

JOHN P. ALLEN.
Improvement in Lathes.

No. 114,512.

Patented May 9, 1871.

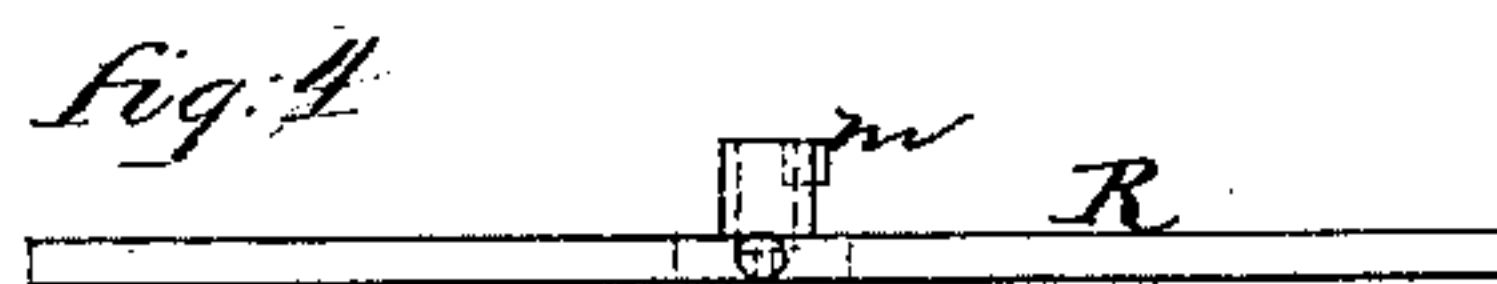
