

W. E. BROCK.

PROCESS OF MANUFACTURING MARQUETRY.

No. 178,989.

Patented June 20, 1876.

FIG. 1.

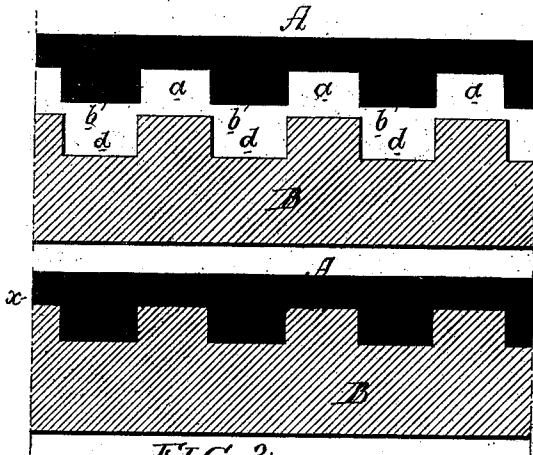


FIG. 4.

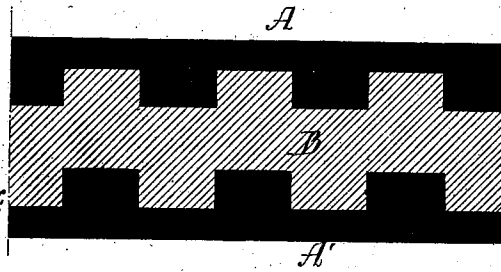


FIG. 5.

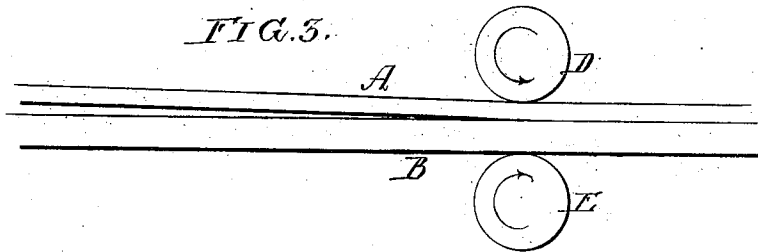


FIG. 5'

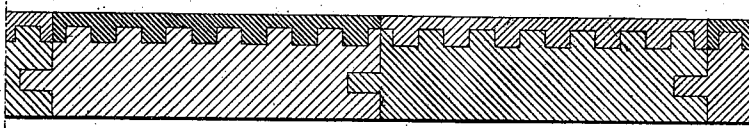


FIG. 6.

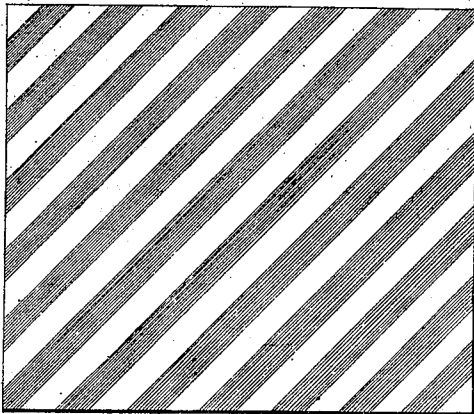
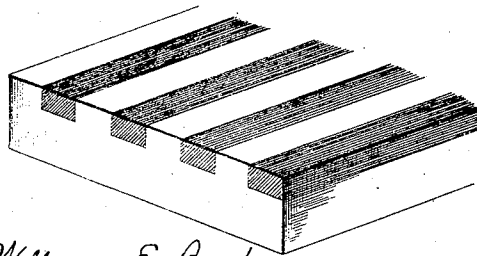


FIG. 7.



Witnesses, Hubert Howson
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UNITED STATES PATENT OFFICE.

WILLIAM E. BROCK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PROCESSES OF MANUFACTURING MARQUETRY.

Specification forming part of Letters Patent No. **178,989**, dated June 20, 1876; application filed February 10, 1875.

To all whom it may concern :

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

My invention relates to certain improvements in compound lumber, which consists of two or more different woods united face to face by means of parallel tongues and grooves, Letters Patent No. 161,746, granted to me April 6, 1875, being for an example of this compound lumber; and the object of my invention is to produce ornamental marquetry or striped lumber economically and in large quantities. This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a sectional view of the two parts of the compound lumber before being united; Figs. 2, 4, and 5, views of the compound lumber from which my improved striped lumber is made; Fig. 3, a view showing a mode of uniting the boards of the compound lumber; Figs. 6 and 7, views of my striped lumber.

The mode of carrying my invention into effect will be best understood by referring to the enlarged sectional views Figs. 1 and 2, in which—

A represents a strip or board of walnut or other ornamental wood, and B a strip of pine or other like wood of a cheaper character. By means of circular saws or rotary cutters, are formed in one face of the strip A, throughout its entire length, a series of parallel grooves, between which are ribs *b*, adapted to grooves *d* in the strip B. The ribs of one strip should be slightly wider than the grooves of the other, so that great pressure will be required to force the ribs into the grooves. It is preferable, moreover, to make the grooves a trifle deeper than the ribs, so that the latter cannot reach the bottom of the grooves until the boards have been subjected to the pressure necessary to effect a proper junction.

The most effective method of effecting a thorough union of the boards is illustrated in Fig. 3, in which D represents a pressure-roller, and E a roller arranged to revolve in fixed bearings in the direction of the arrow.

The two boards, in the inclined position

shown in Fig. 3, with their striated surfaces in contact with each other, and the ribs of one coinciding with the grooves of the other, are passed between these rollers, which force the ribs into the grooves, and the result is a compound board, as seen in Fig. 2.

The above-described relation of the ribs of one strip to the grooves of the other, and the pressure exerted to force the ribs into the grooves, are such that when the boards are united every rib must be in a continuous state of lateral compression, and have a constant tendency to return to its original condition; hence there must be a continued hugging of the ribs of one strip by those of the other, and such tight frictional contact of the sides of the ribs of one strip with the sides of the grooves of the other as to induce the cohesion of the two strips; and it is this cohesion which is relied upon for an effective junction more than any glue or other cement which may be applied to the striated surfaces prior to the pressing of two strips together.

Whatever may be the character or condition of the wood this method of uniting them will always insure a snug and accurate fitting of the strips together.

It will be readily understood how the strips composing the compound board shown in Fig. 4 may be united in the same manner. Fig. 5 shows compound flooring-boards tongued and grooved together, each board having a backing of pine and a facing of walnut, united in the manner described.

The most solid and permanent floors with highly-finished ornamental faces may thus be made of the compound boards, at a much less cost than ordinary walnut floors.

The ornamental marquetry or striped lumber illustrated in Figs. 6 and 7 is produced by severing the compound boards at their point of junction on the line *xx*, Fig. 2, a face consisting of alternate stripes of walnut and pine or other wood being thereby produced, as shown. These ornamental boards may be used in the construction of cheap marquetry floors, wainscoting, or in the manufacture of ornamental frames, or for interior decorations generally.

I do not desire to claim as an article of manufacture compound boards consisting of two or

more woods united face to face by means of parallel tongues and grooves; but

I claim as my invention—

The mode herein described of manufacturing striped lumber or marquetry—that is to say, by uniting face to face, under pressure, two or more woods, A B, having corresponding tongues and grooves, and then severing such compound lumber at the points of junction, as and for the purpose set forth.

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

W. E. BROCK.

Witnesses:

HUBERT HOWSON,
HARRY SMITH.