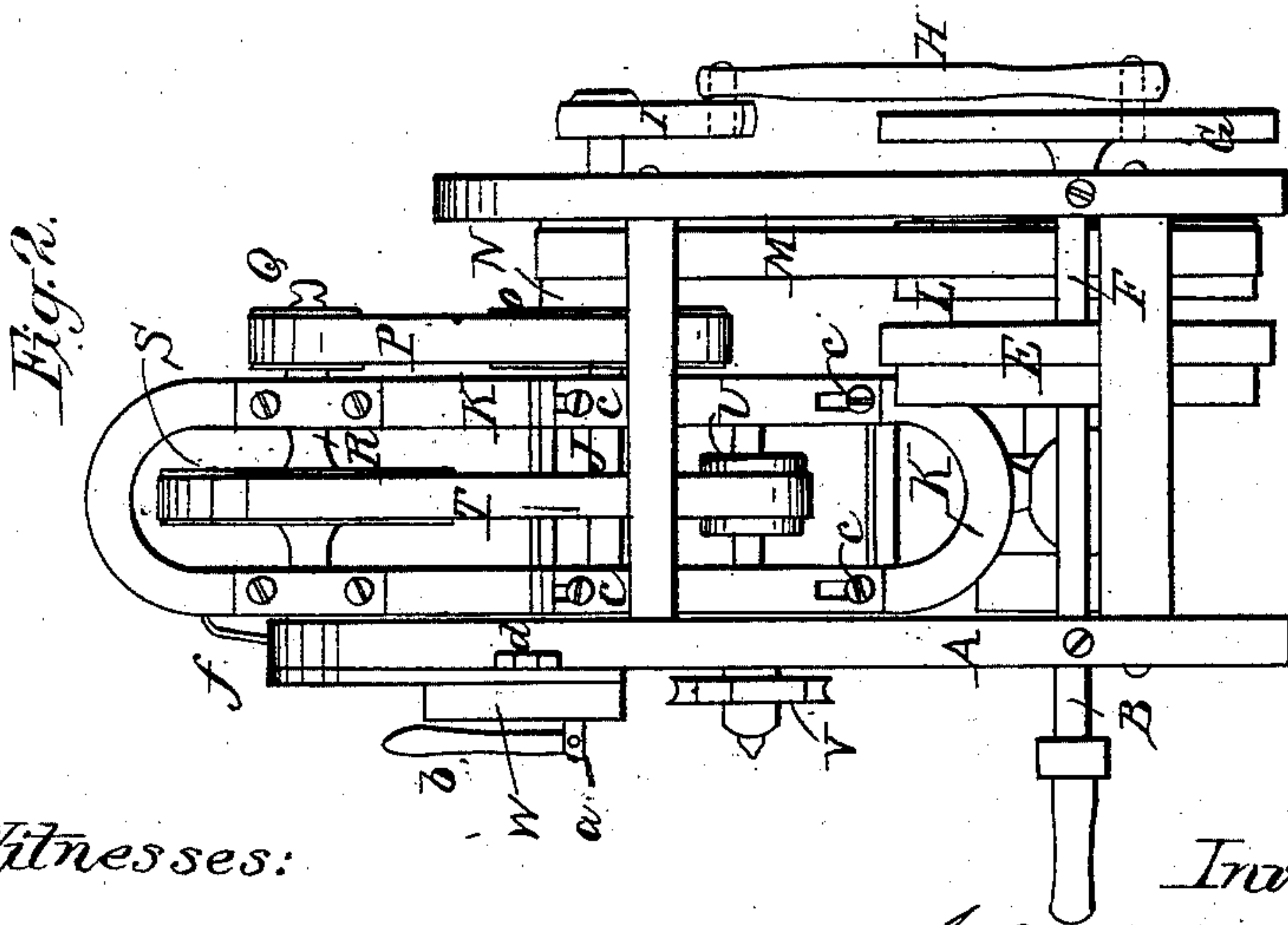
