J. A. Peabody,

Mortising Window Blinds.

No. 13,271. Patented July 17, 1855.

Fig. 4

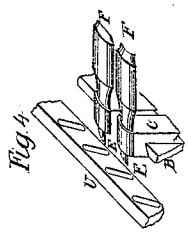


Fig. 3

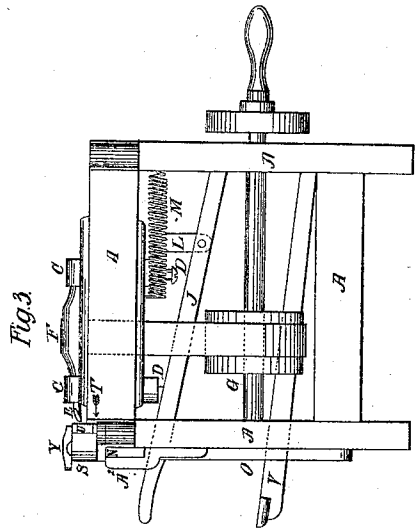


Fig. 1

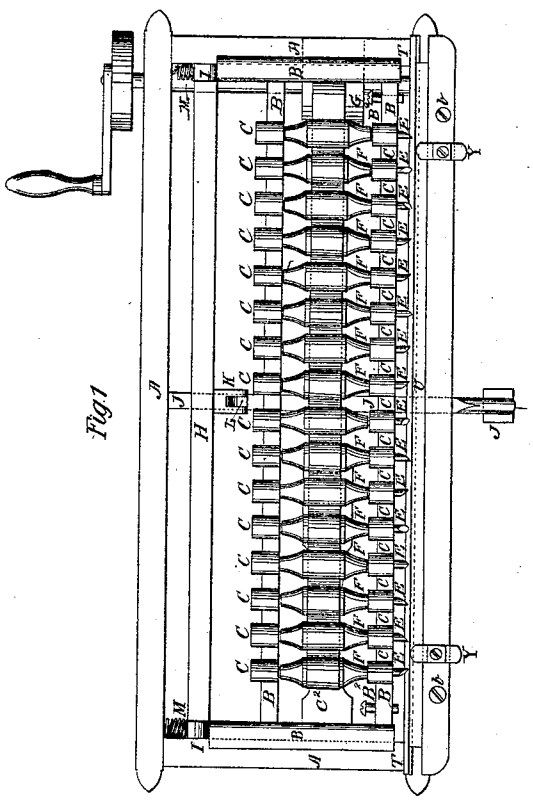
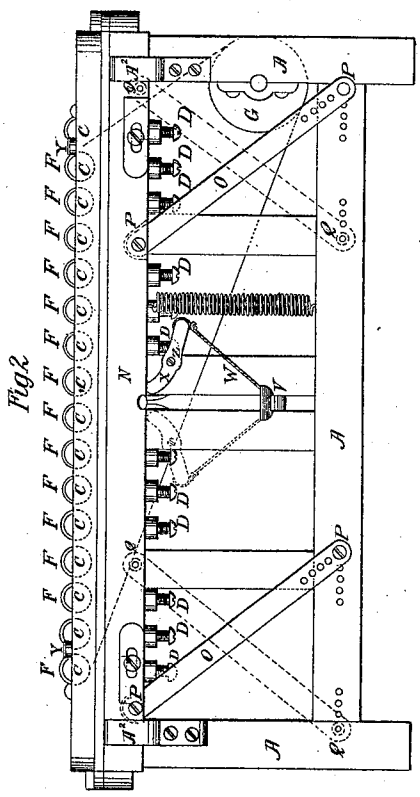


Fig. 2



UNITED STATES PATENT OFFICE.

JOS. A. PEABODY, OF LOWELL, MASSACHUSETTS.

MACHINE FOR MORTISING WINDOW-BLINDS.

Specification of Letters Patent No. 13,271, dated July 17, 1855.

To all whom it may concern:

Be it known that I, JOSEPH A. PEABODY, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Machine for Mortising Window-Blinds; and I hereby declare and affirm that the following specification, in connection with the accompanying drawings and references thereon, constitutes a lucid, clear, and faithful description of the same.

In referring to the said drawings, Figure 1, denotes a plan or top view. Fig. 2, a front side elevation of the same. Fig. 3, an end elevation of it. Fig. 4, is a perspective view of two of the revolving chisels and a portion of the carriage in which they are placed, and also a part of a blind stile, showing how the chisel forms the mortise by revolving.

The nature of my invention consists of the principles embodied in the following described machine for making all the angular mortises, in stiles to window blinds, to receive the slats at one operation, by providing the machine with a swinging bar to which the stile is properly secured, and a horizontal sliding carriage to which a series of my revolving mortising chisels, sufficient to mortise the whole length of the stile, are adjusted, and driven or revolved by power, this carriage and series of chisels being slid forward by means of a lever, until they enter the stile the required depth of the mortise which requires two or three operations, or forward movements. Then the swinging carriage carrying the stile is moved or swung upward or downward so as to give the required angle and length to the mortises by two or three operations, as aforesaid all as hereafter described.

