2 Sheets—Sheet 1.

# P. T. PERKINS.

## BORING-MACHINE.

No. 182,222. Patented Sept. 12, 1876.

*Fig. 1.*

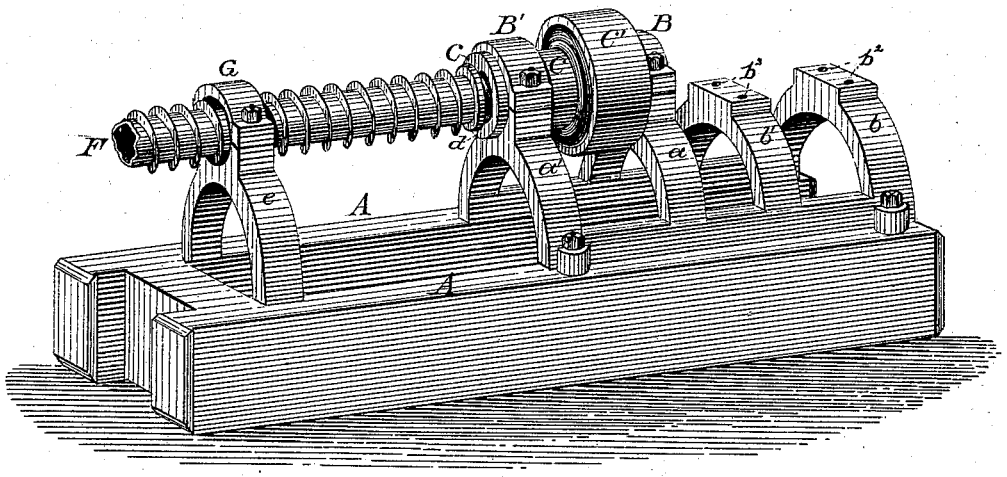
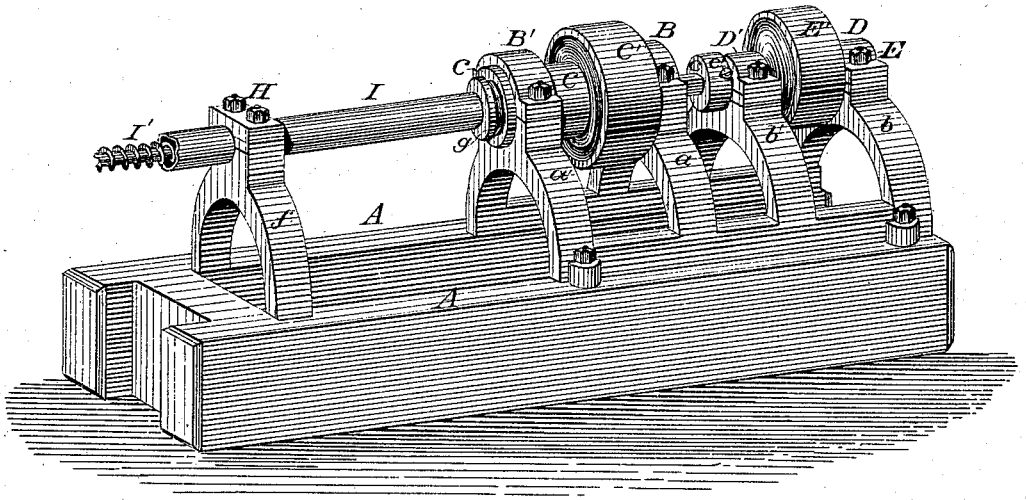



*Fig. 2.*

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2 Sheets—Sheet 2.

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## BORING-MACHINE.

No. 182,222. Patented Sept. 12, 1876.

*Fig. 3.*

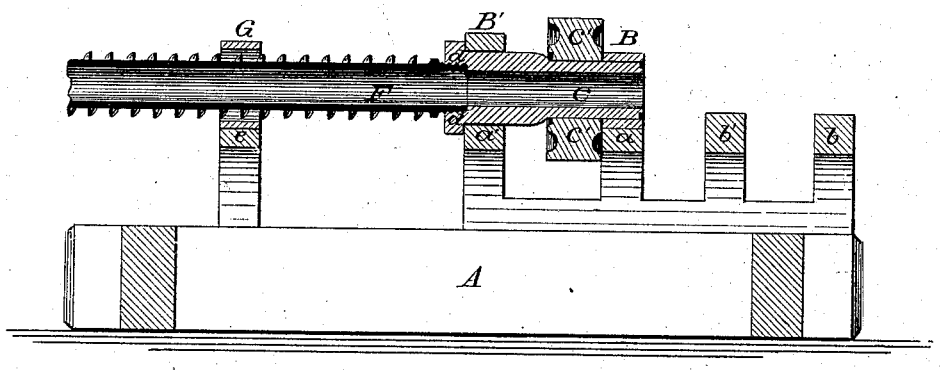
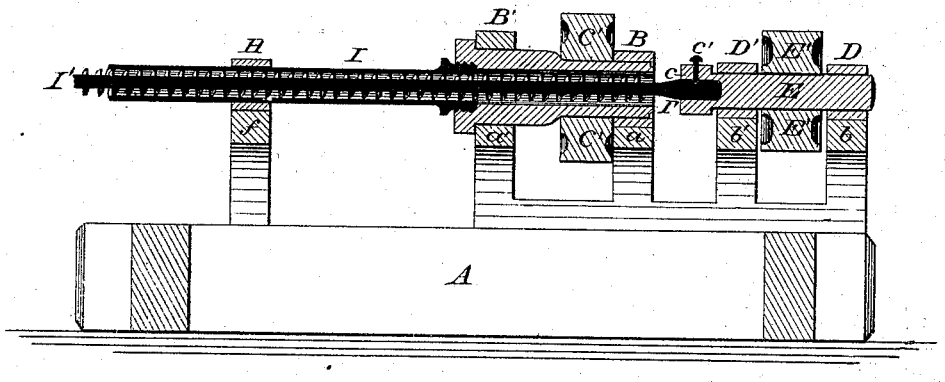



*Fig. 4.*

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# UNITED STATES PATENT OFFICE.

