

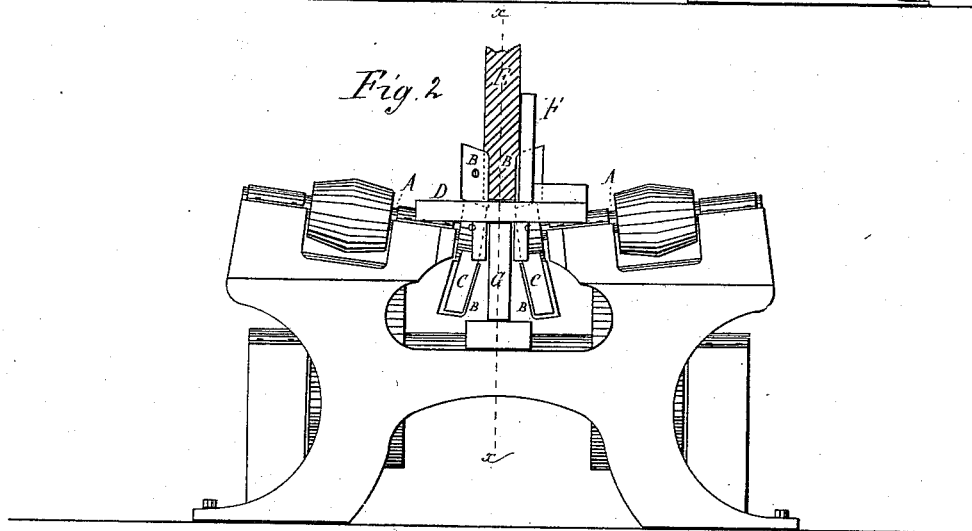
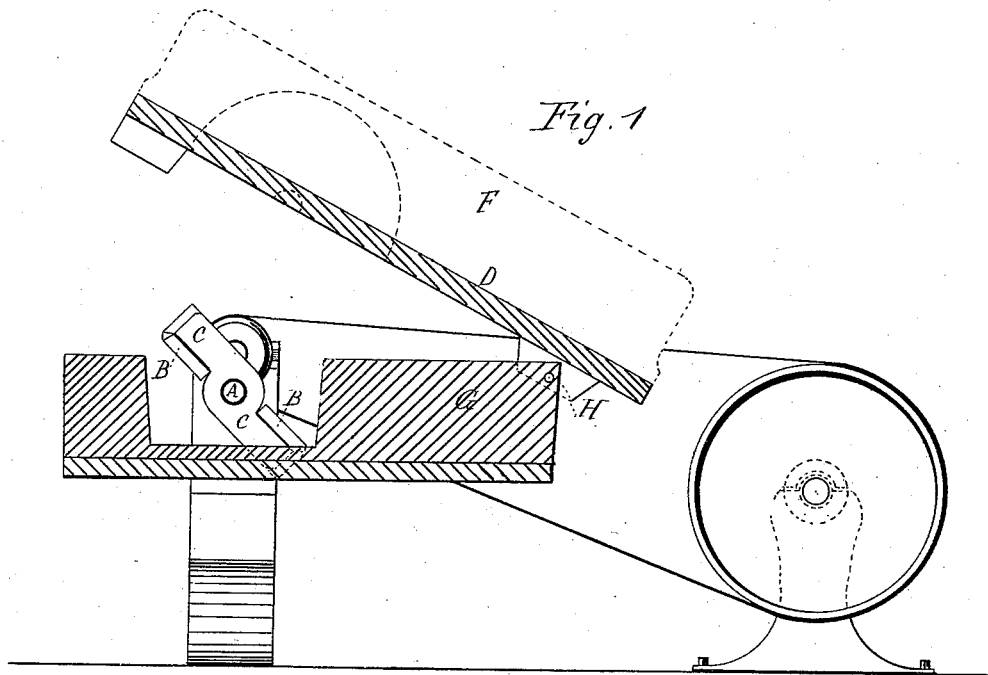
(Model.)

