(No Model.)

C. J. ZIMMERMAN.

MARKING ATTACHMENT FOR TENONING MACHINES.

No. 483,887. Patented Oct. 4, 1892.

FIG. 1.

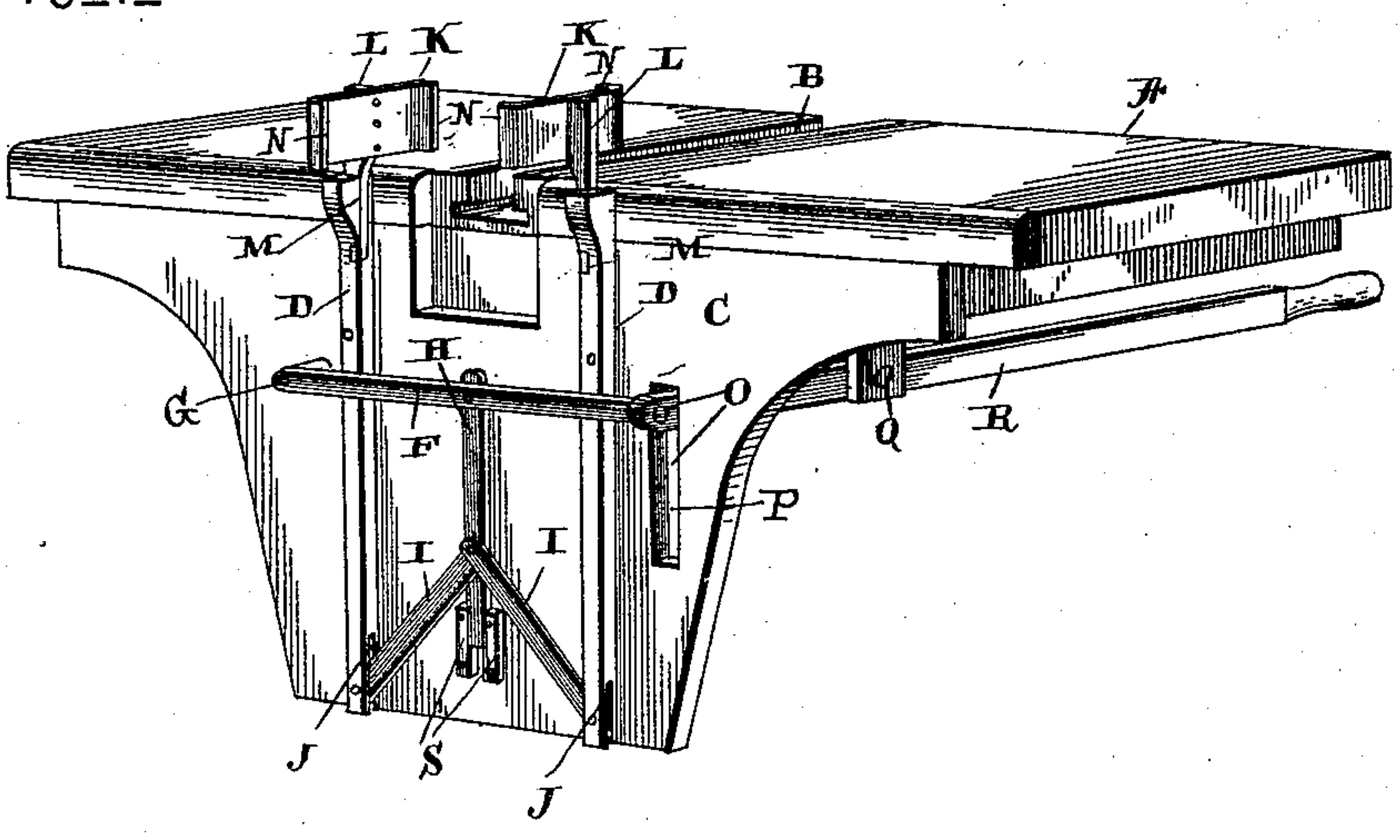
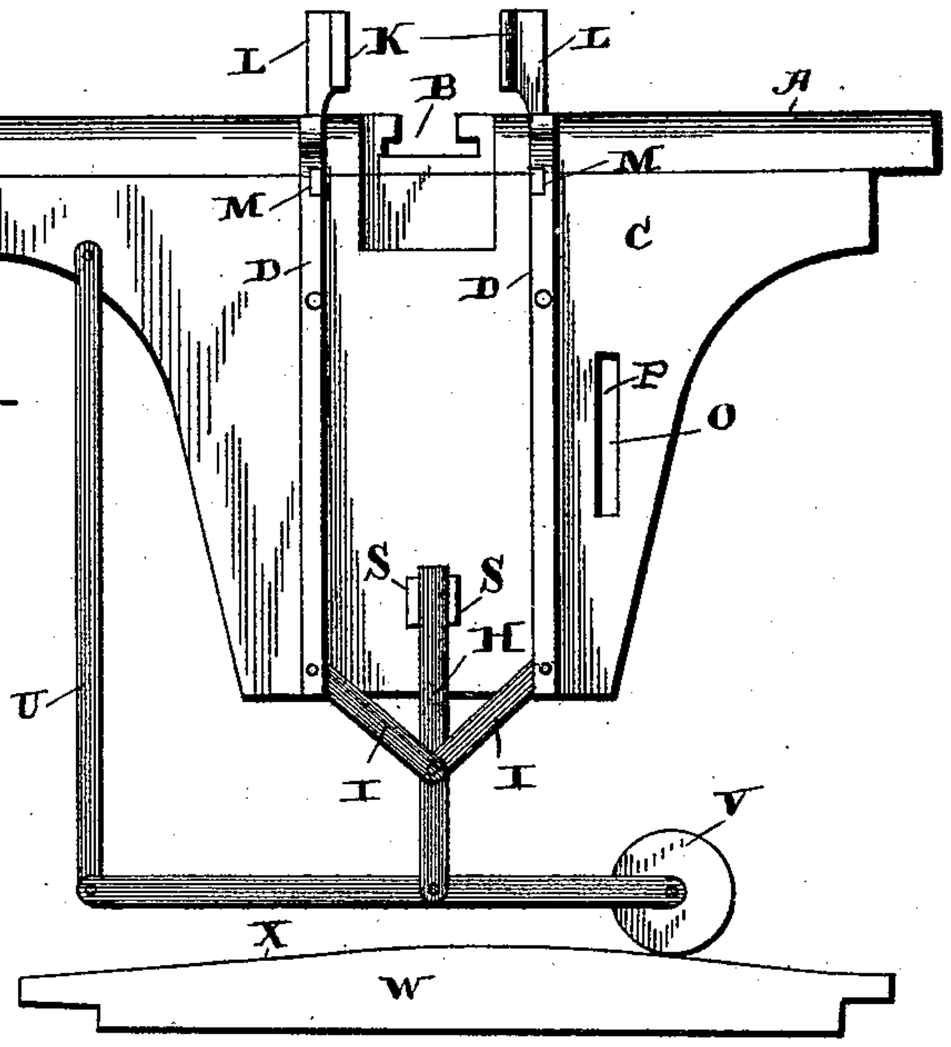


