(Model.)

W. A. COMPTON.

RECESSED EMBOSSING TOOL.

No. 335,898. Patented Feb. 9, 1886.

Fig. 1.

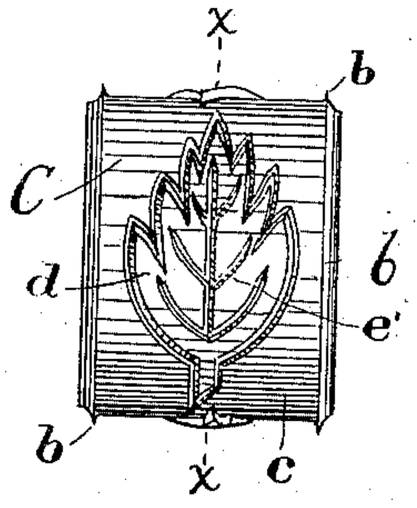


Fig. 2.

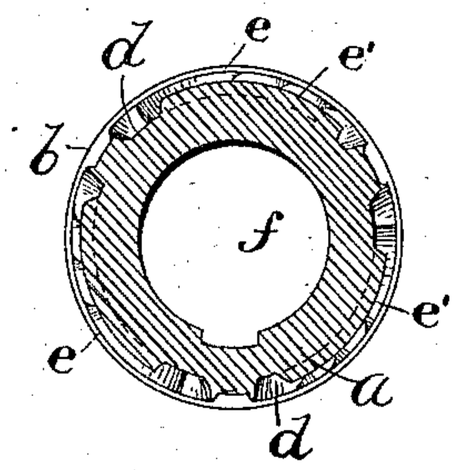


Fig. 3.

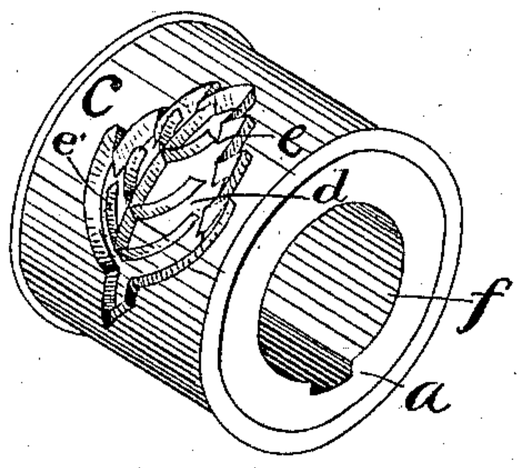


Fig. 4.

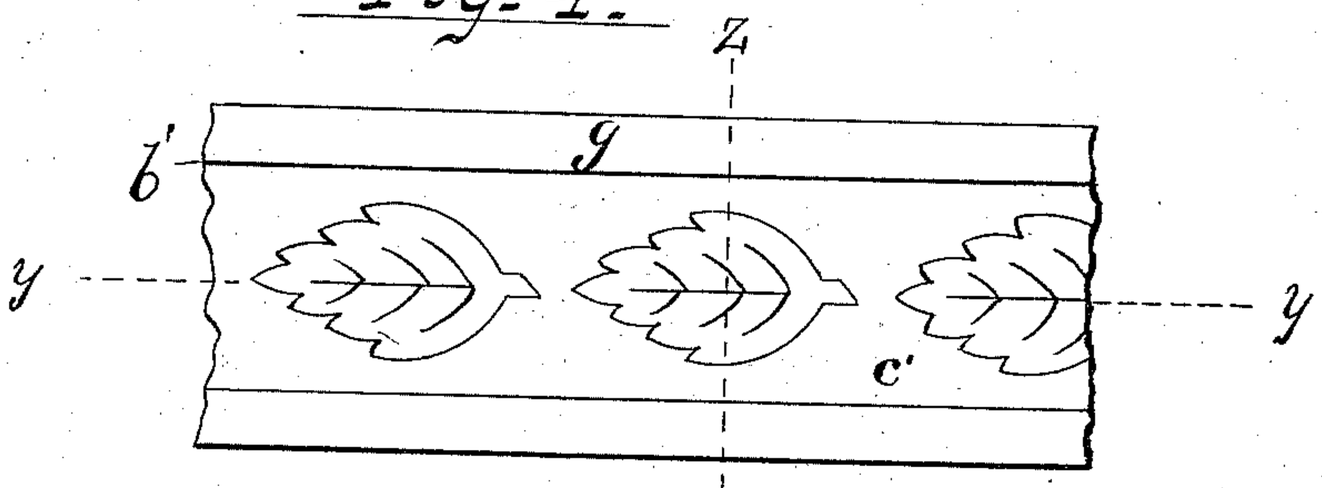


Fig. 5.

