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UNITED STATES PATENT OFFICE.

JERUB. A. FAY, OF KEENE, NEW HAMPSHIRE.

MACHINE FOR MORTISING TIMBER.

Specification of Letters Patent No. 2,425, dated January 17, 1842.

To all whom it may concern:

Be it known that I, JERUB. A. FAY, of Keene, in the county of Cheshire and State of New Hampshire, have invented certain
5 Improvements in Machines for Mortising Timber; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing, I have, in
10 Figure 1, given a representation of a side elevation of my machine, exhibiting those parts thereof which constitute my particular improvements.

The first of these improvements consists
15 in the manner in which I have arranged and combined the spring latch by which the chisel shaft is turned round, and is held in place, so as to reverse the chisel. A, is the shaft, or socket, into the lower end of
20 which the chisel is to be inserted; the upper end of this shaft is received, and swivels, within the jointed piece B, which is attached by a bolt, or joint pin, *a*, to the upper lever C. On each side of the piece B,
25 there is a cavity, or hollow *a'*, which constitutes the catch of the latch *b*, which latch embraces the shaft A, is connected with it by a joint pin, and is forced upward by the spring *c*, attached to the latch, and bearing
30 against the shaft; the latch falling into the cavity *a'*, on either side of the piece B, will retain the chisel in place, and allow of its ready reversal. The lever C, is brought down by the
35 bridle D; said lever being received at its back end within a notch, or mortise, in the back standard E, of the frame of the machine, where, not having any joint pin, it has a sliding motion endwise, the bearing on
40 its lower side forming its fulcrum; there may, if preferred, be a friction roller placed beneath it, but this has not, in practice, been found necessary. Fig. 2, is an end view
45 of the lever C, and of the jointed piece B, on an enlarged scale, the shaft A, passing up through a socket *h*, within which it swivels, being secured at top by a nut, or collet, *i*. This manner of attaching the latch and of
50 arranging the parts with which it is connected is at once simple and peculiarly convenient.

My second improvement consists in the manner in which I have arranged and combined the respective parts by means of which
55 the shaft A, is moved in and out, in a vertical direction, so as to carry the chisel to the

exact point where it is required. F, F, are two sliding bolts, which slide freely through the standards E, E', of the frame of the machine. Through the heads *d*, *d*, of these
60 sliding bolts there are holes into which fits the shaft A, and within which it slides up and down closely, but freely. The two bolts F, F, are connected together by means of the cast-iron frame G, G, or by any anal-
65 ogous contrivance, and being made fast to this frame they will both be made to slide back and forth together. H, is a screw shaft, which is tapped into a nut at *e*, on the standard E. This shaft swivels in the
70 frame G, and when it is turned by means of the hand wheel I, the bolts F, F, will be moved in, or out, simultaneously, and carry with them the shaft A, to the desired point. Should the shaft A, work too loosely in the
75 holes in the heads *d*, *d*, of the bolts, they may be tightened by turning said bolts round, and fastening them by means of the screws *k*, *k*.

My third improvement consists in the manner in which I form the intermediate
80 lever J, by making it oblique on its lower side, and combine the bridle D, with the upper lever C, and with said middle, or intermediate, lever; by means of which form, arrangement and combination, the power
85 to be applied to the chisel, and its range, are adjusted more readily than in the ordinary modes of combining such bridle. The part C', of the upper lever C, I usually make of cast-iron, while the part C, is of wood. The
90 intermediate lever J, may be wholly of cast-iron; on the upper side of C', and on the lower side of the lever J, I form several notches, or indentations, *j*, *j*, into which the
95 ends of the bridle D, fall; when it is desirable to shift the points of bearing of this bridle, it may be done instantaneously without the removal, or the insertion, of a joint pin at either end; and this, in combination
100 with the oblique form given to the under side of the intermediate lever J, not only shifts the distance of the points of bearing, but also varies the extent of the play of the chisel. K, is the lower lever, which may be
105 worked by the foot, and which may be checked, and regulated by a pin *f*, or by two such pins, one above and the other below the lever, which may be shifted to either of the holes *g*, *g*, in the ordinary way. The
110 rest L, for holding the stuff to be mortised,

as well as some other parts of the apparatus, are similar to such as have been before employed in other mortising machines.

Having thus, fully described the nature of my improvements, and shown the manner in which I carry the same into operation, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The particular manner in which I have arranged, and combined the parts concerned in the swiveling and latching of the shaft containing the chisels, said latch working on a joint pin in said shaft, and catching in the two indentations formed on the two sides of the jointed piece B, by which the shaft is suspended.

2. I claim the manner in which I have arranged, connected, and combined, the sliding bolts F, F, the screw shaft H, and the chisel shaft A; by means of which combination and arrangement, the chisel shaft is regulated, and the chisel brought correctly

and readily to the proper point on the stuff to be mortised; and in combination therewith I claim the allowing of the upper lever C, to have end play on its fulcrum, the whole operating in the manner described.

3. I claim the manner of combining the upper and the intermediate levers, and the bridle by which they are connected, so as instantaneously to regulate the depths to which the chisel shall descend, by the oblique form of the under side of the lever J, and the amount of power to be applied to them, by the shifting of the bridle, without the necessity of withdrawing and inserting a joint pin; and this I claim only in combination with the oblique form given to the intermediate lever, in the manner, and for the purpose, herein set forth.

J. A. FAY.

Witnesses:

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