FIG. 2.



WITNESSES.

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MARKING ATTACHMENT FOR TENONING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 483,887, dated October 4, 1892.

Application filed November 30, 1891. Serial No. 413,565. (No model.)

To all whom it may concern:

Be it known that I, CYRUS J. ZIMMERMAN, of Manor Station, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Marking Attachments for Tenoning-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to a marking attachment for tenoning-machines; and it consists in the construction, arrangement, and combination of parts, which will be fully described hereinafter, and particularly referred to in the claims.

The object of my invention is to provide a mechanism which is readily attached to and removed from the movable plate of a tenoning-machine, which will mark one end of the sash-stile placed in the machine to indicate where the mortise is to be cut while the tenon is being cut upon the other end, thus saving the usual time and labor required to do this and reducing the cost of the stile very materially.

In the drawings, Figure 1 is a perspective view of a marking mechanism, showing it attached to the movable plate of a tenoning-machine. Fig. 2 is a view showing a device for automatically operating the marking jaws.

A indicates a movable plate which is placed upon all tenoning-machines and which plate is secured to the carriage of the machine in a manner to allow of its being adjusted laterally. This forms no part of my invention and need not be further referred to in the description as to its particular construction, except as it relates specifically to my attachment.

My attachment comprises a vertical plate C, which is secured to the movable plate A at the side farthest from the cutter-head of the tenoning-machine and is provided with an opening corresponding with the transverse slot B, which is made in the said plate A to receive a window-stile or other piece of material which is to be mortised and tenoned. Pivoted between their ends to the outer side of this plate C and at equal distances from opposite sides of the slot B are the two vertical levers D, which have their upper ends provided with vertical sockets M, formed in the inner sides thereof, preferably as shown. Placed in these sockets M are two bars L, which carry on the inner sides of their upper ends the jaws or markers K, which latter have their edges turned inward, as shown at N, and which inturned edges mark one end of the sash-stile while the other is being tenoned, as will be more fully described presently. These bars, which carry the markers, are placed in the sockets, so that they can be readily removed therefrom and others inserted in their stead, which carry jaws or markers of different sizes to suit the size of stile that is being tenoned and mortised, as will be readily understood.

