2 Sheets--Sheet 1.

B. B. & A. J. OCKINGTON.

Lathes.

No. 151,794. Patented June 9, 1874.

Fig. 1

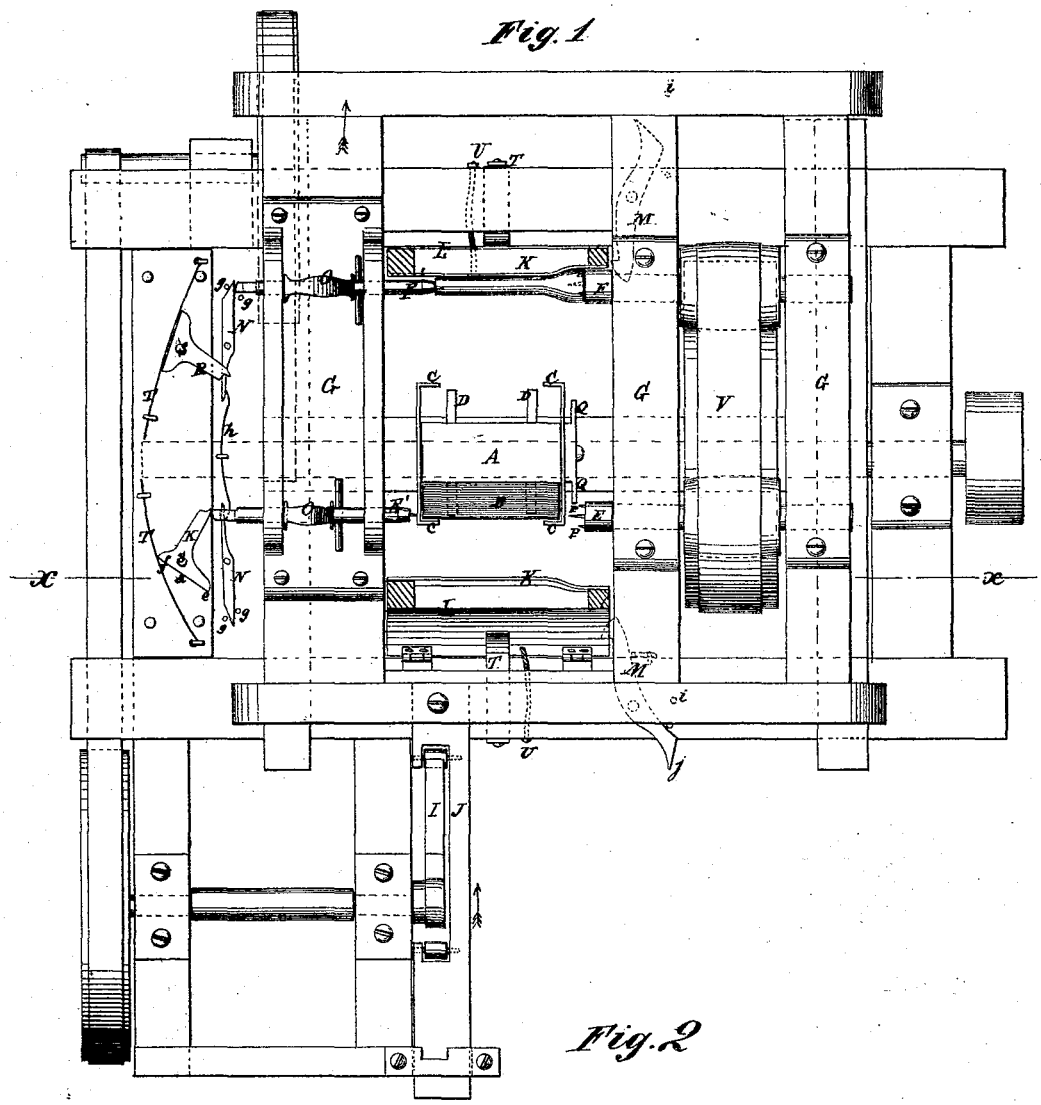
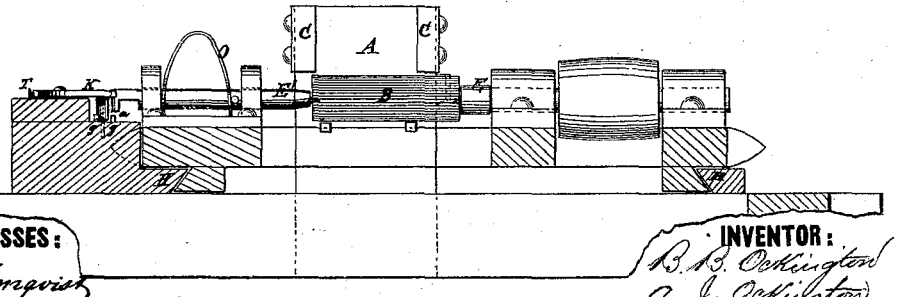


Fig. 2



WITNESSES:

A. W. Almquist

Geo. Geisenick

INVENTOR:

B. B. Ockington

A. J. Ockington

BY Munn & Co

ATTORNEYS.

