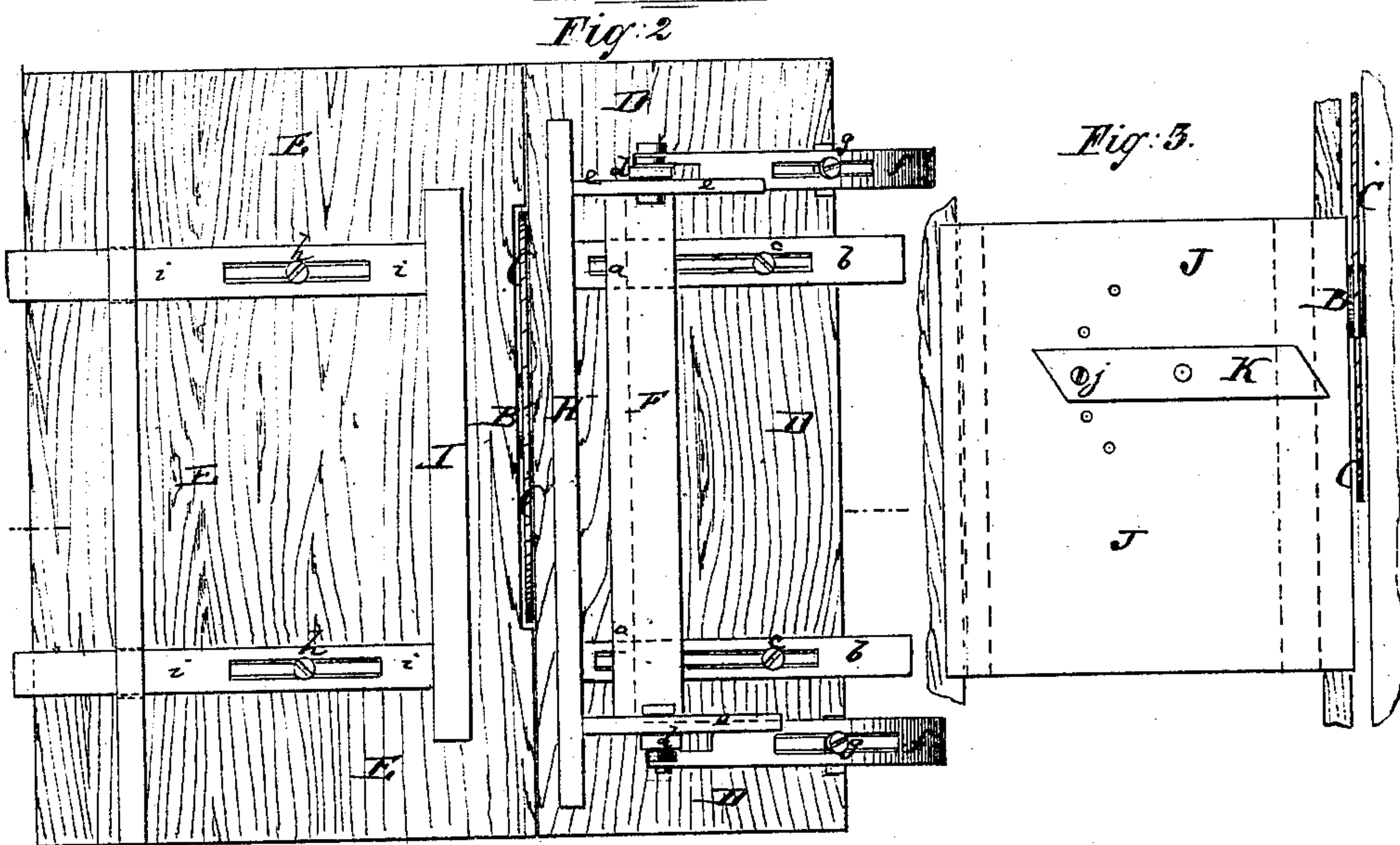