E. N. GORE.

PANEL RAISER.

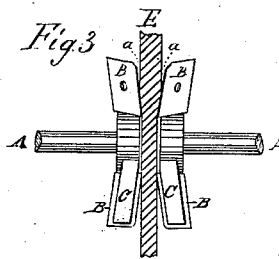
No. 264,278.

Patented Sept. 12, 1882.



WITNESSES

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# UNITED STATES PATENT OFFICE.

EDGAR N. GORE, OF ELKHART, INDIANA.

## PANEL-RAISER.

SPECIFICATION forming part of Letters Patent No. 264,273, dated September 12, 1882.

Application filed April 12, 1882. (Model.)

*To all whom it may concern:*

Be it known that I, EDGAR N. GORE, of Elkhart, in the county of Elkhart and State of Indiana, have invented a new and Improved Panel-Raiser, of which the following is a full and exact description.

This invention consists essentially of a pair of rotary cutter-heads placed side by side for raising panels on both sides of the board at the same time, the said cutter-heads having their axes arranged obliquely to the plane of the boards to be dressed, and the edges of the cutters beveled to correspond with the inclinations of the axes to said plane, so that said cutters dress the panels parallel to the plane of the board, but at the same time act obliquely on the wood in such manner as to shave across the grain in a way that enables them to cut much smoother and better than when the axes are in a plane at right angles to that of the board and the cutting-edges at right angles to the arbor, all as hereinafter more fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of a panel-raising machine constructed according to my invention, the section being taken on line *xx* of Fig. 2. Fig. 2 is an end elevation. Fig. 3 is a detail of the cutter-heads and their arbors, also a section of a board being dressed, showing the improved method of cutting the wood by the bevel-cutters with axes oblique to the plane of the board.

A represents the arbors; B, the cutters, and C the arms by which the cutters are attached to the arbors.

D represents the horizontal table on which the boards E are moved along edgewise on said table against the vertical guide F and between the cutters of the respective arbors for having the sides planed off and rabbeted from the lower edge upward a short distance, as is common in panel-raising.

By reference to Fig. 2 it will be seen that the arbors A are inclined upward from the guideway for the boards to less than ninety degrees to the vertical plane of the boards to be dressed, and that the cutters B are so set

or beveled to the arbors that the edges are parallel to said plane when they pass the vertical plane of the arbors, but are considerably divergent below said arbors. Then, by reference to Fig. 3, where the cutters are seen from the vertical plane of the arbors, it will be noticed the cutting-edges diverge from the board on both sides of the arbors. Now, supposing the cutters to be rising at *a* up to the board, it will be understood that they cut obliquely from the bottom of the groove or channel outward to the surface of the board in such manner as to plane off the wood by a smooth shear cut, that not only takes less power than when the cut is straight up from the lower edge of the board parallel with it, but makes much smoother work.

It will also be understood from Fig. 3 that the clearance of the cutters from the board after doing the work is greater than in the common arrangement.

I propose also to attach the table D to the vertical piece G of the frame by a pivot-joint at H, so that the table can be readily raised up, as shown in Fig. 1, for convenient access to the cutters for sharpening them.

The guide F is located over the cutters of one head, so that said cutters project through it on the side where the board passes as much as the depth of the board is to be cut. This guide is adjustable in the working machines to be set so that the board will be dressed alike each side by the cutters of the respective sides.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a panel-raising machine, the combination, with the inclined arbors or shafts A A, disposed end to end and sloping toward each other, of the cutters B, whose cutting surfaces or faces are adapted to impart to the interposed board a shear cut—that is, upon their upward movement to cut obliquely from the bottom of the groove or channel outward to the surface of the board, substantially as shown and described.

EDGAR N. GORE.

Witnesses:

EDWIN J. ROBBINS,  
OTIS D. THOMPSON.