

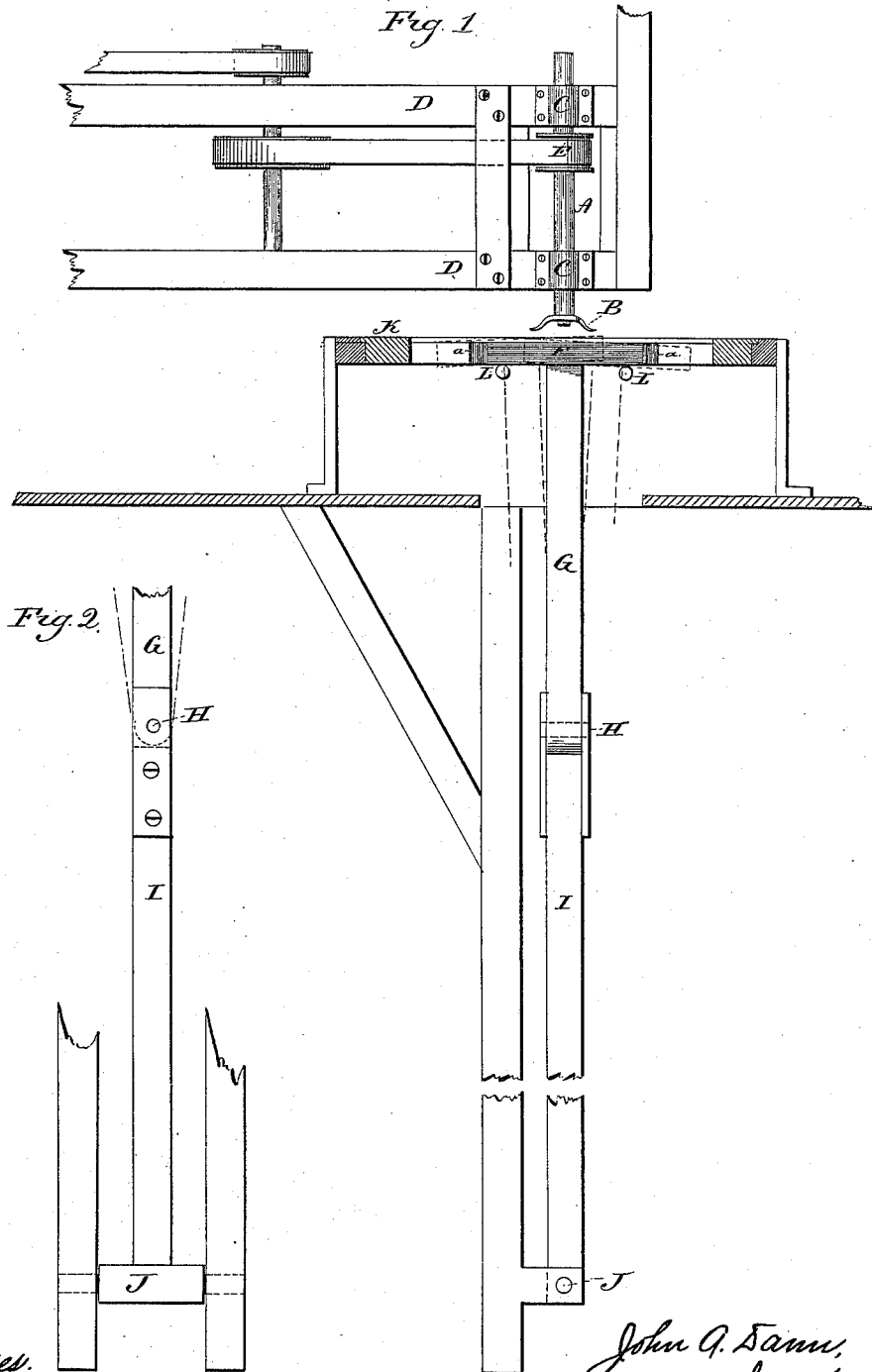
(No Model.)