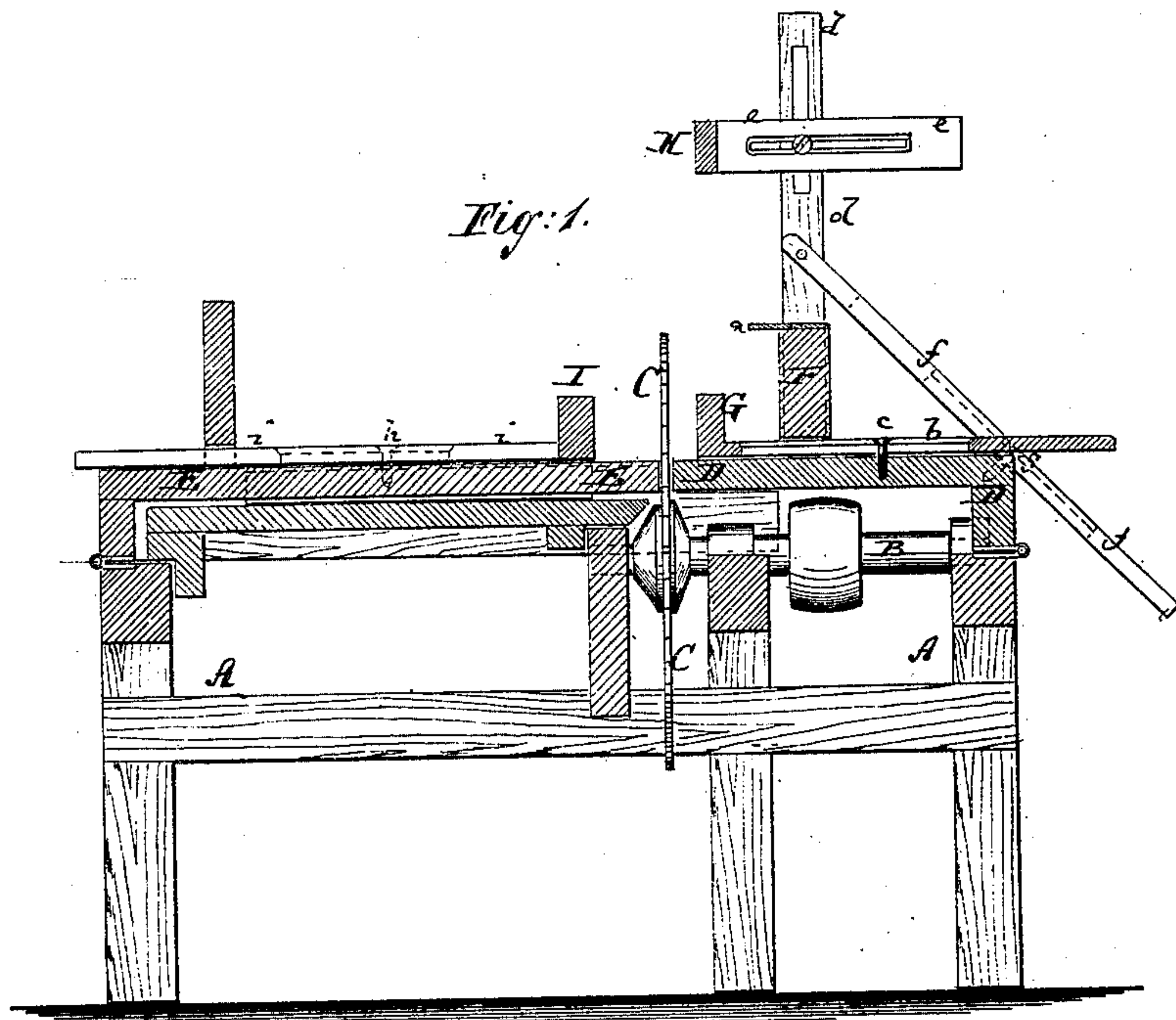