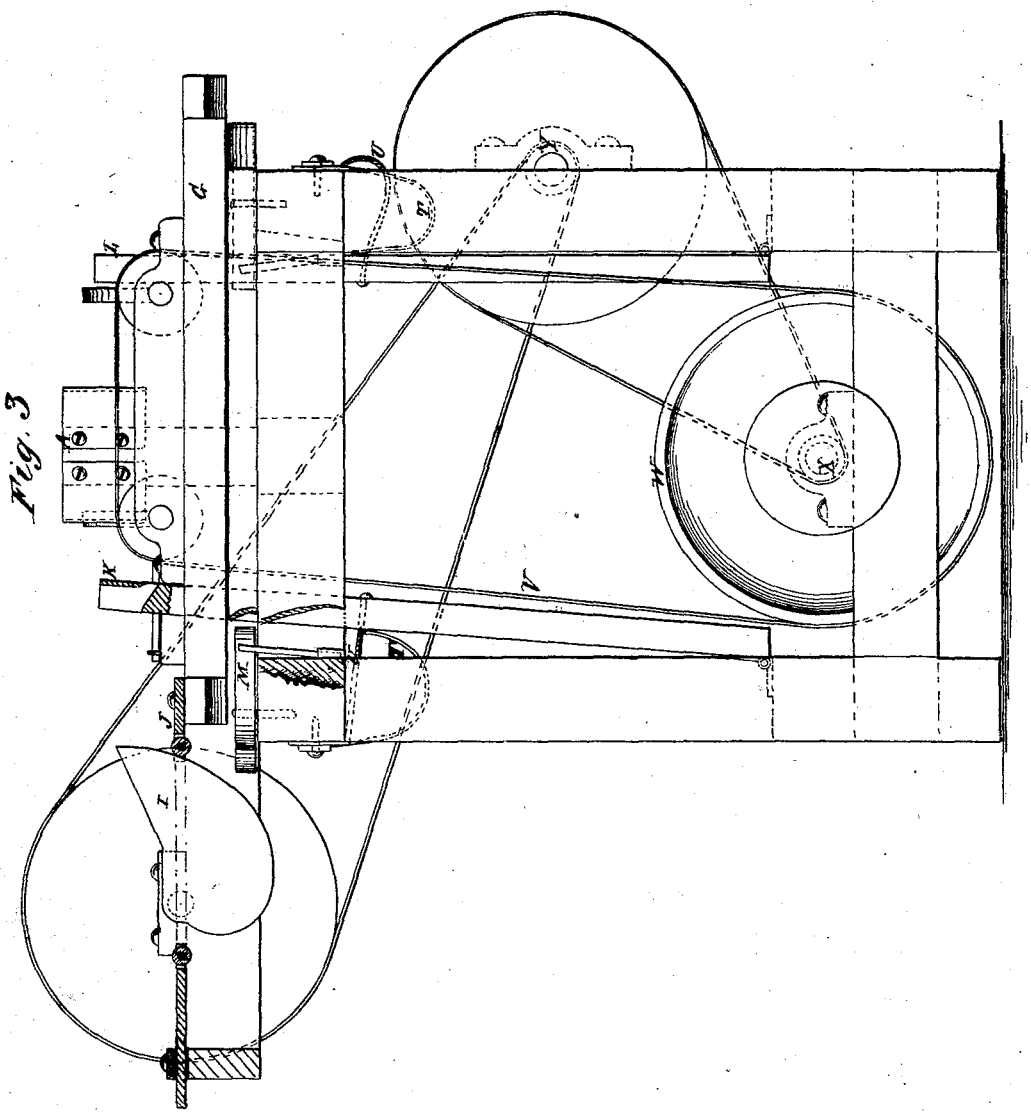
2 Sheets--Sheet 2.

B. B. & A. J. OCKINGTON.

Lathes.

No. 151,794. Patented June 9, 1874.

