(No Model.)

J. H. FISHER & C. C. PECK.

LATHE FOR TURNING POLYGONAL BODIES.

No. 256,991. Patented Apr. 25, 1882.

Figure 1.

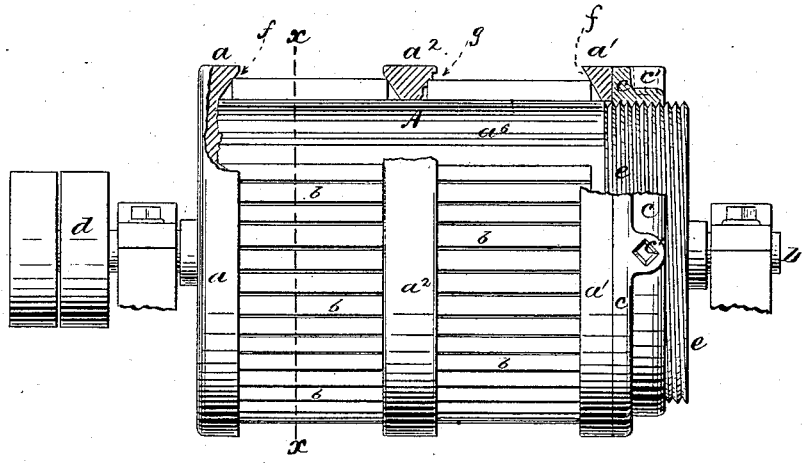


Figure 3

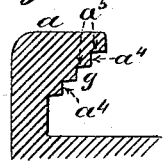
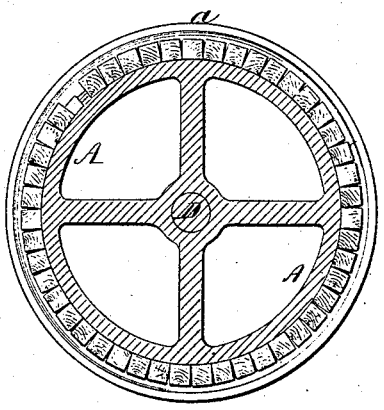


Figure 2.



Witnesses:
S. F. Sullivan
Geo. C. Evans

Inventors:
John H. Fisher
Cassius C. Peck
By their attorney,
Geo. W. Miatt

UNITED STATES PATENT OFFICE.

JOHN H. FISHER AND CASSIUS C. PECK, OF NEW YORK, N. Y.; SAID FISHER ASSIGNOR TO SAID PECK.

LATHE FOR TURNING POLYGONAL BODIES.

SPECIFICATION forming part of Letters Patent No. 256,991, dated April 25, 1882.

Application filed January 3, 1881. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. FISHER and CASSIUS C. PECK, of the city, county, and State of New York, have invented certain new and useful Improvements in Turning-Machines, of which the following is a specification.

Our invention relates to that class of turning-machines for shaping square or polygonal forms in which blanks of wood or other suitable material are arranged and secured in a circle concentric with the lathe-center, so that the cutting-tool in operation will act successively upon one side of each piece or blank, removing material therefrom in the arc of a circle, governed by the radius of the cutting-edge from the lathe-center.

The object of our invention is to render the operation of placing and securing the blanks in position more convenient and effective than heretofore, to adequately support and re-enforce the blanks against the action of the cutting-tool, to adapt the apparatus to blanks of different length and thickness, and to provide for the placing and securing of two or more series or lengths of blanks in the machine at the same time in proper relative position to be acted upon successively.

Our invention consists, first, in connection with a cylinder or drum mounted concentrically upon a suitable shaft or adapted to be secured between the centers of a lathe and formed with a shoulder or flange for the reception of the ends of the blanks to be acted upon, and having one or more adjustable flanges for securing the opposite ends of said blanks, of a device forcing the adjustable flanges against the ends of the blanks, which is essentially a nut adjustable upon and engaging with a screw-thread formed upon the periphery of the cylinder; secondly, in forming the bearing-surfaces of one or both of the stationary or movable flanges with a series of inwardly-projecting shoulders or offsets, so as to adapt the flanges to blanks of different thickness and effectually wedge the ends of the blanks down against the periphery of the cylinder and prevent their withdrawal or displacement from any cause except the loosening of the tightening device; and, lastly, in the employment of an intermediate double-faced flange sliding upon the body of the cylinder, and adapted to receive and engage the adjoining ends of two series of blanks, when, owing to their shortness or for other cause, it is desirable to secure more than one series in the apparatus.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of our improved construction, showing portions of the flanges broken away. Fig. 2 is a transverse section on the plane of line $x\,x$, Fig. 1. Fig. 3 is a detail section of a flange, showing a modification in its bearing-surface.

