(No Model.)

L. WEISSE.

Lathe Chuck for Turning Polygonal Bodies.

No. 235,716. **Patented Dec. 21, 1880.**

Fig: 1.

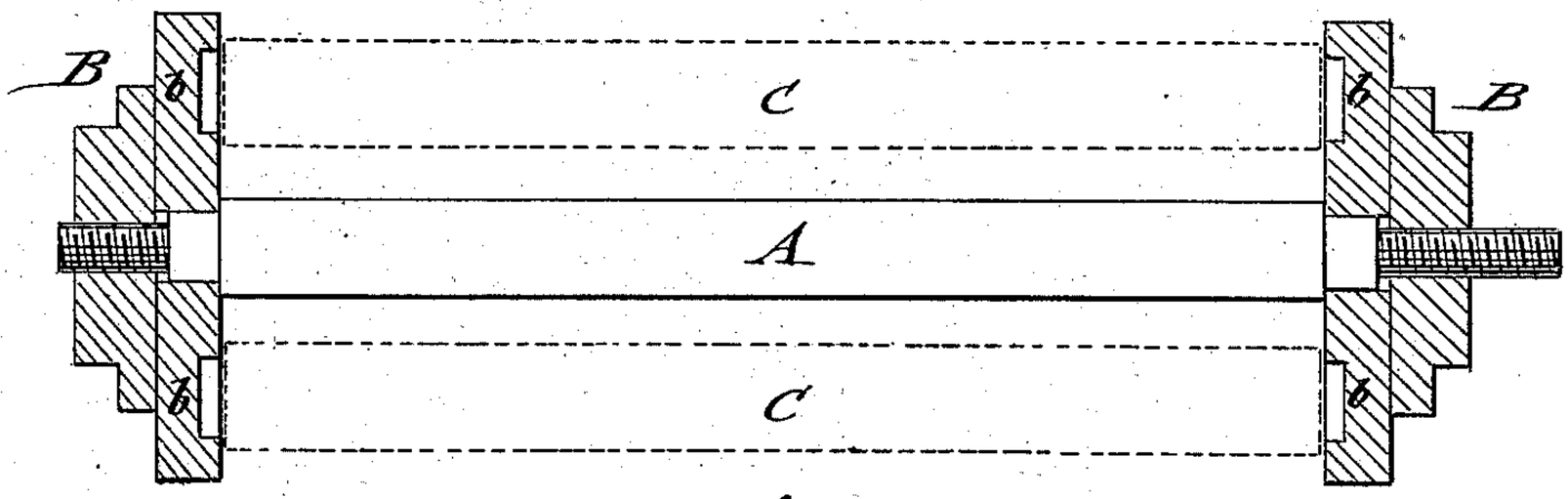


Fig: 2.

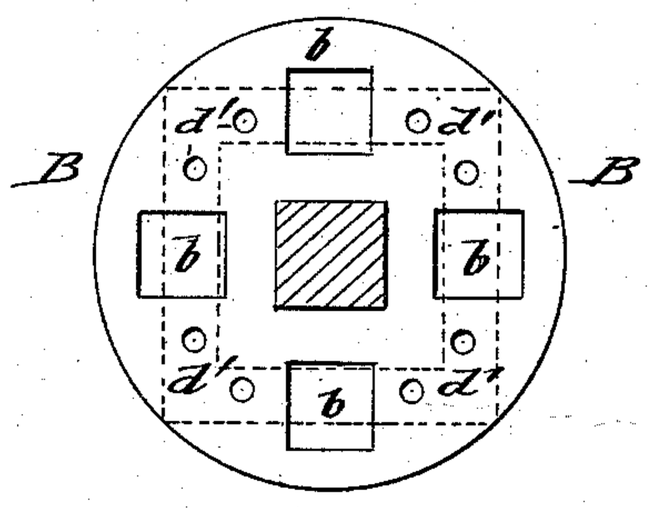
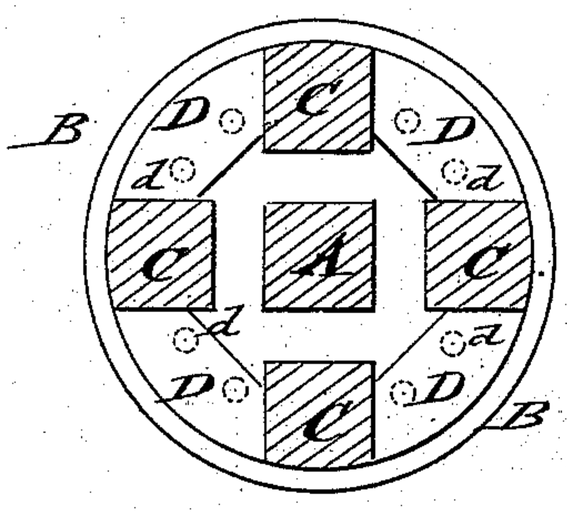


Fig: 3.

Fig: 4.



