

W. H. DOANE.  
DEVICES FOR CARVING WOOD.

No. 174,212.

Patented Feb. 29, 1876.

Fig. 1.

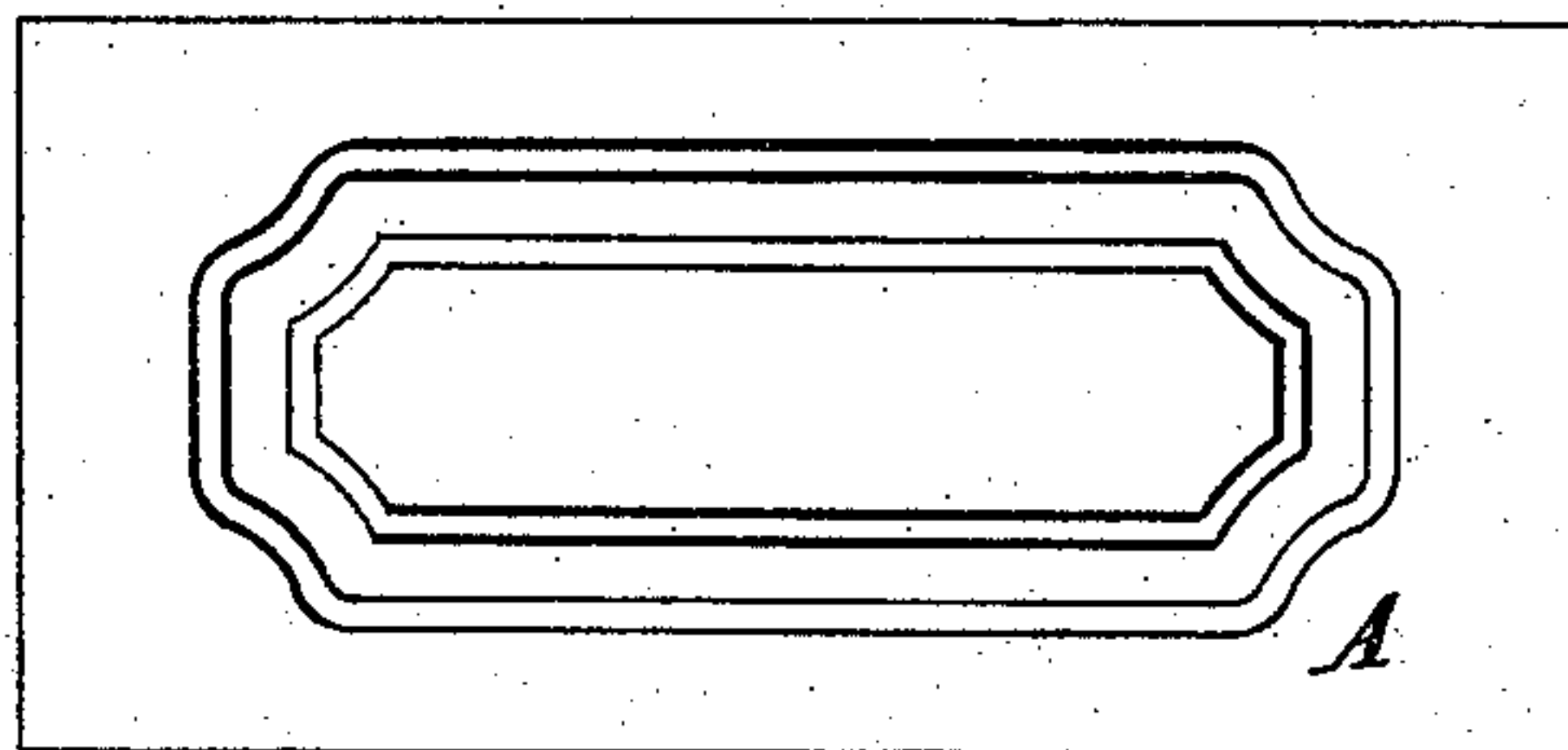


Fig. 2.