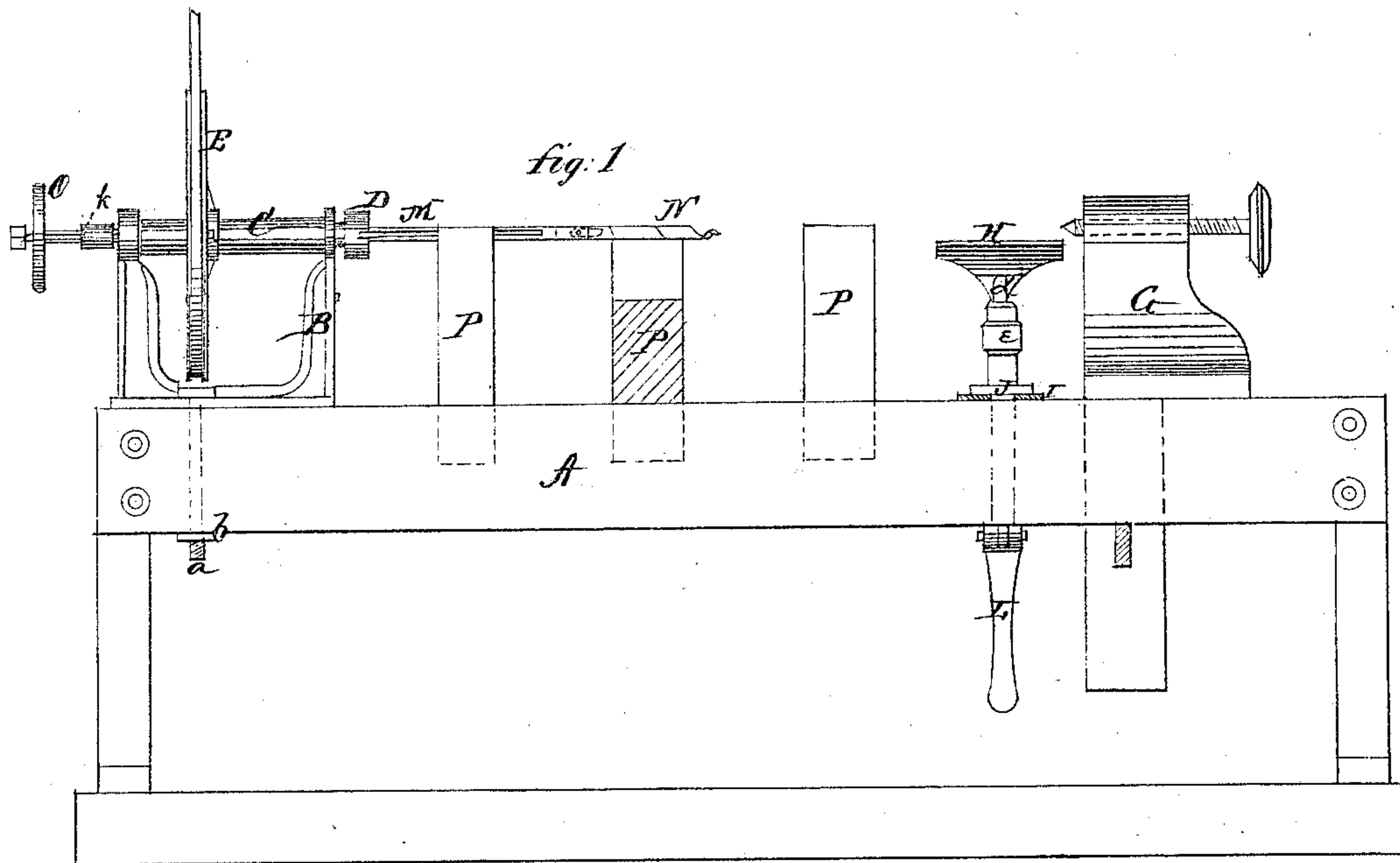
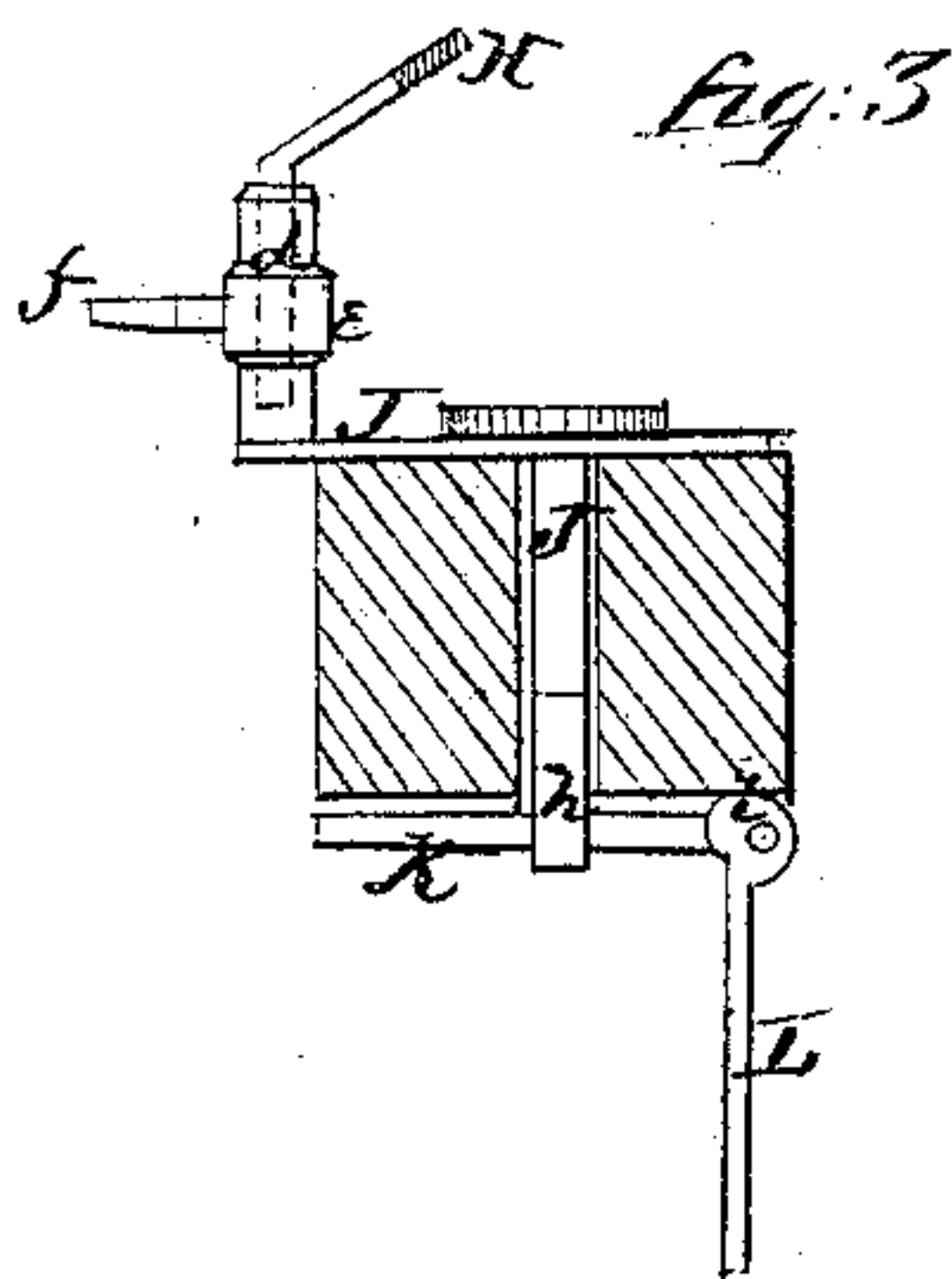
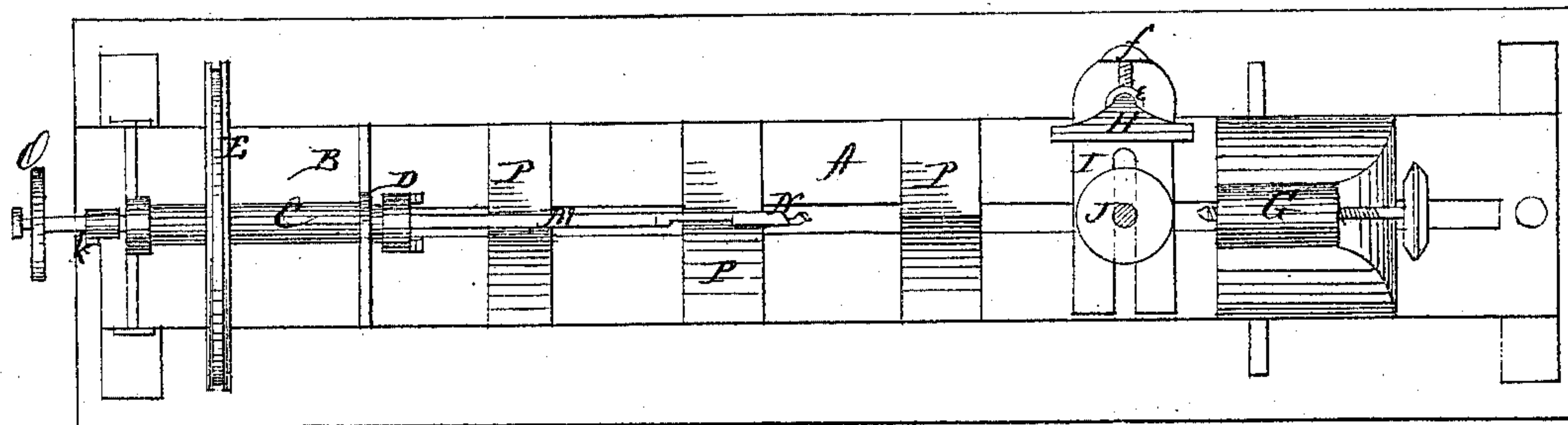


