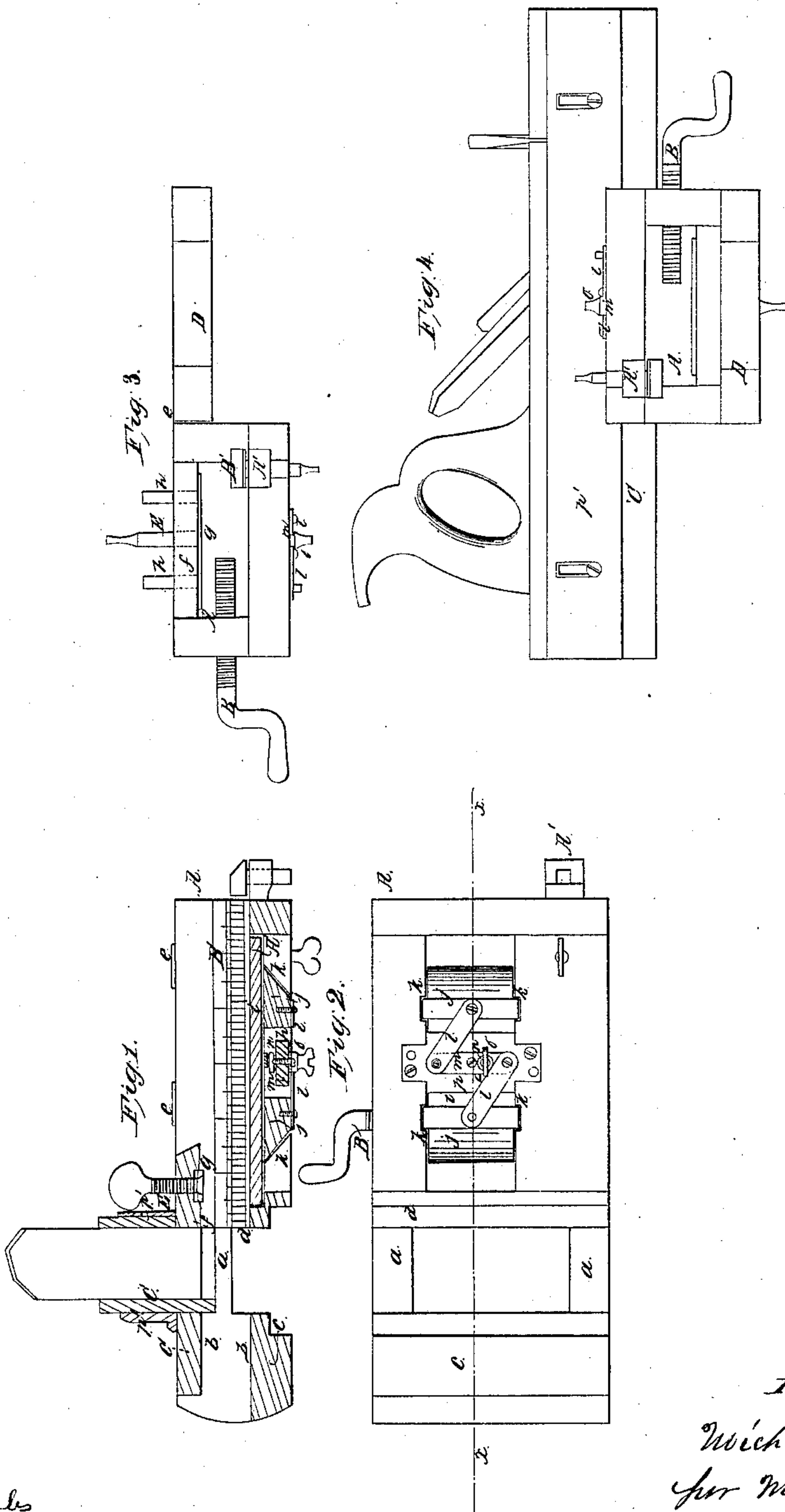


*M. Galvin,*

*Tenoning Machine.*

*N<sup>o</sup> 35,873.*

*Patented July 15, 1862.*



*Witnesses:*  
*Jobson*  
*W. Reed*

*Inventor:*  
*Michael Galvin*  
*for Munn & Co*  
*Attorneys*

# UNITED STATES PATENT OFFICE.

MICHAEL GALVIN, OF WILKES-BARRÉ, PENNSYLVANIA.

