M. RICE.

Carving-Machine.

No. 207,207. Patented Aug. 20, 1878.

Fig. 1

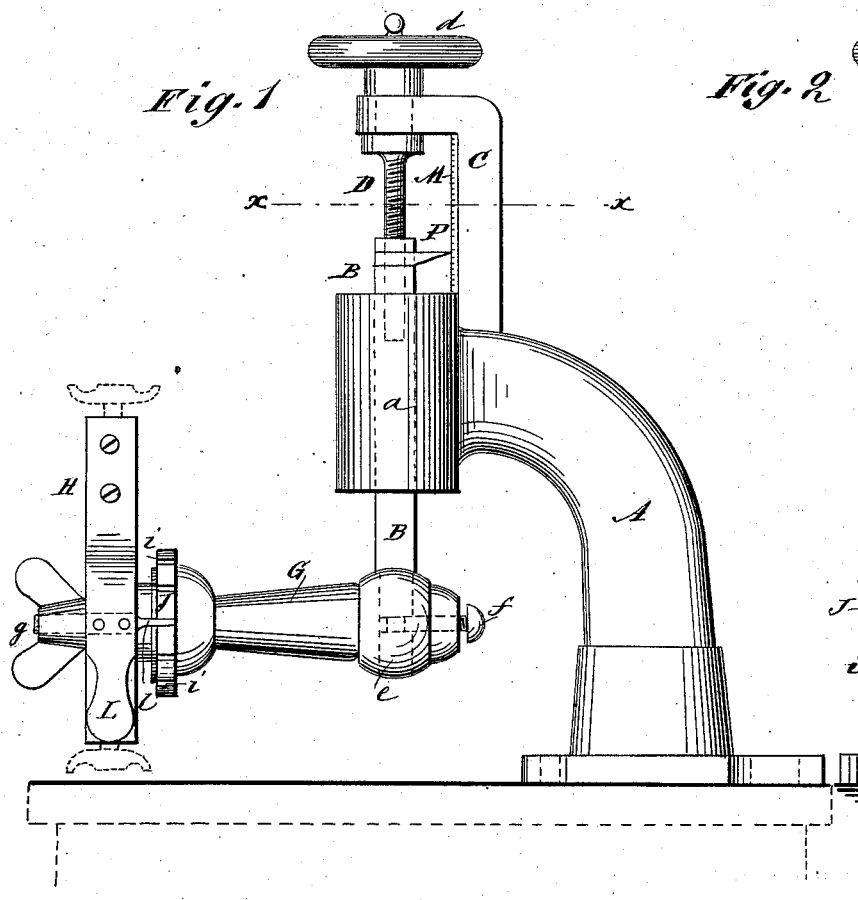


Fig. 2

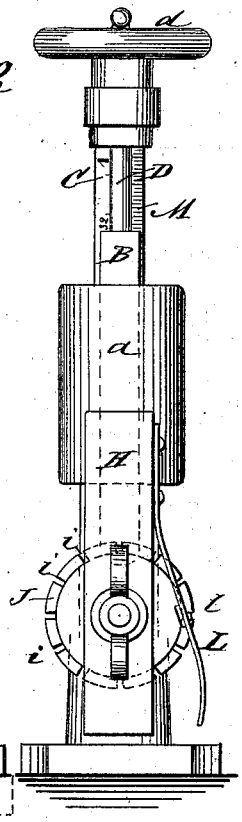


Fig. 3

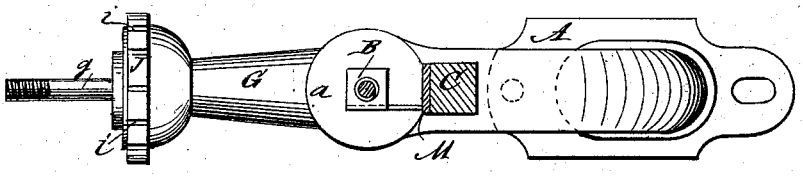
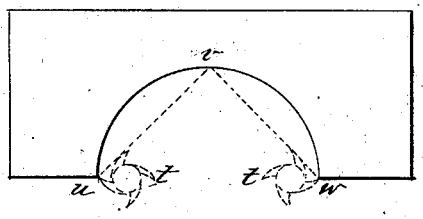


Fig. 4

WITNESSES:

C. Nereux

E. Sedgwick



INVENTOR:

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BY Munn & Co

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UNITED STATES PATENT OFFICE.

MATHEW RICE, OF AUGUSTA, GEORGIA.

IMPROVEMENT IN CARVING-MACHINES.