Fig. 3



WITNESSES:

A. W. Almqvist

C. Sedgwick

INVENTOR:

B. B. Ockington

A. J. Ockington

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

BENJAMIN B. OCKINGTON AND ANDREW J. OCKINGTON, OF STRATFORD HOLLOW, NEW HAMPSHIRE.

IMPROVEMENT IN LATHES.

Specification forming part of Letters Patent No. **151,794**, dated June 9, 1874; application filed March 14, 1874.

To all whom it may concern:

Be it known that we, BENJAMIN B. OCKINGTON and ANDREW J. OCKINGTON, of Stratford Hollow, in the county of Coos and State of New Hampshire, have invented a new and Improved Lathe for rough-turning bobbins and other articles, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

Figure 1 is a plan view of our improved machine. Fig. 2 is a section on the line *x x* of Fig. 1. Fig. 3 is partly a side elevation and partly a sectional elevation.

Similar letters of reference indicate corresponding parts.

A represents a double stationary holder for the blanks B in the middle portion of the machine, into which the blocks are dropped on each side behind guards C, and upon rests D, to be taken therefrom by the lathe-centers E E′ and F F′, said lathes being mounted on a frame, G, which slides forward and backward on the ways H, being actuated by the cam I and bar J. The lathes are arranged on opposite sides of the blank-holder, so that when one moves up to it the other moves away from it. In front or outside of each lathe is a shaping cutter, K, so fixed on the upper end of a swinging frame, L, that when the blank is moved outward it will come against the cutter, and be reduced to the required shape by it, the cutter being the whole length of the blank, and, after the blank comes against it, moving back with it during the time it operates on the blank, and until the frame carrying the lathes arrives at the end of its movement. The frame L carrying the cutter is then engaged by the spring-catch M, and held back while the lathe returns.

When one lathe is in this outermost position against the cutter, the other is at the blank-holder taking a blank, which is accomplished in the following manner: At the moment the centers come into the axial line of the blank, the hook or projection *a* of the tail-center escapes off the end of the switch N, and its spring O forces it forward into the end of the blank, and also forces the blank against the live-spindle; but, as the spring would not be reliable to force it fully onto points P, a guard, Q, is employed to hold the blank back, so that the end of the tail-stock will catch the dog R as the lathe moves toward the cutter, so that the blank will be forced onto the points by positive means, by which all the blanks will be adjusted exactly relatively to the cutters, and thus be uniform in shape. The dog forces the tail-center by swinging around its pivot S, and the connection of the dog and the center is maintained during the operation by the end of the center resting in the notch of the dog, and being moved against it by the slide G. The dogs have a light spring, T, acting on their heads and toes *d e f*, to keep them in position for engaging the tail-centers, while at the same time allowing them to move with the centers when thus fixing the blanks; also allowing them to swing out of the way of the centers as they go back to the holder, at which time they are drawn back by the switches N to discharge the turned blank, and to prepare for taking another blank. The switches N have a little movement between the stop-pins *g* to give way when the tail passes it, and then swing forward enough to catch the projection *a*, when the movement of the center in return to the blank-holder begins, and they have a spring, *h*, for throwing them forward to engage the centers. The blank is discharged from the centers when the tail-center is pulled back by switch N. The cutter-frames L are released to move forward to meet the blank by a pin, *i*, on the sliding frame G, which strikes against the incline *j* on the catch M just before the frame stops in the movement of the pin toward the holder. When released, the frame is pushed forward by a spring, T, and it is arrested by a cord, U, at the point where it is required that the blank shall come to the cutters. The live-centers are turned by the belt V from the pulley W on the driving-shaft X, and the cam is driven from the same shaft by a counter-shaft, Y, and suitable reducing-pulley for slowing the motion.

The machine may, of course, be single-act-

ing on the same principle, using only one lathe; but, by using two lathes and cutters, and a double block-holder, the capacity of the machine is doubled.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The swinging knife K, combined with the sliding frame L, as and for the purpose described.

2. The combination of a switch, N, dog K, and a spring, O, with the tail-center of a lathe moving forward and backward between the work-holder and the cutter, substantially as specified.

3. The combination of guard Q with the work-holder, lathe-centers, spring O, and dog K, substantially as specified.

4. The oscillating cutter-carrier L, spring T, cord U, catch M, and reciprocating stud *i*, combined and arranged substantially as specified.

BENJAMIN B. OCKINGTON.
ANDREW J. OCKINGTON.

Witnesses:
CHARLES MAHURIN,
JAMES W. ENGLISH.