## IMPROVEMENT IN HAND TENONING-MACHINES.

Specification forming part of Letters Patent No. 35,873, dated July 15, 1862.

*To all whom it may concern:*

Be it known that I, MICHAEL GALVIN, of Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Tenoning-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my invention, taken on the line *x x*, Fig. 2; Fig. 2, an inverted plan of the same. Fig. 3 is an end view of the same. Fig. 4 is an end view of the same with the plane fitted in it.

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

This invention relates to an improved machine for cutting tenons by hand, and is designed chiefly for cutting tenons on door-rails and similar work.

The object of the invention is to obtain a simple and efficient device for the work-bench which will greatly facilitate the cutting of tenons by the manual process.

The invention is an improvement on a device for which Letters Patent were granted to me, bearing date March 18, 1862; and it consists in providing the device with a movable or adjustable bed so arranged that the tenon may, by a very simple adjustment, be cut centrally on the stuff or work, or at a greater or less distance at one side of the center, as may be desired.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a rectangular frame or box, which should be sufficiently wide to receive the widest "stuff" on which the tenons are to be cut. B is a screw inserted in one side of the box to clamp the stuff firmly therein. (See Figs. 3 and 4.) One end of this box A has two bars, *a a*, projecting parallelly and longitudinally from it, the ends of said bars having projections *b* at their upper and lower surfaces, to which cross-bars *c c* are attached, and which are parallel with the end of the box A, as shown in Fig. 2. These cross-bars *c c*, in connection with the end *d* of the box A, opposite to them, form guides for a plane, C. (Shown in Figs. 1 and 4.)

The box A is connected by hinges *e e* to a frame, D, which is permanently secured to the

work-bench at or near its front edge, and across the end *d* of the box A there is secured a bar, *f*, to which an adjustable pressure-bar, *g*, is fitted by guide or steady pins *h h*, said bar *g* having a set-screw, E, bearing against it, by turning which the bar *g* may be made to press down the work or stuff firmly on the bottom *i* of the box A. (See Figs. 1 and 3.)

The bottom *i* of the box A is not permanently secured in the latter, but is adjustable, and may be adjusted higher or lower by means of two transverse sliding bars, *j j*, which are fitted in oblique grooves *k k* in the framing of the box, and are moved obliquely up and down by means of two arms, *l l*, the outer ends of which are attached to the bottoms of the sliding bars *j j*, and the inner ends to the ends of a lever, *m*, which is provided with a screw, *n*, and thumb-nut *o*, the screw *n* passing through a curved slot in a transverse bar, *p*, of the framing of the box A, as shown clearly in Fig. 2. Thus it will be seen that by adjusting the lever *m* the oblique sliding bars *j j* may be thrown more or less inward or outward, and the bottom *i* consequently adjusted higher or lower in the box A, as may be desired.

The tenons are cut by adjusting the stuff in the box A with one end in contact with the outer cross-bars, *c c*, and then firmly clamping the stuff in the box by screwing up the screw B and adjusting the bar *g* firmly upon it. The tenon is cut by planing the stuff transversely, the plane being shoved back and forth between one of the cross-bars *c* and the end *d* of the box A, the depth of the cut being regulated by adjusting side pieces or stops, *p p*, at each side of the plane C, and which rest or bear on the cross-bars *c* and the end of the box. When the stuff is cut at one side, the box A is inverted and the opposite side cut, the plane C being fitted between the cross-bar *c*, at the opposite side of the bars *a a*, and the corresponding end of box A.

When the tenon is to be cut centrally on the stuff, the latter is adjusted so that its center will be in line with the centers of the bars *a a*, and when the tenon is required at one side of the center of the stuff the bottom *i* is adjusted accordingly, the thickness of the tenon being regulated by adjusting the side pieces or stops, *p' p'*, of the plane C.

The box A is provided with a sliding scale, A', and also with a stationary scale, B'.

I do not claim the reversible box A, nor the



method of clamping the stuff therein and cutting the tenons, for that is old and may be seen in the device formerly patented by me, as previously alluded to; but

I do claim as new and desire to secure by Letters Patent—

The adjustable bottom *i*, arranged to be op-

erated substantially as shown, when used in combination with the box A and plane C, all arranged as and for the purpose specified.

MICHAEL GALVIN.

Witnesses:

C. BENNETT,  
IRA MAREY.