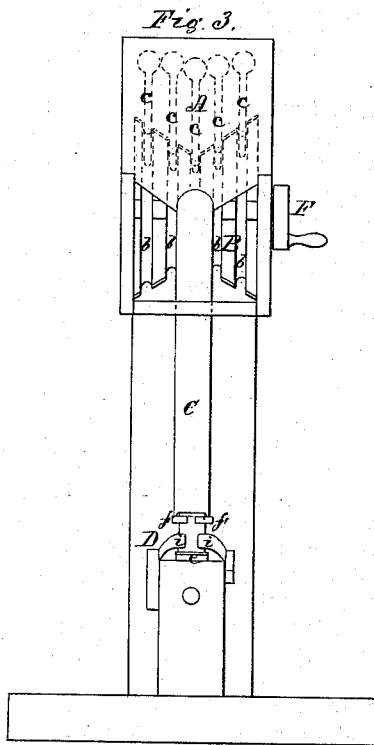
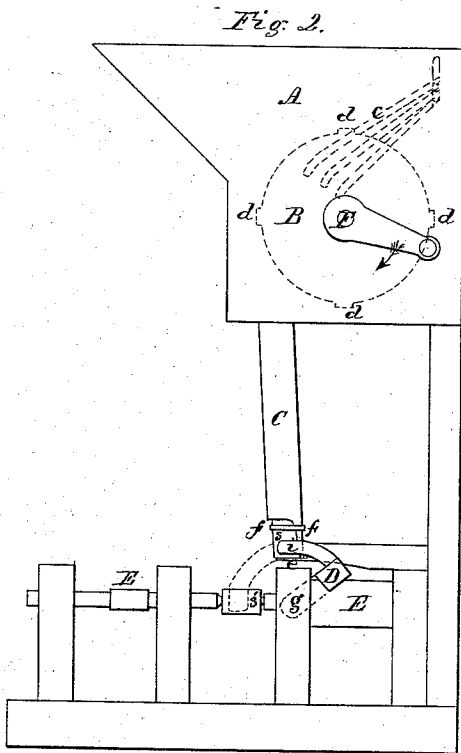
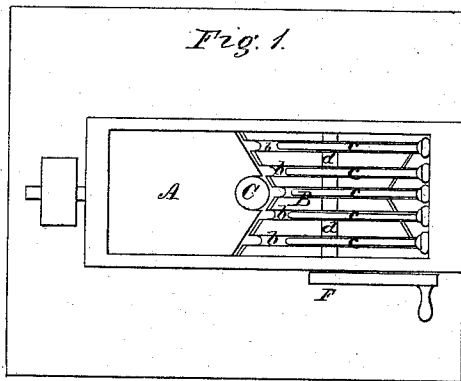


W. R. LANDFEAR & N. E. CAMPBELL.

Lathes for Turning Spools.

No. 156,640.

Patented Nov. 10, 1874.



Witnesses,

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UNITED STATES PATENT OFFICE.

WILLIAM R. LANDFEAR AND NATHAN E. CAMPBELL, OF HARTFORD, CONN.

IMPROVEMENT IN LATHES FOR TURNING SPOOLS.

Specification forming part of Letters Patent No. **156,640**, dated November 10, 1874; application filed May 6, 1874.

To all whom it may concern:

Be it known that we, WILLIAM R. LANDFEAR and NATHAN E. CAMPBELL, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Lathes for Turning Spools, on that part used for arranging and conveying blanks; and we do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Our invention has for its object the arranging of the blank blocks from which spools are made, and conveying them one by one to the lathe, when they are turned and finished, and thus rendering the operation automatic after the spool-blanks have been thrown promiscuously into a hopper.

In the accompanying drawings, Figure 1 is a top view of our improved mechanism. Fig. 2 is a side view, and Fig. 3 is a front view, of the same.

A is a hopper, into which the blanks are thrown. B is a revolving drum, of the general form of two frustums of a cone united by the bases of smallest diameter. The surface of this drum is furnished with grooves *b*, in which rest the wires or rods *c*. These form a screen for preventing the blanks from falling behind the rotating drum, which extends from the drum to the back of the hopper. At intervals around the circumference of the drum are ridges or projections *d*, occupying the whole width, except when cut away to form the grooves *b*. These projections are for the purpose of catching upon the blanks as they lie in the hopper and turning them over and over. The drum is turned in the direction of the arrow in Fig. 2 by any suitable mechanism applied to the axis F. C is a vertical pipe of circular form, for the descent of the blanks from the hopper. They pass down through this pipe until arrested by the stop *e* at the lower end. *f* is a spring, which embraces the lower blank, and prevents it from falling out of the open part of the bottom of the pipe shown in the drawing. D is a transferring-nipper, formed of two springs, *i i*, attached to a frame which turns upon the axis

g. These springs are made of such a form that they clasp and hold a blank with sufficient force to carry it from one position to another, but yield to a moderate degree of force applied to draw them away from the blank when it is held in place. E is the lathe for turning the spools, which operation is performed in the ordinary manner. *s* is a blank in the pipe C, and *s'* is its position after being transferred to the lathe.

The operation of our invention is as follows: The blanks, as ordinarily prepared for turning, are thrown promiscuously into the hopper A, while the drum B is turning continuously. The projections *d* turn them over and over, while the inclination of the two sides of the drum throws them toward the middle. When a blank presents itself in the proper position it falls into the pipe or tube C, which is thus kept constantly full. The nipper D, being operated by the same mechanism as the lathe, and acting in connection with it, is brought forward in the position of the dotted lines in Fig. 2, whenever a previous spool has been finished, and brings with it one of the blanks. The two springs *i i* grasp the blank *s* and draw it through between the two parts of the spring *f*, and carry it down to the position *s'*, where it is seized by the automatic action of the lathe and held, while the nipper D returns to its former position, ready to move another blank. Meanwhile, the next blank in the pipe C has fallen down into the place of *s*, and the springs *i i* slide onto and grasp it as they did the previous one.

It will thus be seen that the supply to the lathe is kept up so long as any blanks remain in the hopper or pipe.

What we claim as our invention is—

1. The drum B, with its projections *d* and grooves *b*, in combination with the rods *c*, as an arranging mechanism, substantially as herein set forth.

2. The combination of the tube C, the spring *f*, the stop *e*, and the transferring-nipper D, as a conveying mechanism, when constructed and arranged substantially as herein described.

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Witnesses:

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