Specification forming part of Letters Patent No. **207,207**, dated August 20, 1878; application filed, July 10, 1878.

To all whom it may concern:

Be it known that I, MATHEW RICE, of Augusta, in the county of Richmond and State of Georgia, have invented new and useful Improvements in Attachments to Wood-Working Machines, of which the following is a specification:

This invention relates to a device which may be used in connection with machines for carving, dovetailing, molding, blind-slat mortising, and other descriptions of wood-working.

The invention consists in a novel construction, arrangement, and combination of a frame or standard, an adjustable sliding shaft, and a swinging arm, employed in connection with a tool-carrying device, whereby provision is made for adjusting the tool to different positions, according to the character of the work.

The accompanying drawing represents a device embodying my improvements, Figure 1 being a side view, Fig. 2 an end view, and Fig. 3 a horizontal section taken in the line *x x* of Fig. 1. Fig. 4 is a detail view, hereinafter referred to.

Similar letters of reference indicate corresponding parts.

A represents a frame or standard adapted to be attached to the bed of a lathe or other machine in any suitable manner. The upper portion of this standard is curved laterally, and terminates in a sleeve, *a*, in which works a shaft, B, arranged to slide vertically therein.

To the standard A is attached an arm, C, which extends upward, and is then bent laterally, and carries at its end a screw, D, provided with a wheel, *d*, for turning it. This screw D engages with an internal thread in the upper portion of the shaft B, so that by turning the screw in one direction or the other the shaft B is raised or lowered in the sleeve *a*, said shaft and sleeve being squared to prevent the shaft from turning.

The lower end of the shaft B is turned to a cylindrical form, and is provided with a peripherical groove, as represented in dotted lines in Fig. 1. To this cylindrical lower end is attached a horizontal arm, G, one end of which is provided with a socket, *e*, fitting over said cylindrical portion, and a set-screw, *f*, for engagement with the peripherical groove above referred to. This arm G is arranged to swing around the pivot formed by the cylindrical lower end of the shaft B, and by means of the set-screw *f* it may be held firmly in any position in which it may be placed. The outer end of the arm G is formed into a spindle or pivot, *g*, for the reception of a tool-holder of suitable description. The portion of the arm G immediately in rear of the pivot *g* is enlarged and formed into a circular flange or disk, J, on the periphery of which are notches *i*.

The tool-holder here shown represents a portion of a frame adapted to carrying tools for various kinds of wood-working, and arranged to turn on the pivot *g*, so that the tool may be inclined in different directions, or the holder may be reversed when provided with a tool at both ends. To this tool-holder H is attached a spring-pawl, consisting of a flat spring, L, provided with an arm, *l*. The spring has one end attached to the tool-holder, and the other end is formed into a thumb-piece for lifting it, and the arm *l* extends laterally from the length of the spring and engages with the notches *i*. By this means the tool-holder may be placed so as to incline the tool in different directions by disengaging the arm *l* from one notch *i*, then turning the holder to the desired position, and then engaging the arm with another notch. When so engaged the tool-holder is held firmly in whatever position it may be adjusted to.

The arm C, which carries the hand-screw D, is provided with a scale, M, and the shaft B is provided with an indicator, P, with its point in close proximity to the figures marked on said scale. By this means the operator is enabled to adjust the height of the tool-holder with exact nicety.

Among the advantages resulting from the use of my invention I mention one, which may be illustrated by reference to Fig. 4 of the drawing, and will suppose said figure to represent a piece of wood of oblong form, with the grain of the wood running longitudinally of the piece, and will also suppose the holder H to carry a cutting-tool at each end. In cutting a semicircular recess in such a piece of wood, the cutting-tool *t* (shown in dotted lines) will cut with the grain in the direction of the line *u v* and against the grain in the direction of the line *v w*. This should be avoided for

fear of splitting the wood, and my invention provides ample means for avoiding it, as follows: After cutting from *u* to *v* the shaft B is raised so as to withdraw the tool from the work. The pawl L is then disengaged from the notch *i* in the flange J, and the tool-holder is reversed so as to bring the opposite tool to the work, and this tool, cutting in the opposite direction, cuts from *w* to *v* until it reaches the point at which the first tool ceased cutting.

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

The swinging arm G, provided with a socket, *e*, and set-screw *f* at one end, and a spindle or pivot, *g*, and notched flange or disk J at the other end, in combination with the shaft B and a tool-holder or tool-carrying frame, substantially as and for the purpose herein described.

MATHEW RICE.

Witnesses:
T. M. PREVAL,
A. J. DAVIS.