2 Sheets—Sheet 1.

J. A. DANN.  
PANELING MACHINE.

No. 383,711.

Patented May 29, 1888.



Witnesses.  
*J. H. Shumway*  
*Fred C. Earle*

*John A. Dann,*  
By atty, *Wm. E. Earle,*  
Inventor.

(No Model.)

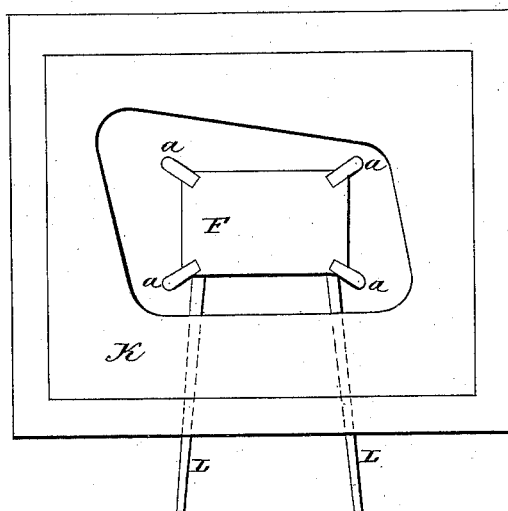
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*Fig. 3*



*Fig. 5*



*Fig. 4*



Witnesses:  
J. H. Shumway  
Fred C. Barre

John A. Dann.  
Inventor.  
By Atty.  
Wm. C. Emery

# UNITED STATES PATENT OFFICE.

JOHN A. DANN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE DANN BROS. & COMPANY, OF SAME PLACE.

## PANELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 383,711, dated May 29, 1888.

Application filed March 8, 1888. Serial No. 266,550. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. DANN, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Paneling-Machines; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view of so much of the machine as is necessary for the illustration of the invention; Fig. 2, a partial side view of the same; Fig. 3, a plan view of the work-holder, showing the former surrounding it; Fig. 4, a transverse section through the panel cut upon the machine; Fig. 5, a longitudinal section through the same panel.

This invention relates to the construction of a feeding device for machines for sinking panels into wood surfaces—that is to say, machines which are provided with a cutter revolving upon a vertical axis, so as to work in a horizontal plane, and so as to cut into the surface of a piece of wood placed beneath the cutter, and the wood guided with relation to the cutter so as to produce the requisite outline—a common and well-known paneling-machine.

In the manufacture of carriage-bodies the panels for the quarters are curved in two directions—that is, vertically and longitudinally—or, in other words, the surface of the panel is longitudinally cylindrical, and is also cylindrical vertically, the axis of the two cylinders being substantially at right angles to each other. Hence in the usual construction of these panels a frame has been made of the required shape and then the panels shaped upon forms and introduced, or the wood has been curved on forms of the requisite shape and then a border applied. In other cases—and that most generally practiced—the panel is worked out of solid wood into the required shape by hand-cutting. In either case the construction of these panels is an expensive part of the carriage wood-work.

The object of my invention is to work these panels from the solid wood—that is, to recess

the panel bodily by means of a cutter such as employed in common paneling-machines.

To this end my invention consists in a work-holder hung upon one axis, corresponding to the axis of the cylindrical surface in one direction, and the axial support for the one axis hung upon another axis at the requisite angle thereto, the said second axis corresponding to the axis of the cylindrical surface in the other direction.

A represents the vertical arbor, which carries the cutter B. This arbor is supported in bearings C C in an upright frame, D, power being applied to the arbor through a pulley, E, or otherwise, all in the usual manner, the cutter being upon the lower end of the arbor, and so that the wood to be cut passes beneath the cutter.

