

C. H. RADCLIFF.
Tenoning-Machines.

No. 155,973.

Patented Oct. 13, 1874.

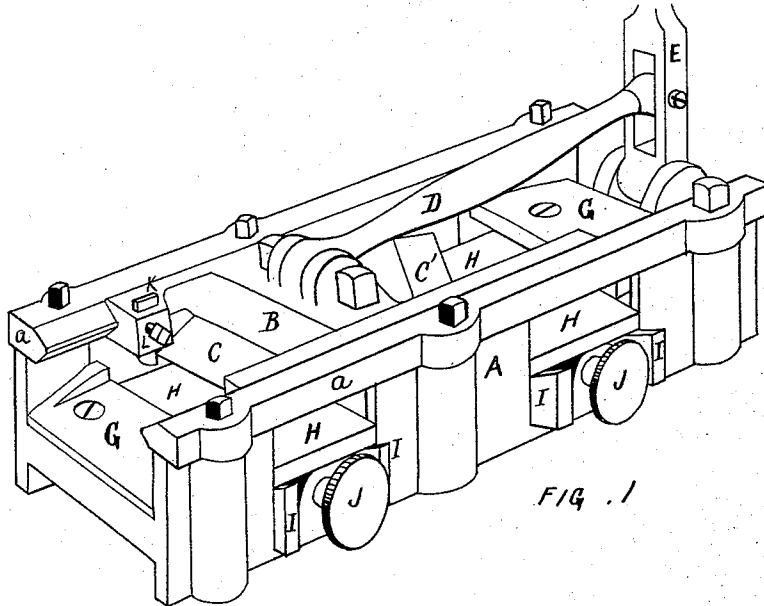


FIG. 1

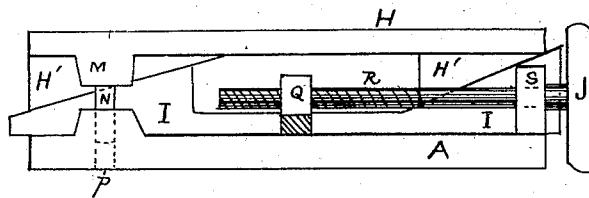


FIG. 2

Witnesses:

Charles Letts
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Inventor:

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Att'y.

UNITED STATES PATENT OFFICE.

CHARLES H. RADCLIFF, OF ST. JOHN, CANADA.

IMPROVEMENT IN TENONING-MACHINES.

Specification forming part of Letters Patent No. **155,973**, dated October 13, 1874; application filed July 24, 1874.

To all whom it may concern :

Be it known that I, CHARLES H. RADCLIFF, of St. John, in the county of St. John, in the province of New Brunswick, Canada, have invented a certain new and useful Improvement in Tenoning-Machines, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is an isometrical perspective view, showing my improvement; and Fig. 2, a vertical longitudinal section of the adjusting mechanism.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates more especially to that class of tenoning-machines which are adapted to both light and heavy work; and consists in a novel construction and arrangement of the parts, as hereinafter fully set forth and claimed, by which a more simple, durable, and effective device of this character is produced than is now in ordinary use.

In Fig. 1, A is the body or frame-work of the machine; B, the knife-stock; E, the lever; G G, the stops; and H H, the adjustable supporting-beds. The lever E is for operating the machine, and is journaled at its lower end to rock in the frame A, being connected with the stock B by the pitman or rod D. The stock is constructed to slide in the V-shaped ways or runlets *a a*, and carries the horizontal knives C C', which are arranged diagonally, or in such a manner as to act with a shear or gaining cut. Each of the knives C C' is provided with a "leader" or vertical knife, secured in the same stock, and so disposed as to act slightly in advance of the horizontal knife, the leader for the knife C' not being shown. Arranged laterally in the frame A, and immediately beneath the knife C, there is an adjustable supporting-bed, H H, on which the timber or spoke to be operated upon rests while the tenon is being cut.

The method by which the bed is rendered adjustable is best seen in Fig. 2, in which A

is the bottom of the machine, and H the supporting-bed.

A slide, I I, having two wedge-shaped lifts, one at either end, and a vertical central stud, Q, is disposed beneath the bed, as shown. The screw-shaft R, having at its outer end the rosette or wheel J, is fitted to work in the stud Q, and also to turn loosely in, without advancing through, the projection S, which is a part of the bottom A. The under side of the bed H is provided with the projections H' H', the lower surfaces of which are inclined to correspond with the angle of the upper surfaces of the lifts on the slide I I. There is also a projection, M, on the under side of the bed H for supporting the dowel or pin N, which works vertically in a hole, P, drilled in the bottom A. There is also an adjustable supporting-bed of corresponding construction beneath the knife C'.

It will be seen that when the wheel J is turned to the right, the shaft R being prevented from moving longitudinally in the projection S, the screw will act upon the stud Q to withdraw the slide I I toward said wheel, thus permitting the bed to fall, and that when the wheel is turned to the left, the lifts of the slide I I will be forced under the inclines H' H', raising the bed H.

The office of the dowel-pin N is to prevent the bed from receiving a longitudinal movement by the action of the shaft R.

From the foregoing the nature and operation of my invention will be readily obvious to all conversant with such matters.

The timber or spoke to be tenoned is inserted in the machine laterally, being supported by the bed H. The lever E is then operated by moving it toward the knife C, causing the stock B, with its knives, to advance along the ways *a a*, the leader or vertical knife K coming first into action and bisecting the stick or spoke to the depth of the recess desired in cutting the shoulder of the tenon, the knife C removing the chip so cut. The movement of the lever is then reversed, and the wheel J turned to raise the bed H a proper distance, preparatory to repeating the process, if necessary.

The knife C is used in a corresponding manner, and may be employed at the same time

with the knife C' to utilize the return stroke of the lever.

The stops G G are to resist the thrust of the knives, and to prevent the timber or spoke being forced out of place during the process of tenoning.

Having thus described my invention, what I claim is—

In a tenoning-machine, the sliding stock B,

provided with the knives C C' and K, arranged and combined to operate with the stop G and adjustable supporting-bed H H, substantially as and for the purpose specified.

CHARLES H. RADCLIFF.

Witnesses:

JAMES BARRY,
CHARLES DOHERTY.