J. H. & A. T. GOODELL.

MACHINE FOR SHARPENING VENEER CUTTERS.

No. 28,074. Patented May 1, 1860.

Fig. 2.

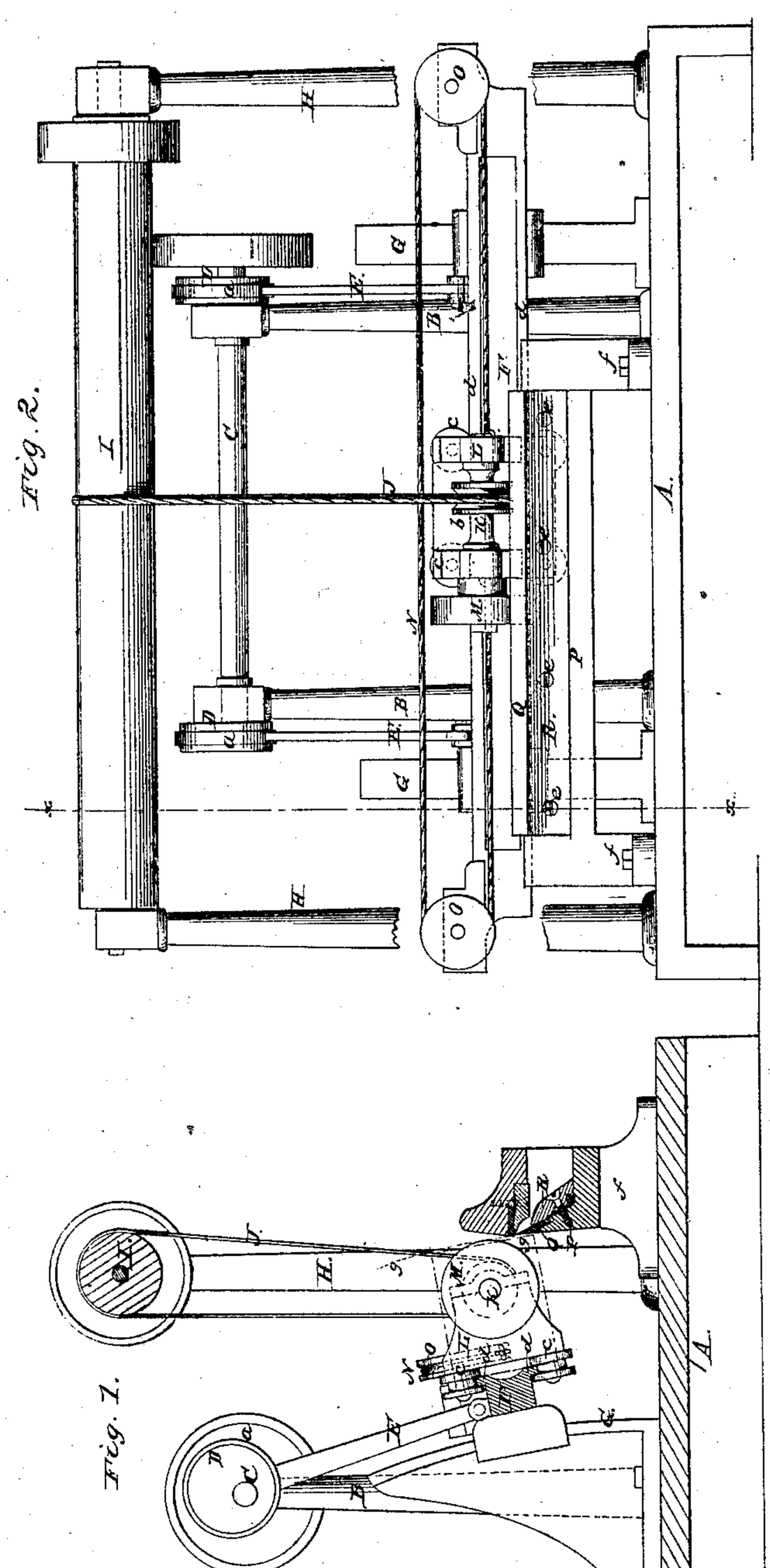
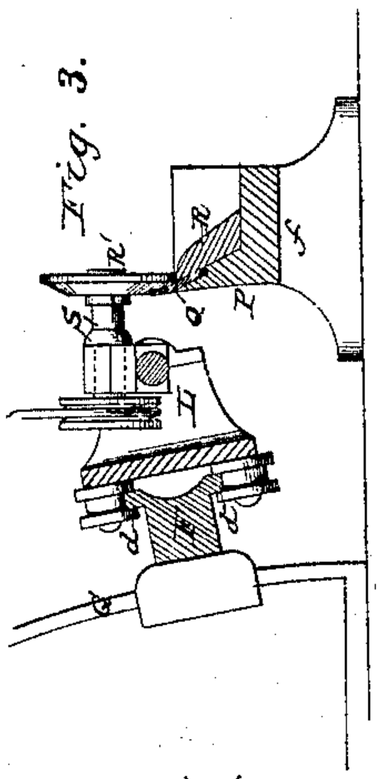


Fig. 1.

Fig. 3.