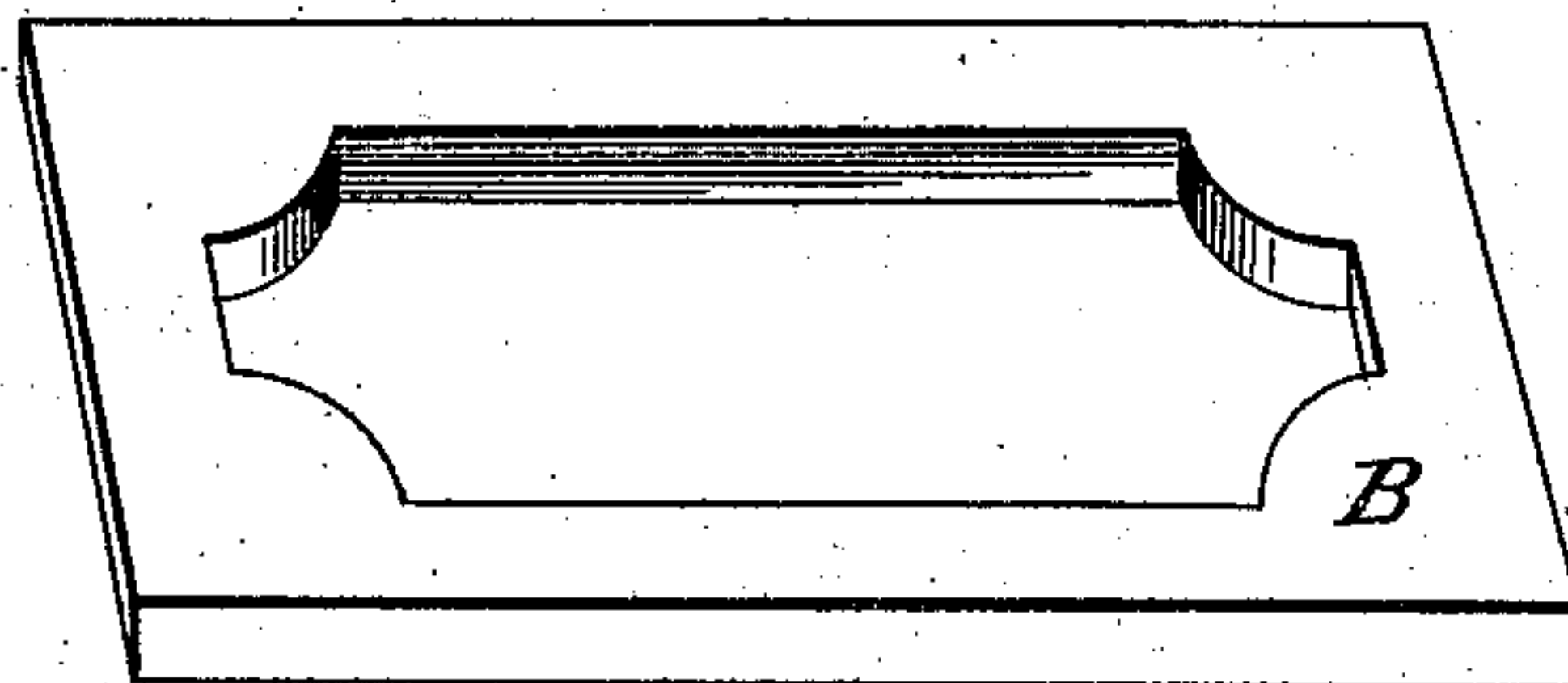


Fig. 3.