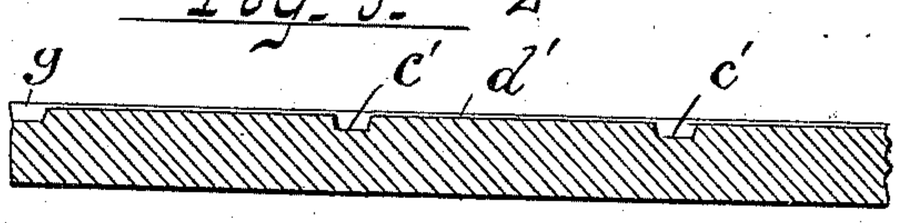


Fig. 6.

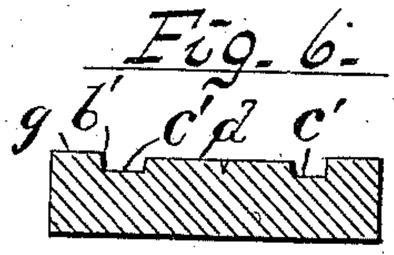
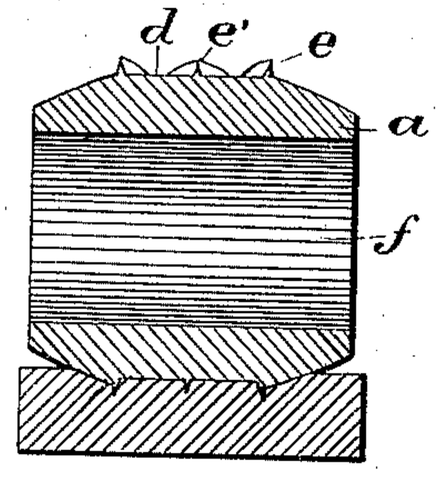


Fig. 7.



Attest;
L. Lee.
Henry J. Theberath,

Inventor.
William A. Compton,
per Brauer & Miller, Atty's

UNITED STATES PATENT OFFICE.

WILLIAM A. COMPTON, OF LIBERTY CORNER, NEW JERSEY.

RECESSED EMBOSSING-TOOL.

SPECIFICATION forming part of Letters Patent No. 335,898, dated February 9, 1886.

Application filed December 17, 1885. Serial No. 185,928. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM A. COMPTON, a citizen of the United States, residing in the township of Liberty Corner, in Somerset county, in the State of New Jersey, have invented certain new and useful Improvements in Recessed Embossing-Tools, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention is a modification of that claimed by me in Patent No. 331,770, of December 8, 1885; and it consists in a combined cutting and pressing tool for embossing wood, and having one or more recesses formed in its surface, and provided with a cutting edge or edges affixed to the tool at the margin of such recess or recesses.

It also consists in a modification in which the tool is formed as an embossing-roller having a convex embossing surface in longitudinal section, and provided with recesses in its surface and a cutting-edge around such recess or recesses.

In the annexed drawings, Figure 1 is a side view of an embossing-roller provided with my improvement. Fig. 2 is a transverse section of the same on line *x x* in Fig. 1. Fig. 3 is a perspective view of the same, showing more clearly the projection of the cutting-edge around the margin of the recess and from the bottom of the same. Fig. 4 is a plan of a strip of wood embossed by such roller. Fig. 5 is a longitudinal section of the same on line *y y* in Fig. 4. Fig. 6 is a transverse section of the same on line *z z* in Fig. 4, and Fig. 7 is a convex roll in contact with a strip of wood.