Attest:
B. J. Grouse.
M. McLivington.

Inventors.
Joseph H. Goodell
Alfred T. Goodell

UNITED STATES PATENT OFFICE.

JOSEPH H. GOODELL AND ALFRED T. GOODELL, OF NEW YORK, N. Y.

METHOD OF SHARPENING CYLINDRICAL CUTTING-KNIVES.

Specification of Letters Patent No. 28,074, dated May 1, 1860.

To all whom it may concern:

Be it known that we, J. H. GOODELL and A. T. GOODELL, of the city, county, and State of New York, have invented a new and Improved Machine for Sharpening the Knives of Machines for Cutting Veneers and other Articles; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 is a side sectional view of our invention taken in the line *x*, *x*, Fig. 2. Fig. 2 a front view of the same. Fig. 3 a side sectional view of the same showing a different grinding device from that shown in Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain by simple means a device by which the proper level or basil may be given the knives of veneer-cutting and similar or analogous machines.

The invention is designed for knives for those machines in which either the bolt or the knife moves in the arc of a circle, and which consequently require in order to do perfect work, that the basils of the knives have a curvature corresponding to the arc in which they or the bolts move. To this end we employ a rotary and traversing grinding wheel and apply the same to the bolt bar or stock of the machine, and give it the same vibratory motion as when in operation for cutting the bolts, whereby the grinding wheel is presented to the knife so as to act upon and sharpen it with a proper concave basil.

To enable those skilled in the art to fully understand and construct our invention we will proceed to describe it.

A, represents the base of a veneer cutting machine and B, B, are two uprights the upper parts of which form bearings for a shaft C, which has two eccentrics D, D, on it.

E, E, are rods which are attached to the eccentrics by straps *a*, *a*, and F, is a bar or stock which is fitted on segment guides G, G, attached to the base A. This bar or stock as the shaft C, is rotated, is made to rise and fall in the arc of a circle in consequence of being fitted on or to the segment guides G, G.

H, H, are two uprights attached to the base A. The upper ends of these uprights form bearings for a drum I, around which an elastic belt J, passes, said belt also passing around a pulley *b*, on a shaft K, which shaft is fitted in a carriage L, that is placed on the bar or stock F. The back part of the carriage L, is provided with grooved rollers *c*, which are fitted on ways *d*, at the front side of the bar or stock and admit of the carriage moving readily back and forth thereon. At one end of the shaft K, a grinding wheel M, is placed.

N, is an endless band or cord which is attached to the carriage L, and passes around pulleys O, O, at the ends of the bar or stock F.

P is a bed in which the knife or cutter Q is attached by a plate or clamp bar R, which is attached to the bed by screws *e*. This bed P, is attached to supports *f*, which are secured to the base A, by screws in such a way as to admit of a certain degree of adjustability of the bed and thereby allow the knife to be placed in a proper position to be acted upon by the grinding wheel. The knife or cutter Q, is fitted in the same position in its bed as when adjusted to perform its legitimate work of cutting veneers.

The operation is as follows: The shaft C, is rotated by any convenient power, and a reciprocating movement is thereby given the bar or stock F. The shaft I, is also rotated and motion communicated to the grinding wheel M, by the belt J, which on account of its elasticity compensates for the distance between the pulley *b*, and the drum I, occasioned by the movement of the bar or stock F. As the bar or stock F, works up and down, the wheel M, sharpens the knife Q, cutting the basil which forms its edge in the arc of a circle which is concentric with the segment guides G, G, the carriage being fed along on the bar or stock by moving the cord N, which gives the grinding wheel M, a lateral movement and causes it to work over the whole length of the knife or cutter. The vertical curved path of the grinding wheel M, is shown by the dotted lines *g*, in Fig. 1.

From the above description it will be seen that by simply attaching the carriage L, to the bar or stock F, and adjusting the knife Q, in its bed the knife may be sharpened with a concave basil corresponding to the arc of the circle in which the veneers are cut from the bolt—and the knife therefore will work in a most efficient manner. It could

not be possible to sharpen the knife in proper form by manual operation trusting to the eye for a proper curvature, neither could the work be done manually if gages be employed to test the curvature from time to time. The opposite side of the knife may be sharpened by attaching a bevel-shaped grinding wheel R′, to a shaft S, which may be placed in the carriage L, and rotated by the belt J, the shaft K, and wheel M, being removed. The face of the wheel R′, bears against the outer side of the knife and the carriage L, is simply moved along on the bar or stock F, no up and down movement being required. This latter operation however may be readily done without a machine as no curvature, at least not a great one, is required at the outer side of the knife but it is desirable to have a wheel R′, to fit in the carriage L, as it enables both sides of the knife to be operated on by the same device or machine.

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

Attaching the carriage L, to the vibrating bolt-bar or stock F, of a veneer-cutting machine, when said carriage is provided with a rotating grinding wheel M, and so arranged as to have a traversing or lateral movement on the bar or stock F, and operate on the knife Q as and for the purpose set forth.

JOSEPH H. GOODELL.
ALFRED T. GOODELL.

Witnesses:
B. GIROUXE,
M. M. LIVINGSTON.