*M. S. Bourland,
Tenoning Mach.*

No. 113731.

Patented Apr. 18. 1871.



Witnesses:

*G. Praetig.
L. S. Mabe*

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United States Patent Office.

MELTON S. BOURLAND, OF BUENA VISTA, TEXAS.

Letters Patent No. 113,731, dated April 18, 1871.

IMPROVEMENT IN TENONING-MACHINES.

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, MELTON S. BOURLAND, of Buena Vista, in the county of Shelby and State of Texas, have invented a new and improved Tenoning-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a vertical transverse section of my improved tenoning-machine.

Figure 2 is a plan or top view of the same.

Figure 3 is a detail plan view of an attachment to the machine.

Similar letters of reference indicate corresponding parts.

This invention relates to improvement in tenoning-machines, and consists in the arrangement of certain parts, as hereinafter described, and as specified in the claim.

A in the drawing represents the frame of my improved tenoning-machine. It is made of wood or other material of such suitable size and form as to properly support and hold the gauges, shafts, and other devices which constitute the machine.

B is the said shaft or mandrel hung in the frame A in a horizontal position, and rotated by suitable mechanism.

Upon the shaft B is mounted a circular-saw, C, of suitable diameter. Two or more saws may be used on one machine if desired.

The table or top plate of the machine is formed by two pieces, D and E, hinged to the frame A on both sides of the saw, and forming between their adjoining edges the slot through which the saw-blade projects above the table.

To the surface of the plate D is secured a stationary, and, if desired, adjustable transverse gauge, F, which has a forward projecting rib or flange, *a*, as shown.

G is another transverse gauge, secured upon the plate D parallel with the saw-blade.

It is secured to slotted arms *b b*, which are held on to the table by means of screws *c*. The gauge G can thus be readily adjusted any distance from the saw.

To the ends of the gauge F, or to ears projecting from the plate D, are pivoted vertical posts or bars *d d*, to the upper parts of which are pivoted slotted horizontal arms *e*, that hold an upper transverse gauge, H, above the gauge G, as shown.

Slotted inclined braces *f f*, projecting backward

from the post *d*, and connected with the table D by screws *g*, serve to steady and lock the upper gauge in any desired position. The posts *d* may also be slotted to permit the vertical adjustment of the gauge H.

For cutting the long sides of tenons—*i. e.*, for ripping the boards, rails, or posts—the same are placed vertically against the faces of the gauges G and H, and are then moved toward the saw, which will cut the same at the proper distance from the gauges. The length of the cut is regulated by the height of the saw above the table or above a plate placed thereon.

Upon the plate E is also arranged a transverse gauge, I, which is held by screws *h*, that pass through slotted arms *i*. The gauge I serves to receive and guide the end of the board or rail while the same is being cut to form the shoulder at the end of the tenon. For this purpose the wood is placed horizontally with the cut end against the gauge F, so that the flange *a* will enter the incision made by the saw, the said flange being on a level with the upper edge of the saw.

The wood rests on the gauges G and I, that are less high than F. When the board or rail is fed toward the saw the requisite incision will be made for removing the piece which leaves the tenon.

If the gauge H projects forward or backward from the face of G, the saw may be used for pointing fence-posts, &c. The saw may, in fact, be used for ripping purposes of all kinds.

By swinging back the plates D and E room is made for admitting another plate, J, shown in fig. 3.

To the surface of the plate J is pivoted a guide, K, which can be locked by a pin, *j*, in any desired position, to hold boards, &c., obliquely against the saw for cutting their ends at any desired angle.

Having thus described my invention,

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

1. The improved tenoning-machine, consisting of the saw C, gauges G and H, the gauges I and F, and flange *a*, all arranged and connected with the hinged plates D and E, as shown and described.

2. The gauge I, combined with the gauge F, flange *a*, and saw C, for the purpose of operating substantially as herein shown and described.

MELTON S. BOURLAND.

Witnesses:

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