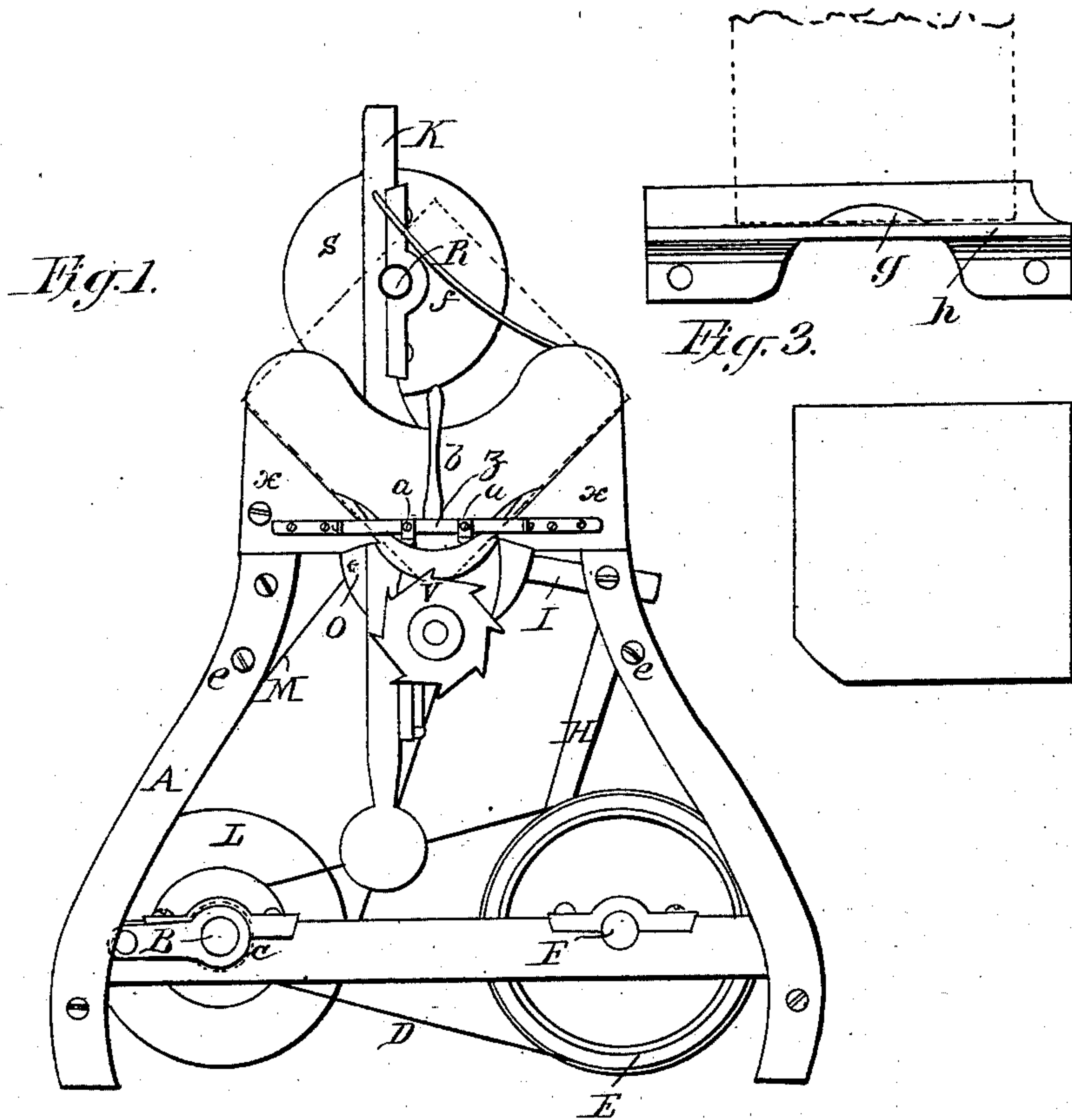