PARDON T. PERKINS, OF OSWEGO, NEW YORK.

## IMPROVEMENT IN BORING-MACHINES.

Specification forming part of Letters Patent No. **182,222**, dated September 12, 1876; application filed May 8, 1876.

*To all whom it may concern:*

Be it known that I, PARDON T. PERKINS, of Oswego, in the county of Oswego and State of New York, have invented a new and useful Improvement in Boring-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is the production of a machine for boring wooden pumps or pipes, adapted to use either the "core" or "Wyckoff" auger, thereby saving the expense of two machines, which have been employed heretofore, and the extra room, shafting, &c., necessary.

My invention therein consists in the peculiar construction, arrangement, and combination of the several parts, all as more fully hereinafter explained.

To enable others skilled in the art to manufacture my device I now describe the same in connection with the drawings, in which—

Figure 1 is a perspective view of the auger-head and a part of the lathe-bed, with a core-auger in position; Fig. 2, a perspective view of the auger-head and a part of the lathe-bed carrying a Wyckoff auger; Fig. 3, a longitudinal section of the machine as shown in Fig. 1; and Fig. 4, a longitudinal section of the machine as shown in Fig. 2.

Like letters denote corresponding parts in each figure.

In the drawings the sliding table for carrying and presenting the log to the auger and the shafting are not shown, since these are substantially the same as those now in use.

A represents a part of the bed of the machine, to which are secured the frames *a a'*, carrying the journal-boxes B B', in which is journaled the hollow shaft C. Upon this shaft, between the boxes, is mounted a pulley, C'. The hollow shaft terminates at the rear at the outer edge of the journal-box B. To the front it projects a short distance beyond the box B'. This end of the hollow shaft is screw-threaded on its inside, and is adapted to receive the screw-threaded rear end of an auger. To the rear of the frames *a a'* are secured two similar frames, *b* $b^1$, preferably nearer together than the said frames *a a'*. Upon the frames *b* $b^1$ are mounted two journal-boxes, D D'. These boxes are removably secured to the frames *b* $b^1$ in any convenient manner, preferably by screw-bolts or by studs on the under side of the boxes, which fit into proper holes $b^2$ $b^3$, formed in the top of the supporting-frames. In the boxes D D' is journaled the solid shaft E, carrying the pulley E', of smaller diameter than the pulley C'. The forward end of the shaft E in front of the box D' is provided with a socket, *c*, having the set-screw *c'*.

It is understood that the pulleys C' E' are driven from corresponding pulleys on a counter-shaft, placed a short distance off to one side, and, by the direction of the strain upon the shaft E, the said shaft and the boxes D D' are held rigidly in place by the use of the stud before mentioned. The manner described of securing the removable boxes to their supporting-frames allows the shaft and boxes to be removed bodily, and in much less time than the ordinary journal-boxes with their numerous bolts.

When it is desired to use a core-auger in my machine, as shown in Fig. 1, the boxes D D' and the shaft E are removed from the frames *b* $b^1$. The core-auger, which is shown by F, is of the ordinary construction, and is secured in the end of the shaft C by its screw-threaded end *d*. A box, G, supported on a frame, *e*, is placed in front of the box B', and steadies the auger. Only the rear end of the auger is shown. The log to be bored is presented to the end of the auger on a sliding table (not shown) in the usual manner, and the core passes out through the hollow shaft C and over the frames *b* $b^1$.

When it is desired to use the Wyckoff auger, as shown in Fig. 2, the core-auger F is removed, and a frame, *f*, and box H, are substituted for the frame *e* and box G; but the box G may be made removable, and the box H adapted to be placed directly upon the frame *e*. The boxes D D' and the shaft E are set in position upon the frames *b* $b^1$. The Wyckoff auger used is of ordinary construction, and has the outside shell I and the inside auger I'. The outside shell I of the auger is secured to the front end of the hollow shaft C by its screw-threaded end *g*. The inside auger I' has its rear end secured in the

socket *c* by the set-screw *c'*. This auger works in the ordinary manner. I preferably use on the counter-shaft (not shown) a cone-pulley, and also one on the line-shaft to match the one on the counter-shaft, by which the speed of the different augers may be regulated, and either or both of the pulleys C′ and E′ may be cone-pulleys if desired.

It will thus be seen that the two augers required for the different kinds of work can be used in one machine, and the extra expense and room necessary for two machines done away with.

Having thus fully described my machine and explained some of its advantages, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a boring-machine, the hollow shaft C, having a screw-threaded outer end adapted to receive and hold a core-auger, or the outer shell of a Wyckoff auger, and the removable shaft E, provided with the socket *c*, to receive and turn the inner part of a Wyckoff auger, constructed and arranged substantially as described and shown.

2. The boring-machine described, consisting of the bed A, the frames *a a' b b*[1], the journal-boxes B B′, the hollow shaft C, having a screw-threaded outer end, the solid shaft E provided with the socket *c*, the journal-boxes D D′, adapted, with the said shaft E, to be bodily removed from the supporting-frames, and the pulleys C′ E′, all constructed and arranged substantially as described and shown.

This specification signed and witnessed this 1st day of May, 1876.

PARDON T. PERKINS.

Witnesses:
O. H. BROWN,
WM. E. BELL.