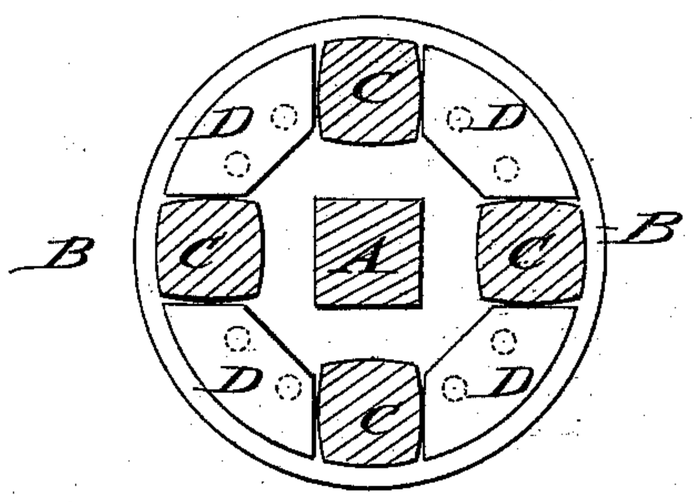
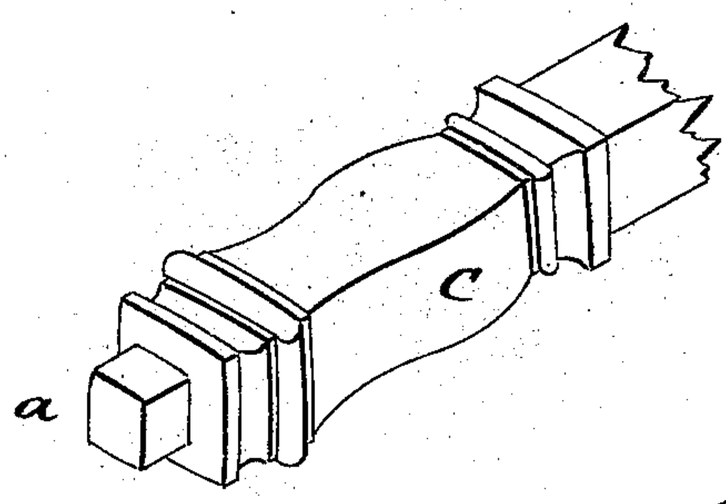


Fig: 5.



WITNESSES:

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LUDWIG WEISSE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND ERNST W. F. NATTER, OF SAME PLACE.

LATHE-CHUCK FOR TURNING POLYGONAL BODIES.

SPECIFICATION forming part of Letters Patent No. 235,716, dated December 21, 1880.

Application filed August 16, 1880. (No model.) Patented in Germany August 7, 1879.

To all whom it may concern:

Be it known that I, LUDWIG WEISSE, of Boston, in the county of Suffolk, in the State of Massachusetts, have invented certain new and useful Improvements in Lathe-Chucks for Turning Polygonal Bodies, of which the following is a specification.

The object of this invention is to turn on the common lathe polygonal bodies without the use of special complicated machinery or gears; and the invention consists of a lathe-chuck the heads of which are laterally adjustable on a connecting-shaft. The heads are provided with recesses or sockets for the ends of the bodies to be turned. They are rigidly secured against axial motion by intermediate brace-pieces, which are set by pins into socket-holes of the heads. The recesses of the heads are arranged in a circle around the center shaft, so that the sides of the bodies can be successively turned, one after the other, by changing the position of the bodies after one side is finished.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved lathe-chuck for turning polygonal bodies. Fig. 2 is an inside view of one of the heads of the chuck. Figs. 3 and 4 are vertical transverse sections through the center shaft and bodies to be turned, showing the head and the retaining-braces; and Fig. 5 is a perspective view of a body or article turned by my improved lathe-chuck.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a shaft, which is mounted between the centers of the lathe, and B B are two disk-shaped heads, the distance between which is equal to the length of the bodies to be turned by means of the lathe-chuck. The heads B, which are made either of wood or metal, are secured by any suitable means to the shaft A, but preferably in such a manner that one or both are laterally adjustable upon the same, for the purpose of admitting the insertion of the bodies to be turned between the heads.

The bodies C C are provided at their ends with square tenons *a*, which are inserted into corresponding mortises *b* of the heads B. The cross-section of the end tenons and end mortises, however, corresponds to the number of sides which the bodies to be turned should receive. The drawings show the lathe-chuck constructed for turning bodies having four sides, in which case, therefore, the tenons and mortises are made of square cross-section. Should the bodies be turned with three sides it would be necessary to employ tenons and mortises of triangular shape. For polygonal bodies the tenons and mortises should be in the shape of regular polygons, the sides of which correspond to the number of sides of the bodies to be turned.

For the purpose of mounting the bodies C between the heads the same are placed in position in the mortises, and one of the heads, or both, tightly closed up upon the same by being adjusted toward each other upon the shaft A. The axial motion of the bodies in the mortises is prevented by means of short angular or segmental brace-pieces D, which are secured to the heads B by pins or studs *d*, that are inserted in socket-holes *d'* of the heads B. The chuck is then placed between the lathe-centers and turned according to the pattern, so as to produce the profile of one side on all the bodies. One of the heads is then loosened and all the bodies between the heads turned around an angle of one hundred and eighty degrees and secured again by the heads so as to expose the opposite side to the action of the cutter. This side is then turned to the required profile, and then the third, and finally the fourth, sides turned off in the same manner. The sides of the bodies are not planes, but rotary curves, which, however, when the heads are of proper size, is hardly noticeable and not at all objectionable for practical purposes.

For turning longer bodies the size of the heads and the length of the shaft A have to be proportionately increased.

The number of bodies to be mounted between the heads of the chuck may be increased to any number, according to the size of the same.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

In a lathe-chuck for turning polygonal bodies, the combination of the revolving spindle A with laterally-adjustable heads B, having mortises equidistant from the spindle for receiving the end tenons of the bodies, and with brace-pieces D, secured to the heads intermediately between two adjoining bodies for clamping the same to the heads, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 30th day of July, 1880.

LUDWIG WEISSE. [L. S.]

Witnesses:
LUDWIG SCHULER SCHUTZ,
FREDK. RUDOLPH.