Fig. 2



Witnesses.

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JOHN P. ALLEN, OF SPRINGFIELD, OHIO, ASSIGNOR TO HIMSELF AND
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Letters Patent No. 114,512, dated May 9, 1871.

IMPROVEMENT IN LATHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN P. ALLEN, of Springfield, in the county of Clark and in the State of Ohio, have invented certain new and useful Improvements in Combined Boring-Machine and Turning-Lathe; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "combined boring-machine and turning-lathe," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, and

Figure 2 a plan view of my entire machine;

Figure 3 is a vertical section, showing the construction and mode of fastening the tool-rest; and

Figure 4 is a side view of a hand-wheel used for boring by hand.

A represents the bed of my machine, made of any suitable dimensions, and slotted longitudinally, as shown in fig. 2.

B represents the head, which supports and forms bearings for the hollow mandrel C, said head being provided on its under side with a tongue, which projects downward into the slot on the bed A.

This head may be adjusted at any point desired and fastened by means of a bolt, *a*, passing through the same and through the slot in the bed, a nut and washer, *b*, being placed on the lower end of said bolt to secure it.

The hollow mandrel C is, at its inner end, provided with the usual appliances for fastening chucks D to hold work for turning; and upon the mandrel is secured a pulley or gear-wheel, E, to communicate, by means of belt or otherwise, rotary motion to the mandrel from a treadle, steam, or other power, as may be desired.

G is the back center block, adjusted upon the bed A at any point desired, and fastened by a wedge-shaped key underneath.

The tool-rest H is provided with a stem, *d*, which is inserted into an upright hollow post, *e*, and adjusted at any height and angle by means of the set-screw *f*.

The hollow post *e* is attached to a slotted plate, I,

which is laid crosswise on the bed A wherever wanted, and secured by the following means:

A headed pin, J, is passed through the slot in the plate I and also through the slot in the bed A.

At the lower end of this pin J is attached a stirrup or loop, *h*, through which and immediately under the bed A is passed a key, K.

This key has a lever, L, pivoted at one end, and said lever provided with a cam, *i*, at the pivot point, so that when the lever is turned down, as shown in fig. 3, this cam will bear against the under side of the bed A, and thus hold both the pin J and plate I, with its attachments, firmly in place.

The plate I being slotted the tool-rest may be adjusted at any distance from the work.

When it is desired to use this machine for boring purposes a longitudinally-grooved rod, M, is passed through the hollow mandrel C, a pin or feather, *k*, fastened in said mandrel fitting in the groove on the rod, which causes the rod to have the same revolving motion as the mandrel and at the same time be free to move to and fro in the mandrel.

Upon the inner end of the grooved rod M is attached a boring-bit, N, and upon the outer end a loose wheel, arm, or other suitable hand-hold, O, to control the movement of the rod to and fro.

P P are blocks adjusted to lathe-bed, with grooves or suitable cuts in the top or upper side to rest and fasten logs or timber on for boring, and be removed when the machine is to be used as a lathe.

R is a four-armed wheel, to be put on the outer end of the rod M in place of the loose wheel O for hand boring when power cannot be had.

A feather or pin, *m*, in the collar of said wheel R, is made to enter the grooved rod and hold it for working.

Having thus fully described my invention,

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

The combination in one machine of the bed A, head B, hollow mandrel C, chuck D, back center G, tool-rest H with its attachments, auger-rod M, blocks P P, and four-armed wheel R, all constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of February, 1871.

JOHN P. ALLEN.

Witnesses:

R. Q. KING,

THOS. J. PRINGLE.