W. E. BROCK.

Lumber.

No. 161,746. Patented April 6, 1875.

FIG. 1.

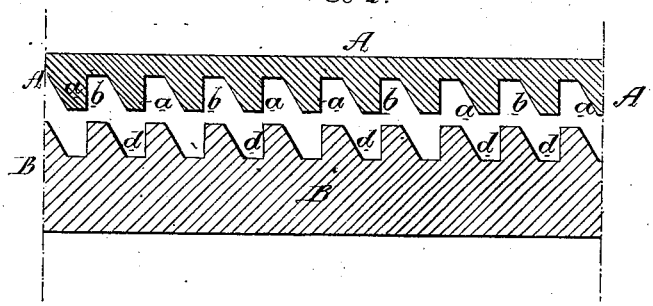


FIG. 2.

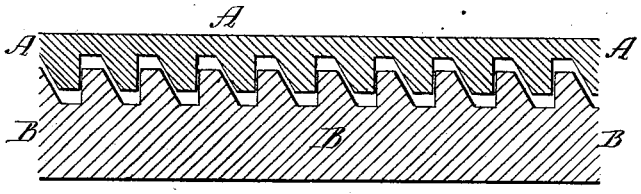
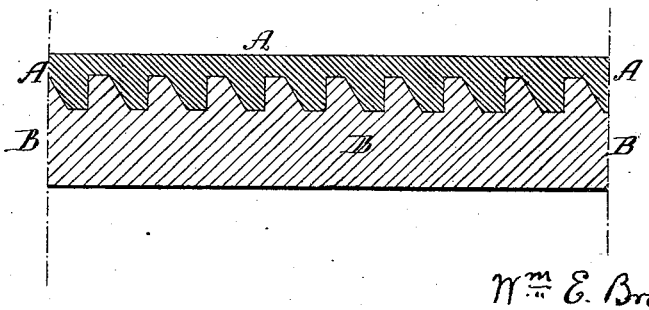


FIG. 3.



Witnesses,
Harry Smith
Hubert Howson

Wm E. Brock
by his Attys
Howson & Howson

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

WILLIAM E. BROCK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN LUMBER.

Specification forming part of Letters Patent No. **161,746**, dated April 6, 1875; application filed March 3, 1875.

To all whom it may concern:

Be it known that I, WILLIAM E. BROCK, of Philadelphia, Pennsylvania, have invented certain Improvements in Lumber, of which the following is a specification:

The object of my invention is to construct, for the use of cabinet-makers, carpenters, builders, and other artisans, ready-made compound boards, or boards having a facing or facings of ornamental and valuable wood, with a backing of less costly wood; and this object I attain by two or more layers of wood united by means of the peculiarly-shaped ribs and grooves fully explained hereafter.

By means of suitable circular saws or rotary cutters I form in one face of a strip, A, throughout its entire length, a series of parallel grooves, *b*, between which are ribs *a*, adapted to grooves *d* in the board B.

It will be observed that each rib of each board has one side at right angles to the grooved face of the said board, and the other side inclined, each rib being consequently thickest at the base, and each groove, which is made to conform with the rib, being narrowest at the base. The ribs, however, should be a trifle larger than the groove, so that considerable pressure is required to force the two boards together.

The boards having been adjusted to each other, so that the ribs of one shall enter the grooves of the other, as shown in Fig. 2—an adjustment readily accomplished, owing to the shape of the said ribs and grooves—pressure is applied by passing the boards between rollers, or otherwise, and the consequence of this pressure, owing to the wedge-like action of the ribs, will be to force the straight sides of the ribs of one board against the straight sides of the ribs of the other board, and this will induce such a cohesion as to result in the effective union of the two boards, and the conversion of the same into a compound board ready for use in the construction of flooring, doors, furniture, and other objects, in the construction of which a walnut facing united to a pine backing is desirable.

The cohesion of the boards caused by the intimate frictional contact of the straight sides of the ribs of one board with those of the other is relied upon for an effective junction more than upon any glue or other cement which may be applied to the ribbed surfaces prior to the pressing of the two boards together.

The tenacity with which the two boards adhere to each other will depend in a great measure upon the character and condition of the woods employed; but in all cases, whether the use of glue may be required or not, the method of uniting the boards will always insure the snug and accurate fitting of the boards to each other.

It will be readily understood that compound boards may be made of three or more strips in the manner described above.

I wish it to be understood that I do not here claim, broadly, a compound board composed of two or more layers of wood having grooved surfaces united under pressure; but

I claim as my invention—

The mode herein described of uniting boards—that is to say, forming on the faces to be united a series of ribs, each of which is straight on one side and inclined on the other, and by forcing the ribs of one board into the corresponding grooves of the other, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM E. BROCK.

Witnesses:

HUBERT HOWSON,

HARRY SMITH.