a is the body of the roller; *b*, a cutter affixed to each end thereof; *c*, the embossing-surface; *d*, a recess formed in its periphery; *e*, a cutting-edge applied to the margin of the recess, and *e'* cutting-edges projected from the bottom of said recess. The recess is shaped like a serrated leaf with a short stem, and in Fig. 2 the roll is represented as formed with three such recesses, the embossing-surface of the roll appearing only at short intervals between the cutting-edges at the ends of each recess, and the cutters *e'* appearing as they project from the bottom of the recess. The roll is furnished with a hole, *f*, for application to an arbor, and is operated by rotating it in contact with the wood under pressure, and produces the effect shown in Figs. 4 to 6, inclusive. The cutting-edge around the recesses *d* serves to sever certain leaf-shaped parts of the wood from that portion which is depressed by the embossing-surface *c*, such leaf-shaped parts being thus left in relief and surrounded by the depressed surface *c'*. The undepressed parts *d'* are plainly shown in the sections at Figs. 5 and 6, where certain portions of the wood are shown depressed (as at *c'*) between the ends of the series of raised leaves produced by the embossing-roll.

In Figs. 4 and 6 is shown the effect of the end cutters, *b*, which serve to sever the fibers on line *b'* at each side of the depressed surface *c'*, and thus to produce an ornamental embossed strip smoothly separated from the undepressed portion of the board at *g*, and having figures in relief thereon, as at *d'*.

Cutters *e'* are represented as projected from the bottom of the recess upon lines representing the mid-rib and veins of the leaf for the purpose of marking the raised parts *d'* upon such lines in imitation of a natural leaf.

It is obvious that in place of the leaf the surface of the roller may be recessed with geometrical or other patterns and the cutters *e* applied to the margin of such recesses, and that cutters may be projected from the bottom of the recess upon lines within such margin to produce any desired effect different from that shown herein. I do not, therefore, limit myself to the particular form of recess or the application of the cutters to its entire margin, as it is obvious that a recess may in certain figures be beveled gradually off to the embossing surface *c*, so as to require no cutting-edge at such point.

Fig. 7 shows merely an application of the recess and cutters to a roller without end cutters, *b*. Such roller may be made convex upon its face, as shown in Fig. 7, to avoid the contact of its edges with the wood where a distinct depressed strip, as at *c'* in Fig. 4, is not required. The same effect may also be produced when strips of wood are to be ornamented with raised figures, by employing a roller long enough to extend entirely across the wood and to depress its entire surface, ex-

cept where the roll is provided with recesses.

I am aware that the embossing-rollers heretofore used have been of necessity formed with elevations and depressions, and that some of the latter may be regarded as recesses; and my invention does not therefore consist in forming a recess in an embossing-tool, but in combining with the margin of such recess a cutter or cutters, where required, to sever the fibers to produce a smooth separation between the depressed and undepressed parts of the embossed wood.

I do not claim herein a combined cutting and pressing tool for embossing wood, as I have made such claim in my said Patent No. 331,770; but it is obvious that my present improvements are applicable both to a flat tool and a roller, as claimed in my aforesaid patent.

I do not claim herein the application of cutters to the ends of an embossing-roller when the latter is used to depress the entire surface of the wood between two parallel lines, as I have claimed such invention in Letters Patent No. 331,771.

I am aware that cutters have been placed at the margin of leather-creasing tools to trim off the surplus leather in the process of embossing straps, and I do not, therefore, claim a cutter, broadly. My cutter, however, is not located at the margin of the tool, but at the margin of a recess formed in the embossing-surface of the tool, and therefore stands between the embossing-surface and that part which is recessed to avoid contact with the wood in whole or in part. My cutter therefore operates to sever the fibers which are depressed from those which are undepressed, and its location and operation are consequently both different from the trimming-cutter I have referred to.

What I claim herein, and desire to secure by Letters Patent, is—

1. The combined cutting and pressing tool having an embossing-surface formed thereon, one or more recesses formed in said embossing-surface, and a projecting cutting-edge affixed at the margin of such recess, between the edge of the recess and the adjacent embossing-surface, as and for the purpose set forth.

2. An embossing-tool having a recess formed in its surface and provided around the entire margin of such recess with a projecting cutting-edge affixed to the tool at the margin of such recess.

3. An embossing-roller having a recess formed in its surface, a projecting cutting-edge affixed at the margin of such recess, and one or more cutting-edges projected from the bottom of such recess within the margin.

4. An embossing-roller having a convex embossing-surface in longitudinal section, a recess formed in said surface and provided with a projecting cutting edge or edges affixed at the margin of such recess.

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

WILLIAM A. COMPTON.

Witnesses:
W. F. D. CRANE,
F. S. BAYLIES.