To enable others skilled in the art to which my invention appertains to construct and carry out the same, I will describe it as follows. I construct a frame of wood seen at A, A. To this frame is fitted the iron sliding carriage seen at B. To this carriage I fit the adjustable metallic stands seen at C, C, which can be moved at a greater or less distance from each other, to regulate the required distances between the mortises, and which are held in their working positions by the set screw D. It will be seen that the changing the distances between the stands C, C, will require the driving belt to be correspondingly lengthened or shortened, which is done by the binder seen at C^2. To each pair of the stands C, C, I fit a revolving mortising chisel seen at E on each of which is secured a pulley seen at F, by which they, and the chisels which they carry are all driven or revolved by one belt from the driving pulley, which may be seen at G.

The chisels are made of round pieces of steel, the diameter of which is equal to the width of the mortise, these chisels being cut or filed off beveling on their front ends as seen in the drawing. This shape of the chisel gives them a cutting edge which displaces and removes the wood from the stile as the chisels are revolved either way, and brought in contact with the stiles to be mortised. Back of the sliding carriage B, I fit an operating bar seen at H so that it can be sufficiently turned as to bring the two projections seen at I against the back part of the sliding carriage, pressing it forward sufficiently to cause the revolving chisels to enter the blind stile the required depth of the mortise. Under the operating bar H, I place a lever J, having its fulcrum in the back part of the frame A, A, and which is connected to the horizontal projection K, on the bar H by means of the connecting rod L. This lever and parts which it operates is designed to be worked downward by the hand of the person operating my machine, but may be operated otherwise. The spiral springs M, M, connecting the carriage B, to the frame draw this carriage back so as to carry the chisels out of the stiles and at the same time raising the lever J. At B^2, B^2, can be seen the adjusting set screws, to gage the movement of the carriage B, and consequently the depth of the mortises in the stiles, as will be readily understood.

To the front part of my machine I attach a swinging bar N, which is kept in position sidewise by the stands A^2, A^2 and which swings up and down on the arms O, each of them having several holes formed in them to adjust the movements of the bar B, so as to give any required angle to the mortises, by changing these turning points at P. The drawings indicate the positions for the arms O, for mortising the righthand stiles of the window blind. For mortising the lefthand stiles each of the arms O, is changed so that their turning points will be at Q as seen in red lines. This will readily be seen to be necessary by those skilled in the art.

To the top of the swinging bar N I fit an adjustable guide seen at S. This is to

give the desired space to receive the blind stile U, between the edge of it and the edge T, which is formed on the top of the bar N. The guide S is made adjustable by the transverse slots formed near each end of it, and screws *b*, which pass through these slots so that the space can be adjusted to receive the various thicknesses of stiles to be mortised. The stiles are held down in position by the buttons Y, Y.

To operate or move the platform N I construct a lever seen at V, to be operated downward by foot or otherwise. To this lever I attach a rod or cord seen at W, which connects it with the lower end of the arm X which is reversible as seen in red lines for moving the bar N to mortise lefthand stiles, this arm having its turning point at Z, and the upper end of it comes in contact with the under side of the bar N, and raises it by the downward pressure of the lever V, the weight of the bar of course keeping it down upon the arm X and lever V.

To operate my machine we will place a window blind stile on the bar N, and confine it down by the buttons Y, Y; then place the hand on the lever J and press it down sufficiently to cause the series of revolving chisels E, to enter the stile partially the required depth of the mortise. Then place the foot upon the lever V and press it down sufficiently for the chisels to traverse angularly the length of the mortises, which angular or rhomboidal movement is caused by swinging of the bar N, the chisels revolving at great speed, say six or eight thousand revolutions per minute, will cut away the wood and remove it entirely from end to end of the mortise which is being formed in the stile. Then press the lever J downward a trifle farther and move the swinging bar N so that the chisels E will again traverse each of the mortises from end to end, cutting them a little deeper, and so on, for two or three times, and the whole series of mortises are neatly formed in the stile, and the chips entirely removed from them at one single operation. After mortising the desired number of righthand stiles, the movements of the bar N can be changed so as to mortise lefthand stiles by changing the arms O, O, and X, to the positions as seen in red lines. To change the angle of the mortises, the turning points, or screws P, P, can be changed so as to give any angle desired. To sharpen the chisels E, all that is necessary is to file or grind off the angle of them as seen in the drawing, which can be performed by any ordinary mechanic. This is a great improvement in chisels from its simplicity of construction and use, which will be seen by persons skilled in the art.

What I claim as my invention and desire to secure by Letters Patent is,—

1. The bar or carriage N, which carries the blind stile, and which is moved by lever or otherwise, and the changeable and adjustable arms O, O, or their mechanical equivalents, one end of each of them being connected to the bar N, while their opposite ends are so connected (by pins or otherwise) to the machine, that these arms are changeable, and adjustable so as to impart any desired angle to the mortises, essentially in the manner and for the purposes set forth.

2. I also claim the carriage B or its equivalent which may be vibrated or moved by lever or otherwise, for carrying a series of revolving mortising chisels, this carriage and the chisels attached to it, being so moved that the chisels will form or cut all the angular mortises in one window blind stile at one operation, essentially in the manner and for the purposes set forth.

JOSEPH A. PEABODY.

Witnesses:
J. M. Peabody,
E. W. Scott.