J. FLORY.

Machine for Rounding the Corners of Slate Frames.

No. 78,200.

Patented May 26, 1868.



Witnesses:

Inventor:

O. P. Fitch

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By his Atty J. Dennis Jr

United States Patent Office.

JOHN FLORY, OF FLICKSVILLE, PENNSYLVANIA

Letters Patent No. 78,200, dated May 26, 1868.

IMPROVEMENT IN MACHINES FOR ROUNDING THE CORNERS OF SLATE-FRAMES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN FLORY, of Flicksville, Northampton county, State of Pennsylvania, have invented a new and improved Machine for Rounding the Edges and Corners of Slate-Frames; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

The nature of my invention and improvements consists in constructing a machine with a revolving or wheel cutter, the shaft of which is supported by a frame so arranged as to vibrate automatically for shaping and rounding the curved corners of the slate-frame, which in this case is held in a fixed position, but capable also of being fixed and made stationary for rounding and finishing the straight sides of the slate-frame, which are moved along upon a straight way or guide to be acted upon by the cutter; also, in so arranging that part of the vibrating-frame that supports the cutter, that it may be adjusted upon the main frame, and the cutter moved toward or from the axis of said frame, to reduce or enlarge the radius of the circle, upon an arc of which the corners are shaped or cut.

A is a frame supporting the operating-machinery, as represented in the accompanying drawings, of which—

Figure 1 is a side view or elevation of my machine, and

Figure 2 an end view of the same.

B is the driving-shaft, to which moving-power may be applied by a pulley or otherwise, and the pulley C on this shaft drives, by the belt D, the pulley E on the shaft F, upon which is the disk (or an arm) G, connected, by the rod H, to the arm I fixed on the shaft J of the vibrating-frame K.

The pulley L on the driving-shaft carries, by means of the belt M, the pulley N, which turns loose on the shaft of the frame K, but is fastened to and carries the pulley O, which, by means of the belt P, drives the pulley Q on the shaft R within the vibrating-frame K; and on the shaft R is the pulley S, driving, by the belt T, the pulley U, upon the shaft of which the cutter V is fixed.

Directly over the cutter is the holding-frame W, upon which the two triangular pieces X are so placed that their inclined edges are at right angles to each other, and form a rest for supporting the slate-frame when the corners are to be shaped and rounded.

The driving-shaft being started, the arm I, connected as before described, will be drawn down, and, by means of the cutter-frame, will carry the cutter back, or to the left of the position represented in fig. 1, and the corner of the slate-frame may then be placed so that the two adjacent sides forming the corner may rest upon the pieces X, and the machine being continued in motion, the arm I will carry the cutter forward, the cutter at the same time being made to revolve rapidly by its connection with the driving-shaft already described. The corner of the slate-frame presented to it will be cut off and rounded by the teeth of the cutter, the edges of the teeth being curved in such manner as to give the edge of the frame the desired shape. The motion being continued still, the vibrating-frame will carry the cutter back to its former position, and in the mean time another corner may be inserted in the place of the one just cut, to be acted upon by the cutter when it again advances, care being taken to insert the corner in such a way that the cutter-teeth will strike the grain of the wood in the most favorable direction for leaving the edge even and smooth.

The bar z, in front of the holding-frame W, turns on pins passing through brackets into its ends, and is provided with plates, a a, projecting from it, and bent outward at right angles, so that when the bar is turned, by drawing forward the lever-arm b, the plates a a will be pressed against the slate-frame and hold it firm while it is acted upon by the cutter.

The screws c c, which secure to the main vibrating-frame the journal-boxes of the shaft holding the cutter V, pass through slots, so that, when loosened, the auxiliary frame, holding these journal-boxes, may be raised or lowered on the main frame, and thus lengthen or shorten the radius of the circle or arc upon which the corners of the slate-frame are cut as desired.

To finish or round the straight sides of the slate-frame, the belt D is thrown off so as to run loose or on to a loose pulley, when the vibrating-frame stops, and, being placed in a vertical position, it is secured there by the bar *f*, one end of which is fastened to the frame A, and the other bent and inserted in the frame K. The holding-frame W must then be turned back upon the hinge shown at *d*, fig. 2, and the straight guide shown in fig. 3 put on in place of it, and secured by the screws *e e*, so that the teeth of the cutter may project up through the curved opening *g*. The straight edge of the slate-frame is then placed upon the projecting way or guide *h*, and moved along to be acted upon by the curved edges of the teeth of the revolving cutter, and be rounded and finished as desired.

The foregoing being a description of my improved machine—

I claim, in combination with the disk or arm G, with its crank-pin, the connecting-rod H and the arm I on the shaft J, for vibrating the frame K and cutter V, substantially as described.

JOHN FLORY.

Witnesses:

B. F. ARNDT,

E. W. BARNET.