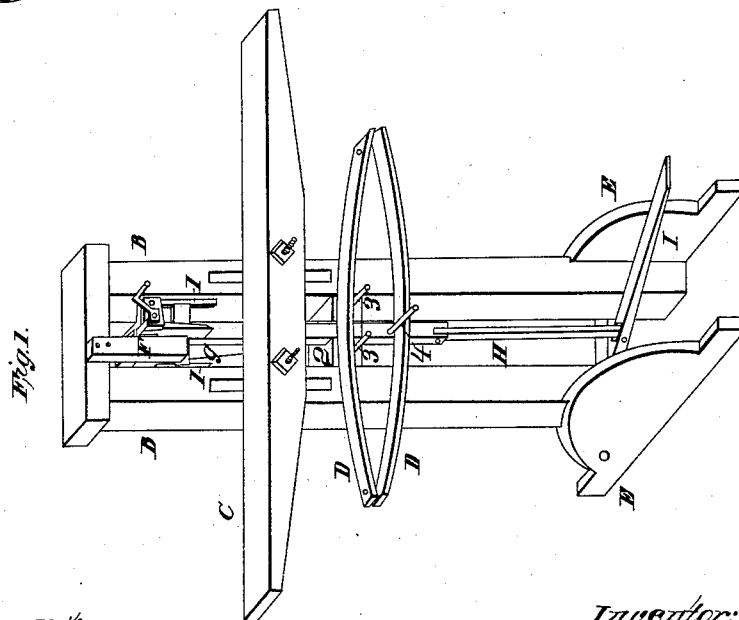
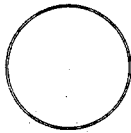
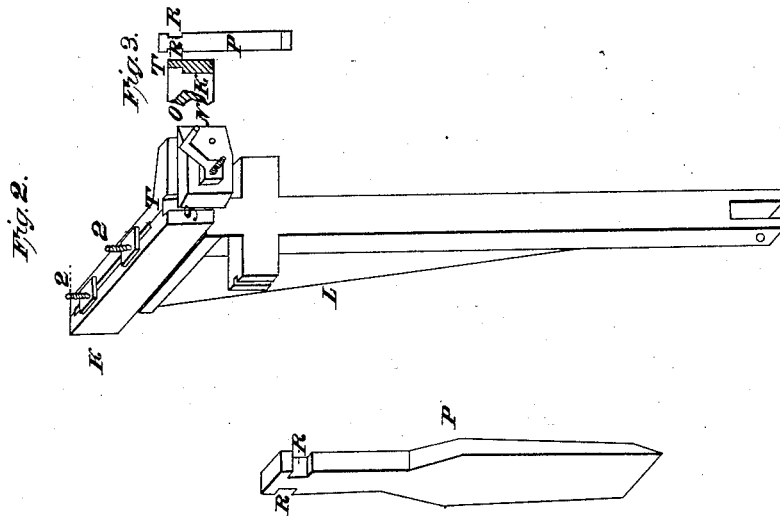


*I. McLaughlin,
Mortising Machine,*

No 685,

Patented Apr. 7, 1838.



*Witnesses:
G. W. Bacon,
I. McLaughlin.*

*Inventor:
Ira. McLaughlin.*

UNITED STATES PATENT OFFICE.

IRA McLAUGHLIN, OF SUNDERLAND, VERMONT.

MACHINE FOR MORTISING TIMBER, &c.

Specification of Letters Patent No. 685, dated April 7, 1838.

To all whom it may concern:

Be it known that I, IRA McLAUGHLIN, of Sunderland, in the county of Bennington and State of Vermont, have invented a new and Improved Mortising-Machine; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists of a frame work, slides, jaws, chisel, treadle, and other fixtures, all of which I will more particularly describe, so as to enable others skilled in the art to build and use my invention.

The frame may be made of any convenient height and width according to the wish of the maker and here I will describe a frame together with the appendages which I judge to be of the best proportions.

