

J. Johnson,
Boring Wood.

N^o 5011.

Patented Mar 13, 1847.

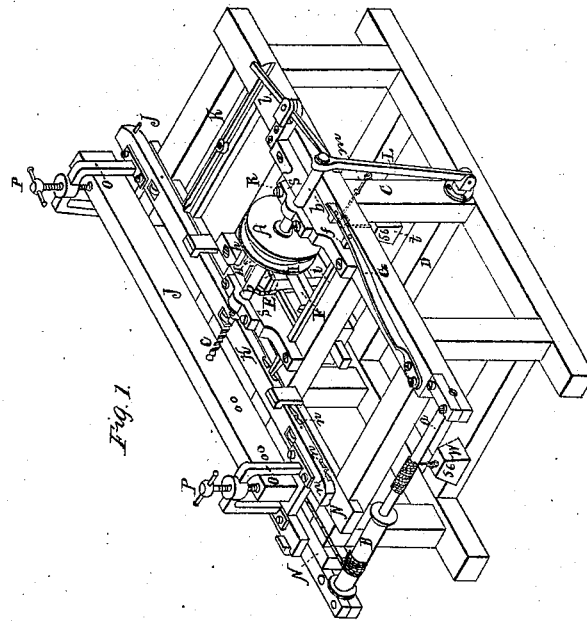


Fig. 1.

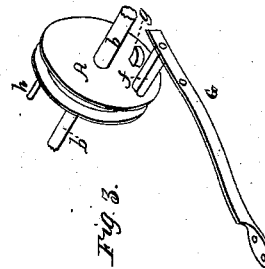


Fig. 2.

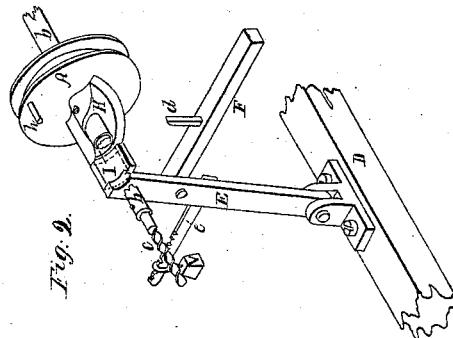


Fig. 3.

UNITED STATES PATENT OFFICE.

JONATHAN JOHNSON, OF MIFFLINBURG, PENNSYLVANIA.

BORING-MACHINE.

Specification of Letters Patent No. 5,011, dated March 13, 1847.

To all whom it may concern:

Be it known that I, JONATHAN JOHNSON, of Mifflinburg, in the county of Union and State of Pennsylvania, have invented a new and Improved Boring-Machine; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a perspective view, and Figs. 2, and 3, are parts of the same detached.

Similar letters refer to corresponding parts in all the figures.

The nature of my invention consists in the combination and arrangement of an auger with a sliding carriage by such means and manner that the power applied to the auger will propel, withdraw, and reset the same, and regulate the movement of the carriage until any desired number of holes are formed in the piece of timber placed upon the carriage.

The sliding carriage and auger, and the various parts connected therewith, are placed upon a supporting frame constructed in any well known or usual manner.

K, is the sliding carriage resting upon the ways N, N, on the side of the supporting frame.

O, O, are gates rising from each end of the sliding carriage, through which the post or piece of timber to be bored passes, and is permanently secured by set screws p, p, passing through the caps of the gates.

A shaft b, is placed at right angles to the sliding carriage—near the center of the supporting frame—having free longitudinal play in its bearings s, s.

The auger C, is confined in a socket at the end of the shaft b.

A, is a pulley on the auger shaft.

H, is a cam on the same, placed at the side of the pulley A.

L, is a vibrating bar, its lower end being hinged to the center post C, and its upper end embraces a journal on the outer end of the auger shaft. A cord m, is attached to near the upper end of the vibrating bar L, passing through the center post C, (and over a pulley) to the end of which (cord) there is suspended a weight t. The weight t, drawing upon the vibrating bar L, causes it to act upon the shaft b, and thereby give a sufficient forward pressure to the auger as

it is revolved, to force it into the wood. To the central base cross piece D, of the supporting frame (immediately below the auger shaft b,) there is connected by a hinge a vertical vibrating post E, having a lateral concave projection I, secured to the top of the same.

F, is an arm projecting at right angles from the rear side of the vibrating post E, a short distance below the top of the same.

d, is a vertical pin inserted into the upper side of the arm F.

e, is an arm projecting from the rear side of the vibrating post E, to which is suspended the weight v, for throwing back the vibrating post against the cross-piece R, of the frame. The carriage K, is moved forward as follows: a, is a shaft secured in bearings at the rear end of the machine.

B, is a drum on one end of a, —a rope or cord passing around the drum B, is connected to the carriage; a weight w, suspended by a rope—having a sufficient number of turns around the shaft a,—imparts motion to the carriage. The carriage is stopped at the proper moment, and retained while a hole is bored in the post or piece of timber on the carriage, by means of the detent i, taking into notches n, n, on the side of the carriage. The detent i, is connected to and pressed forward by the spring G, made fast to the front side piece of the frame.

The operation of my improved boring machine is as follows. A beam or post J, is placed upon and secured to the carriage, and adjusted to the proper position with the auger C; (the carriage being retained by the detent i, as before described;) motion is then imparted to the auger by means of a band passing from a driving drum around the pulley A. As soon as the auger has passed through the post or beam, or penetrated to the desired distance, the pin h, projecting from the side of the pulley A, takes hold of the pin d, rising from the arm F, and carries along the arm and the vibrating post E, till the cam H, is brought in contact with the concave I, the action of which withdraws the auger to its original position. The instant the auger is withdrawn, the tooth g, projecting from the side of the pulley A (opposite to the cam H,) acts upon the pin f, projecting from the spring G, and pushing back the same, detaches the detent i,

for a moment from the carriage; the weight *w*, then moves forward the carriage until the detent takes into another notch and retains the same while another hole is bored.

- 5 As soon as the cam *H*, ceases to operate on the concave *I*, the vibrating post *E*, falls back against the cross-piece *R*, and remains in that position until the advance of the auger brings the pin *h*, projecting from the pulley *A*, into contact with the pin *d*, rising from the arm *F* as before described. In this manner the operation is continued until the required number of holes are bored. When the requisite number of holes have
15 been bored in a post, or piece of timber the adjustable pin *j*, at the rear end of the front side of the carriage, takes hold of and vibrates the latch *k*, and causes it to catch hold of a pin in the front end of the vibrating bar *l*, which permanently retains the bar,
20 causing its rear end to press against the upper end of the vertical vibrating bar *L*, and thereby prevents the auger from being

pressed forward and continuing to operate beyond the proper point.

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

The manner in which I operate and withdraw the auger and regulate the movement of the carriage, by means of the vibrating post *E*, and its arms *F* and *e*, and lateral projecting concave *I*;—the cam *H*, and pulley *A*, upon the auger shaft *C*,—the pin *h*, and tooth *g*, upon the pulley,—the spring *G*, the detent *i*, and pin *f*, connected to each other,—the vibrating bar *L*, and weight *t*,—the whole arranged combined and operating with each other and with the notches *n, n*, in the side of the carriage, and the weight *w*, for moving the same substantially in the manner herein set forth.

JONATHAN JOHNSON.

Witnesses:

JOHN DETWILER,
THOS. G. LEHMAN.