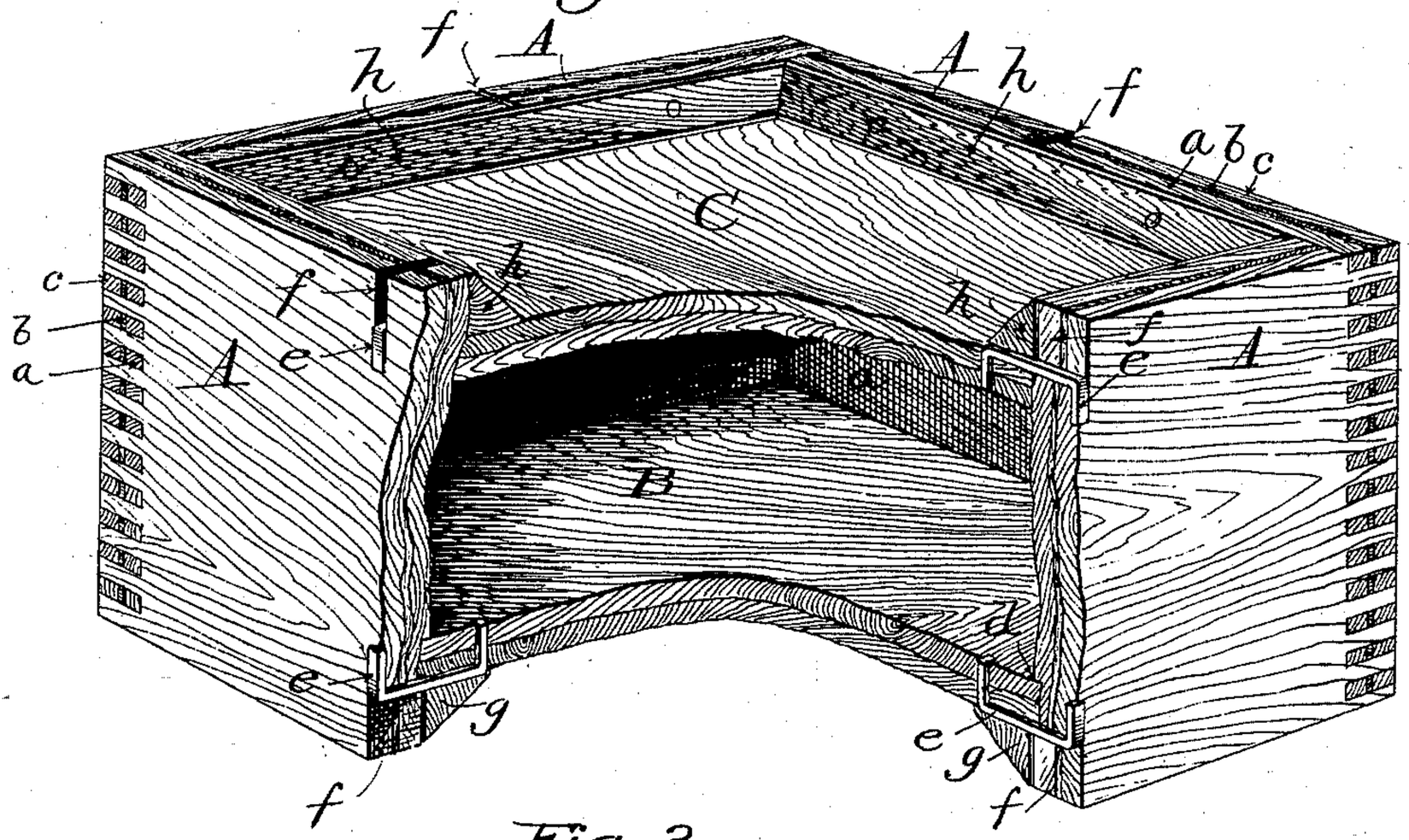
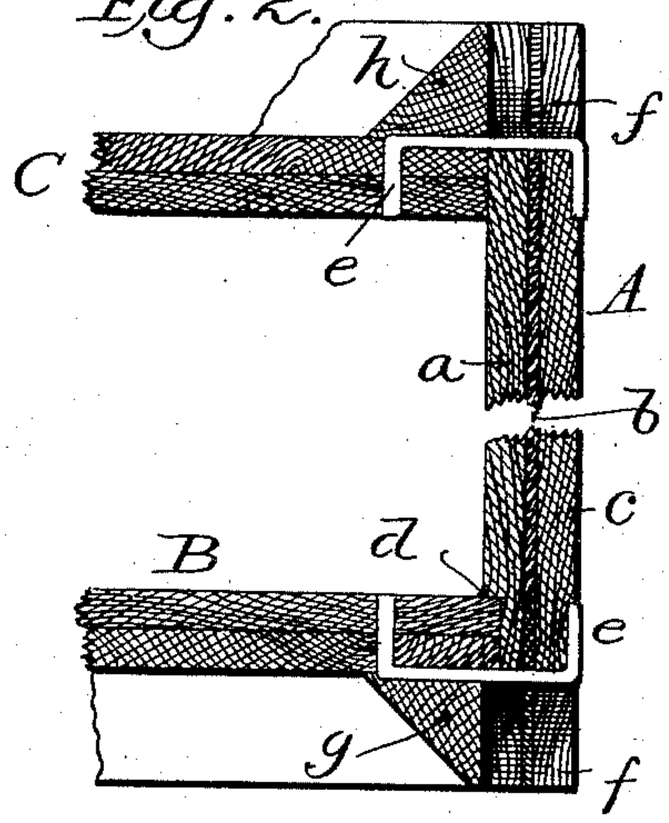


Fig. 2.