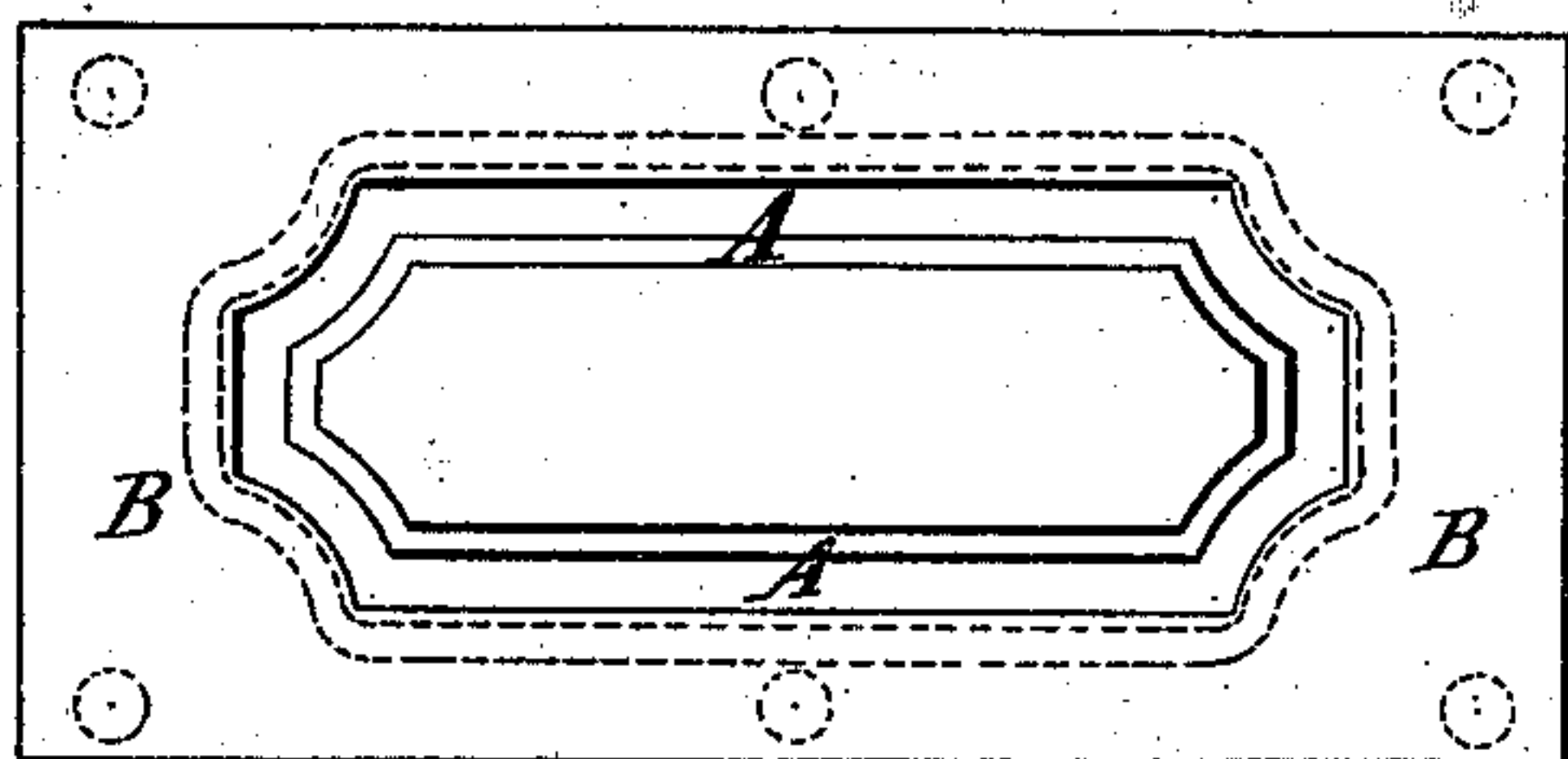
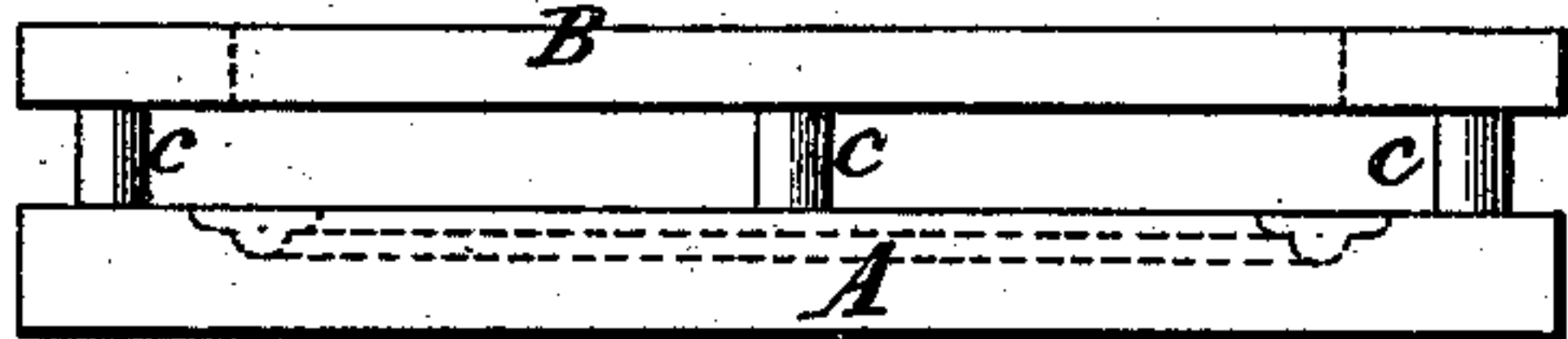


Fig. 4.