F represents the work-holder, which is a plate or bed of requisite size and shape. This holder is supported centrally upon an upright, G, the upright extending downward, and is hung upon an axis, H, below, the distance from the surface of the holder to the pivot H corresponding to the diameter of the cylindrical surface to be wrought, and so that the holder may swing, say, forward and back upon this axis H. Consequently work secured upon the holder and moved backward and forward beneath the cutter will cause the cutter to shape a surface the segment of a cylinder, of which H is the axis. The axis of the upright G is in a second upright, I, which is hung upon a similar axis, J, below, (see Figs. 1 and 2,) the axis J being at right angles to the axis H. The upright I, therefore, is free for a swinging movement to the right and left upon its own axis J, while the upright G is free to swing at right angles thereto upon its axis H. Hence, because the upright G is hung to the upright I, the said upright G, while having its own independent backward-and-forward swinging movement, will partake of the right-and-left movement of the upright I. This right-and-left movement is indicated in Fig. 1 in broken lines. The distance from the holder to the respective pivots will be subject to variation, according to the variation of the curves required.

Under the movement of the holder to the

right and left, turning upon the axis J, a cylindrical surface will be cut, of which the axis J is the center. Consequently the surface produced under both the backward-and-forward and right-and-left movements of the holder will be that of "cross-cylinders."

Surrounding the holder F is a form, K, having an opening through it, in outline corresponding to the outline or edge of the panel which is to be cut, and the former F is adapted to work against the surrounding edges of the former K, as seen in Fig. 3—that is to say, the former K is held stationary, and is constructed with an opening through it, the outline of which corresponds in shape to the outline of the panel to be cut; but the opening is larger than the work-holder F. The work-holder stands within the opening in the former, and moved within the opening will present the surface of the work on the holder to the cutter, and, as the work-holder is guided by the sides or shape of the opening, the cutter will operate upon a surface in shape corresponding to the opening in the former.

I prefer to provide the work-holder with projections *a* at its angles, which will work against the sides of the opening in the former to guide the work-holder.

The holder is provided with handles L L, by which the operator may move the holder, the holder being supported within the opening in the former, as seen in Fig. 1, and so that the operator taking hold of the handles may move the holder within the limits prescribed by the opening in the former.

The wood being placed upon the holder and there secured, the workman takes hold of the handles and moves the holder and the work backward and forward and to the right and left, the former K limiting the extent of movement in either direction, and so that the cutter will work in the surface of the wood a recess or panel corresponding to the outline indicated by the former, and as represented in Fig. 3, and because of the cross-curves given to the holder, as before described, the panel transversely will be shaped, say, as seen in Fig. 4, corresponding to the curve given the forward and back movement of the holder

upon its axis H, while longitudinally the surface will be curved as seen in Fig. 5, and corresponding to the right-and-left movement imparted to the holder from the axis J, and these curves correspond to the curves required for the quarter-paneling of the carriage-body.

The outline of the panel will be varied by varying the outline of the former K, and the curves will be varied by corresponding change of the two axes upon which the holder vibrates. In some cases it may be desirable to simply dress the surface this combined cylindrical character. In that case the former may be omitted.

It will be understood that I use the term "vertical" only as indicating a preferable position of the machine and not as confining the machine to a horizontal bed.

I do not wish to be understood as claiming, broadly, a paneling-machine having a work-holder adapted for a swinging movement, whereby a cylindrical surface is produced, as such, I am aware, is not new; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In a paneling-machine having a cutter revolving upon a vertical axis, the combination therewith of a holder beneath the cutter adapted to receive the work, the said holder hung below upon two different axes, the said axes at an angle to each other, substantially as described, and whereby said holder may swing beneath the cutter transversely upon one axis and longitudinally upon the other, substantially as described.

2. In a paneling-machine having a cutter revolving upon a vertical axis, the combination therewith of a holder beneath the cutter adapted to receive the work, the said holder hung below upon two different axes, the said axes at an angle to each other, with a former surrounding said holder, the said holder adapted to work against the edges of the former, substantially as described.

JOHN A. DANN.

Witnesses:

FRED C. EARLE,  
J. H. SHUMWAY.