Witness:
James F. Duhamel.
Horace A. Dodge.

JOSEPH M. BAKER,
Inventor.
by Dodge & Sons,
Attys.

UNITED STATES PATENT OFFICE.

JOSEPH MARTIN BAKER, OF LOUISVILLE, KENTUCKY.

BOX.

SPECIFICATION forming part of Letters Patent No. 476,121, dated May 31, 1892.

Application filed February 12, 1892. Serial No. 421,293. (No model.)

To all whom it may concern:

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

My invention relates to boxes designed more particularly for holding plug-tobacco and other substances which are forced into the box with considerable pressure.

Tobacco-box lumber is made thoroughly dry, and when water comes in contact with it it acts much like a sponge, with the result that the box swells and allows the contents to become musty and sour, besides in most cases destroying the box itself.

In my prior patent, No. 451,549, I described a box which was so constructed as to overcome in great part the objections above noted, such construction being particularly adapted, however, for the lighter class of boxes.

The present invention has for its object the production of a box that shall also overcome the objections mentioned, it being designed, however, to withstand severer strains than the box previously patented to me.

In the drawings, Figure 1 is a perspective view of my improved box with a portion broken away, and Fig. 2 a vertical transverse sectional view through one of the sides and the top and bottom.

A A indicate the sides of my improved box, B the bottom, and C the top or cover.

The sides A are composed of three pieces of material *a*, *b*, and *c*, arranged with the grain crossing and firmly united one to the other by means of glue or cement. Generally the middle piece *b*, whose grain runs vertically, will be thinner than the outer pieces *a b;* but where increased and unusual strengh is desired its thickness may be increased. By making it thinner than the outside pieces it has no influence upon the latter—that is to say, it does not tend to warp or bend them, as it would do if it were as thick or thicker than the outside pieces. I find that by employing three pieces *a*, *b*, and *c* (and advisedly by making the intermediate piece thin) the moisture is less liable to enter the box and spoil the tobacco than where two thicknesses (of the same total thickness) are used. For instance, if a box filled with tobacco be left exposed in a freight house or car and the package becomes wet only the outer piece *c* would become loosened, leaving the other two pieces intact, and thereby effectually preserving it, whereas if only two layers or pieces be employed and the outer one becomes loosened the inner one will, not having anything to sustain it, be affected by the moisture and swell or warp, thereby destroying the box and exposing the inclosed tobacco to the moisture.

It will be noticed that the sides are joined to each other by tenons and mortises, the tenons extending squarely across each other, so as to secure the greatest amount of strength at the corners of the box, a construction possessing many advantages over prior boxes having their sides made each of two or more pieces of wood.

The intermediate piece *b* is made of the same size as the outer pieces *a* and *c*, and it will therefore also be tenoned and mortised and serve to effectually prevent the loosening and warping of the ends of the side pieces.

I also find, too, that it is not necessary, generally speaking, to nail the box at the corners, thereby effecting a material saving in the first cost.

At a distance from their lower edges the sides A are all grooved, as at *d*, to receive the bottom or end piece B, whose edges are seated in the groove. While in ordinary boxes the frame made up of the side pieces is generally strong enough to prevent the sides from moving outward away from the bottom, this cannot be depended upon where the material put into the box is highly compressed therein. To guard against and to prevent this breaking away of the sides, I employ the staples *e*, which may be previously bent to the form shown, or may comprise merely a nail bent to form after being driven through the bottom from the inside.

As the bottom B is set away from the lower edges of the sides A, it becomes necessary to slot the edges of the sides, as shown at *f*, to allow the body of the staple or nail to properly seat itself. The outer end of the nail or staple is forced slightly into the outer face of the side of the box, and it will be seen upon reference to the drawings that when the staple is once applied it will be practically im-

possible for the sides to move away from the bottom pieces. To prevent the staples from becoming loose and to effectually prevent the entrance of moisture at the joint between the bottom and the sides, I cover said joint with a strip or strips *g*, which rest upon the back of the staple. These strips are held in place by nails, as usual, or in any other suitable manner.

The top or cover rests upon the tobacco or whatever else is contained within the box, and is held in place by means of strips *h* similar to the strips *g*. If desired, the cover or top may also be fastened by means of staples in the same manner essentially as the bottom.

One very important advantage of the construction herein shown resides in the fact that the box is easily opened, and this, too, without destroying the ends.

The cover may, and preferably will, be constructed in accordance with my patent hereinbefore referred to.

Having thus described my invention, what I claim is—

1. A packing-box having its sides A composed of three pieces *a*, *b*, and *c*, glued or cemented together, with the grain of the intermediate piece crossing that of the other pieces, the said intermediate piece being materially thinner than the other pieces, all substantially as shown and described.

2. A packing-box having its sides A composed of three pieces *a*, *b*, and *c*, fastened together with the grain of the intermediate piece *b*, which piece shall be materially thinner than the other pieces, crossing the grain of the other pieces *a* and *c*, and tenons and mortises uniting the ends of the sides, all substantially as shown and described.

3. A packing-box having the slotted sides A, in combination with an end piece and the staple *e*, seated in the slot and secured at one end to the end piece and engaging the sides at the other end.

4. In combination with sides A, grooved, as at *d*, and slotted, as at *f*, an end piece seated in the groove, and the staple *e*, mounted in the slot and engaging the end piece and side.

5. In combination with sides A, slotted, as at *f*, the end piece, the staple *e*, seated in the slot and engaging the side and end piece, and the strip *g*, applied to the back of the staple.

In witness whereof I hereunto set my hand in the presence of two witnesses.

JOSEPH MARTIN BAKER.

Witnesses:
R. C. PRICE,
H. C. ROBERTS.