I make two posts marked B B on the drawings four feet high and three inches square and the insides are six inches apart. The top ends of the posts are secured by a cap A, which cap is one foot and three inches long, three inches wide and two inches thick. The posts B B are set up in a vertical position and connected by a girth six inches long, which girth is inserted between the posts B B about one foot and six inches below the cap A. Feet are made to the posts of timber one inch thick and one foot and six inches long. The top side of the feet E E are cut in a convex or semicircular shape and are secured to the posts B B by wood screws or bolts. These feet serve to keep the frame in a vertical position and they also support a roller which is placed near the back ends of the feet. The roller supports the back end of the treadle I. This treadle is one foot and six inches long and three inches wide. I make a mortise in the treadle to receive the lower end of the connecting rod H and secure the same by an iron pin.

A timber C four feet long and three and one half inches wide and three inches deep at the center and made tapering at each end is bolted onto the front sides of the posts B B, and the posts have mortises about ten inches long through which the bolts pass which fasten the part C at any desired height according to the thickness of the article to be mortised.

A piece of wood F eight inches long one and one half inches wide and three-fourths of an inch thick is secured to the plate A

by screws. This piece serves to keep the article to be mortised from raising up.

Two iron guides, Fig. 1, are inserted one on each of the inside of the two upright posts near the top ends of the same. These guides are about six inches long and one fourth of an inch thick and serve to support the top end of the casting G.

A casting marked G two feet long one and one half inches wide and one inch thick with a flange or brace on the back side and cross arms near the top end is fixed between the posts B B and supported at the ends of the cross arms by the guides before mentioned. On the top end of this casting is another casting marked K, Fig. 2, which is six inches long and one and one half inches square with a jaw to support the chisel. A slot is made through the casting and two bolts pass through the same end, fasten it to the casting G, and by means of this slot and the bolts Q Q. The parts K in which the chisel is secured may be set at any distance desired from the front part of the casting G. The lower end of the casting G is steadied by passing through an indenture made in the cross girth 2, Fig. 1, that connects the posts. Two iron screws 3, Fig. 1, are inserted in this last named cross piece to support the springs D D.

Two springs D D of wood or steel about three feet long and fastened together at the ends and the upper one resting on the iron screws before mentioned and the lower one put beneath a pin 4 in the casting G serve to keep the said casting and the chisel raised up.

An iron connecting rod is secured to the lower end of the casting G by a joint and pin, and at the lower end of the connecting rod H is the treadle I with a mortise and pin which serves to unite the connecting rod to the treadle. A nut with a crank N, Fig. 2, serves to screw up the jaw O and causes it to bear on the side of the chisel.

A jaw of cast iron marked O, Fig. 2, three inches long and one and one half inches wide and about one half inch thick is secured to the casting K by a bolt or screw with a crank N.

The chisel P is about five inches long and should be made of the width of the mortise intended to be made. The top end of the chisel where it is fixed between the jaws is indented on each side with inden-

tures R, Fig. 2, about one eighth of an inch deep and about three eighths of an inch long, in which indenture the back jaw is made to fit so that the chisel may be set to face either way. On the casting K next to the chisel is an arm about two and one fourth inches long and one and one half inches wide which serves as a back jaw to the vise in which the chisel is fixed. In the front side of the casting K is an indenture s, Fig. 2, three eighths of an inch wide and about one eighth of an inch deep. In this indenture one side of the chisel is placed and made to fit and this serves to keep the chisel in a vertical position. Near the top of the indenture on the back jaws before mentioned is a protuberance T which fits in the notch in to the side of the chisel and keeps the chisel from sliding up or down in the indenture.

The mode of operating is thus: Take the article that is to be mortised and place the same on the top side of the cross piece C, raise up the cross piece C until the top side of the article to be mortised touches the end of the timber F and then screw the

cross piece C to the posts B B and as the chisel acts on the article move it to the right or left until the mortise is finished at one end then face the chisel the other way and move the article until the other end of the mortise is finished. At the same time act on the treadle I with the foot to give the chisel motion. Motion may be also given to the chisel with water, steam or animal power. Mortises may be made at any desired distance from the face of the article by setting the casting K to which the chisel is attached backward or forward by means of the slot and securing the same firmly by the screws Q Q.

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

The method of securing the chisel by which means it can be readily reversed and the method of moving the chisel backward and forward all as above described.

IRA McLAUGHLIN.

Witnesses:

G. B. BACON,
C. McLAUGHLIN.