The hub of the cylinder A may be adapted either to be secured upon a shaft suitably supported and provided with a power-pulley, *d*, as shown in the drawings, or to be secured between the ordinary centers of a lathe.

At one extremity the cylinder is provided with a flange, *a*, against which the ends of the blanks abut. One or more movable flanges, a' a^2, slide longitudinally upon the body of the cylinder, and are prevented from turning laterally thereon by a feather or projection, a^6, on the cylinder engaging corresponding grooves or recesses in the flanges, or vice versa. By thus insuring the alignment of the flanges all danger of twisting the blanks out of their proper position during the operation of securing them is avoided.

If only one circle or series of blanks are to be secured on the cylinder, a single movable flange-ring, a', is sufficient, and is provided with a bearing-surface, *f*, for the blanks upon its side facing the stationary flange *a* and adapted upon its other side to be acted upon by the adjusting and securing ring or nut *c*, which latter is formed with a female screw-thread, engaging with a corresponding male thread, *e*, cut upon the periphery of the cylinder.

The nut *c* is provided with sockets c' for the reception of the ends of levers, or with radial spokes or other suitable devices by which it may be turned in either direction upon the cylinder to lock or unlock the blanks in position.

Where it is desired to secure two or more circles or series of blanks upon the cylinder at

the same time, an intermediate ring or sliding flange, a^2, (or more, if required,) is interposed between the fixed flange a and the adjusting-flange a', against which the locking-nut c bears. The intermediate ring is formed with two bearing-surfaces for the reception and retention of the adjacent ends of the two series of blanks, respectively.

The bearing-surfaces f of the flanges may be of any required form; but we prefer to bevel them inward, so that their action, when the flanges are driven against the ends of the blanks, will be to wedge the latter down firmly against the periphery of the cylinder. By thus beveling the bearings we are enabled to compensate for any slight variations in the length or thickness of the blanks where the latter are wood or other compressible material.

In some cases it may be desirable to provide the bearing-surfaces of the flanges with one or more annular shoulders or offsets, as shown at g, Figs. 1 and 3, in which case the shoulders a^4 are in a plane at right angles to the axis of the cylinder, and are intended to receive and support the end surfaces of the blanks, while the inclined bearing-surfaces a^5 act upon the outer surfaces of the blanks to wedge the latter down against the cylinder. By having a series of offsets, as shown in Fig. 3, this form of flange is adapted to various thicknesses of blanks.

It will of course be understood that the fixed flange may be situated between the ends of the cylinder and movable flanges and tightening devices arranged on both sides of it, if preferred. In fact, the fixed flange may be dispensed with altogether, if desired, where each end of the cylinder is provided with a separate tightening device.

It will be seen that the cylinder not only effectually re-enforces the blanks against the pressure exerted by the cutting-tool, but also, by furnishing support for the intermediate flange-rings, enables us to secure two or more series of blanks in the machine at once.

What we claim, and desire to secure by Letters Patent, is—

1. In combination with the cylinder A, fixed flange a, and one or more intermediate adjustable flanges, a' a^2, the tightening device consisting essentially of the nut c, engaging with the cylinder, for forcing said movable flanges toward the fixed shoulder a, for the purpose and substantially in the manner specified.

2. In combination with the cylinder A, the flanges formed with a series of annular shoulders, a^4, for the reception of the ends of the blanks, and the inclined bearing-surfaces a^5, for the purpose and substantially in the manner set forth.

3. In combination with the cylinder A, the flanges formed with the series of annular shoulders a^4, for the reception of the ends of the blanks, substantially in the manner and for the purpose described.

4. In combination with the cylinder A, provided with a fixed flange, a, and an adjustable flange, a', adapted to receive the thrust of the tightening device, the intermediate sliding flange, a^2, provided with bearing-surfaces on both sides for engaging the adjacent ends of two series of blanks, substantially in the manner and for the purpose described.

JOHN H. FISHER.
CASSIUS C. PECK.

Witnesses:
GEO. W. MIATT,
S. F. SULLIVAN.