Pivoted at their outer ends in vertical slots J, made in the lower ends of the levers D, are the two links or plates I, which have their opposite and upper ends pivotally connected together in any suitable manner, as shown. A lever or arm F is pivoted at the point G outside of one of the levers D and has its opposite end passed through an opening O, made in the outer end of an operating-lever R, which is pivoted between its ends to a depending bracket Q at the under side of the horizontal portion of the attachment. A vertical bar or connection H has its upper end connected to the arm F between its ends and between the two levers D and its lower end pivotally connected to the inner and upper ends of the links I, preferably by the same pivotal bolt or pin that pivotally connects the ends of the links themselves. The lower end of this bar H preferably moves in a guideway S, which causes both links I to be depressed evenly and alike.

Made in the vertical plate C is a vertical opening P, through which the end of the operating-lever extends for connection with the adjacent end of the bar F. While I here show the operating-lever provided with an opening and the end of the bar F extending thereinto, it will readily be understood that this means of connection can be varied at will without departing from the spirit of my invention.

By means of a mechanism of the above construction when the sash-stile is placed in the

groove B to have its inner end tenoned and as the operator is moving the carriage forward for that purpose to the cutter-heads he at the same time raises on the inner end of the operating-lever R, which depresses the bars F H and the links I, thus forcing the lower ends of the levers D outward and their upper ends inward and the bent edges of the markers K into the opposite end of the stile sufficiently to mark where the mortise is to be cut.

The attachment is provided with clamps or clamped to a movable plate of the tenoning-machine in such a manner that it can be readily attached to and detached therefrom at will without any trouble and with the expense of very little time.

If desired, the operating-handle can be done away with by connecting to the mechanism a vertical bar U, which carries on its lower end a roller V, which roller engages a guideway W, which latter is provided with a raised portion X. In this manner as the carriage of the machine is moved forward the roller engages the raised portion X of the guideway W, which forces the bar U up and the lower ends of the levers D apart, thus forcing the markers at the upper ends of the levers against the sash-stile for marking the same. As the normal position of the levers D is with their lower ends together, the sash-stile can be placed in position upon the machine without any operation on the part of the operator, and by means of the construction just described the marking operation is entirely automatic. The movable plate A being capable of adjustment upon the tenoning-machine, it can be adjusted back and forth, so as to mark upon short or long stiles and made to mark at any desired point, as will be readily understood.

The utility of this device will be appreciated when it is stated that by means of this attachment the marking of the stiles or other material for mortise is done automatically, while heretofore it has required two men to mark them as fast as one man would cut the tenons on the opposite end.

The attachment is cheap and simple and not liable to get out of order.

Having thus described my invention, I claim—

1. An attachment for tenoning-machines, comprising two levers pivoted between their ends and carrying markers at their upper ends, links having one end connected to the lower ends of the said levers, the upper ends of the links being pivoted together, a guideway for the connected ends of the links, for the purpose specified, and an operating means connected with the said links at their connected ends, substantially as set forth.

2. An attachment for tenoning-machines, comprising levers pivoted between their ends and carrying markers at their upper ends, links connected to the lower ends of said levers, a sliding bar to which the opposite ends of the links are connected, a guide for the said bar, and an operating means connected with the said bar, substantially as specified.

3. The combination, with the movable plate of a tenoning-machine, of levers carrying markers, a stationary camway, an operating-lever engaging the camway, and connections between the operating-lever and the said marking-levers, substantially as described.

4. An attachment for tenoning-machines, comprising levers pivoted between their ends carrying markers at their upper ends, links connected to the lower ends of said levers and connected together at their opposite ends, and an operating-lever pivoted at one end and connected with the connected ends of the links between its ends for actuating the operating-lever, substantially as specified.

5. In an attachment for tenoning-machines, levers having sockets, bars carrying markers adapted to be placed in the said sockets, links connecting the opposite ends of the said levers, an operating-lever, and a connection between the operating-lever and the said links, all combined to operate in the manner shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

CYRUS J. ZIMMERMAN.

Witnesses:

A. E. TRUXAL,

J. C. MCCLELLAND.