Witnesses:  
A. Ruppert.  
John Cils

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Att.

# UNITED STATES PATENT OFFICE.

WILLIAM H. DOANE, OF CINCINNATI, OHIO.

## IMPROVEMENT IN DEVICES FOR CARVING WOOD.

Specification forming part of Letters Patent No. **174,212**, dated February 29, 1876; application filed February 5, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM H. DOANE, of Cincinnati, county of Hamilton and State of Ohio, have invented an Improvement in Devices for Carving Wood, of which the following is a specification:

The nature of my invention consists in the process of carving and ornamenting upon the surface of wood by means of revolving cutters, patterns, templets, or guides, said patterns or templets being temporarily attached to the top surfaces and over the material to be carved or ornamented, as will be hereafter more fully explained.

Figure 1 is a top view or plan of a piece of wood with carving or ornament shown on its surface. Fig. 2 is a perspective view of the pattern or form, which consists of a piece of wood having any required design cut entirely through its surface; Fig. 3, a plan, and Fig. 4 a front view, showing carved or ornamented wood with pattern or templet in proper position.

A, Figs. 3 and 4, represents a board, on the surface of which it is desired to form the carving or ornamentation. Elevated above and over this board is shown, in Fig. 4, the pattern or templet B, having the design cut entirely through it. C C are pins or blocks, of any required form, that will at the same time attach pattern or templet B to the wood A, and also keep pattern and wood apart for the free passage of chips and shavings, and for convenience in taking out or putting in the cutter, and permitting the operator to have a view of the work the carving-tool is performing; and it also at the same time enables the operator to see that the pattern or templet works close to the guide.

The machine by which this work is performed may be of the class known as having an overhanging revolving cutting-tool working above the table or platen, or the ordinary friezing-machine, having a guide for the cutters of smaller diameter than the cutter, for a directrix for the pattern. The cutters used may be of any kind used for carving and ornamenting.

In my invention it will be seen that the pattern or templet is placed upon the side of the wood operated on, above and independent of the same. Between the pattern and the wood

to be worked are placed pins or blocks to hold the pattern or templet to the wood, and also to leave openings for the free removal of chips and shavings, and also to allow of the withdrawal of the cutter without deforming the pattern.

I am aware that machines for carving and ornamenting wood are known, and that such machines form the figure or carving upon the surface of the material by the cutters passing through the pattern, and necessitating the use of a collar a little larger in diameter than the largest size of the cutter; but in this mode of carving the pattern is fastened directly on top of and to the wood operated upon, leaving no room for the cutter to clear itself of chips and shavings, and from the peculiar construction of carving-cutters the shavings soon choke them, obstructing the perfect action of the cutter, and not infrequently burning the work, instead of cutting it clear and smooth.

My invention is entirely different from the machines specified, from the fact that I place the pattern over and above the wood operated upon, and by having a fixed collar above the cutter, a little larger in diameter than the shank of the cutter, forms a directrix for the pattern. The openings between the wood operated upon and the pattern, for the free passage of chips and shavings, and for the larger diameter of the cutter to revolve free and unobstructed, allows the pattern to work on the same collar, no matter whether the cutters are larger or smaller than the fixed collar or directrix, as it insures the perfect action of the cutting tool of any size, thus avoiding the necessity of using varying sizes of guide-collars or directrices for the different sizes of cutting-tools.

What I claim is—

As an improvement in the art of carving wood by machinery, the method, herein described, of arranging the templet at a distance from the surface to be carved, so as to provide an open space between them, substantially as and for the purpose specified.

WILLIAM H. DOANE.

Witnesses:

IRVING SPENCER,  
A. C. GIBBS.