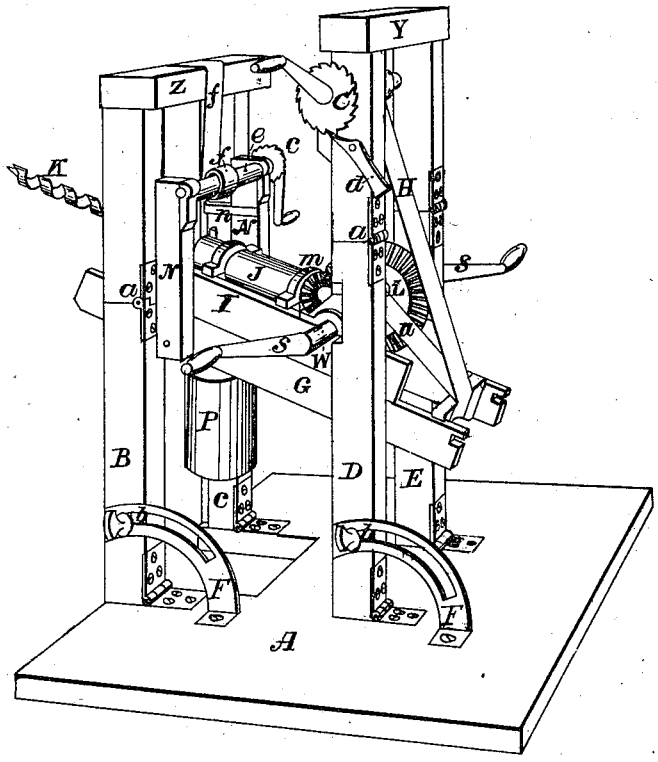
W. H. Willcox,

Boring Mood.

No. 6,484. Patented May. 29, 1849.

Fig. 1.



UNITED STATES PATENT OFFICE.

WM. H. WILLCOX, OF TARRYTOWN, NEW YORK.

BORING-MACHINE.

Specification of Letters Patent No. 6,484, dated May 29, 1849.

To all whom it may concern:

Be it known that I, WILLIAM H. WILLCOX, of Tarrytown, in the county of Westchester and State of New York, have invented a new and useful Boring-Machine for the Use of Ship-Builders; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1, is a perspective view. Figs. 2, and 3, are front elevations showing different positions of the machine. Fig. 4 is a longitudinal central section, showing the positions of the shafts and straps; Fig. 5 a section of the rear, and Fig. 6 a transverse section of the withdrawing cylinder, upon the crank shaft.

Upon a platform A, three or more feet in diameter four posts B, C, D, E, are arranged in quadrangular order, and connected to the platform by hinge joints in a manner to allow each post to incline occasionally to the right.

Each pair of posts B, C, and D, E, are about ten inches apart and connected at the top by caps or cross bars Y Z. Each post consists of two sections which are connected by a hinge joint *a*, in a manner to allow the upper section to incline or fall to the right, but not to the left.

A few inches to the right of the bottom of each post, a curved brace F, is attached to the platform, and ascends, curving to the left, till it passes or comes in contact with the side of the post, and is attached to the post, by means of a set screw which passes into the post through a curved slot *b*, formed in the brace for that purpose, and by means of which the posts may be adjusted and secured in any required position. The distance between the two pairs of posts is about eighteen inches; the height of the posts from four to five feet; those on the right being the highest. A pair of vertical slides N, N, are adjusted to the right sides of the posts B, C, and each slide is connected to its respective post by means of two guide hooks (one of which is shown at *n*,) which project to the left from the centerward side of the slide, and take to a groove or rebate formed in the post. The two slides are connected to each other at the top by a horizontal shaft *e*, the bearings of which are attached to the slides, and upon the center of which is coiled a broad strap *f*, the extreme end of which is attached to the cap Z. The bottoms of these slides are connected by pivots to the sides of an adjustable frame G, which is susceptible of a variety of positions from horizontal to vertical; and the left end of the frame is thus supported.

Upon one end of the shaft is mounted a crank with a ratchet *c*, which is checked by a pawl *d*, connected to the corresponding post below. The adjustable frame G, is about two feet long and ten inches wide, and is ordinarily adjusted longitudinally between the posts of each pair. The side beams of this frame are constructed with grooves or rebates, in which is adjusted a sliding carriage I: and upon this carriage is mounted a mandrel J, in the left end of which is a socket to receive and hold an auger K.

Upon the right end of the mandrel is a pinion *m*, which is turned by a gear wheel L: this wheel being mounted upon a transverse shaft W, which has its bearings upon the sides of the sliding carriage. To the bottom of the carriage is attached a strap *o*, which passes over a roller *r*, to a weight P, which tends to draw the carriage and project the auger to the left. To each end of the shaft W, is attached a crank S, and upon the middle of the shaft is mounted a cylinder T, to which is attached one end of a strap *u*, and the opposite end thereof is attached to the right cross-bar of the frame G. The cylinder T, has a flange at each end, and from the rearward flange a clutch pin *s* slightly projects, and the gear wheel having a corresponding hole or cavity in its front, the cylinder by being occasionally pressed rearward by the hand, becomes clutched or coupled to the gear wheel; and by the motion thereof the strap is coiled upon the cylinder, and thereby the auger is withdrawn from the hole in which it may be employed.

On the front of each post opposite, the upper hinge joint thereof is adjusted a hook and staple *x*, by means of which the erect position of the upper section of the post is secured. To the rear side of the adjustable frame is attached a spring latch or catch *v*, which occasionally takes to a notch in the

side of the carriage, and holds it fast. The management of the adjustable frame in accommodating the various positions of the auger, will be understood by the several drawings.

When this machine is to be put in operation, the frame is adjusted to bring the auger to the required position, when the carriage being released from the restraint of the catch the auger is pressed forward by the weight; and the auger is put in motion rotarily by the cranks S, and gear wheels.

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

The combination of the boring apparatus, with the four jointed posts B, C, D and E; the mode of adjusting the frame G, by means of the straps F, and H, and the windlass shafts and the jointed posts as herein described.

WILLIAM HENRY WILLCOX.

Witnesses:

PATTERSON R. HART,

ROBERT RIKER.