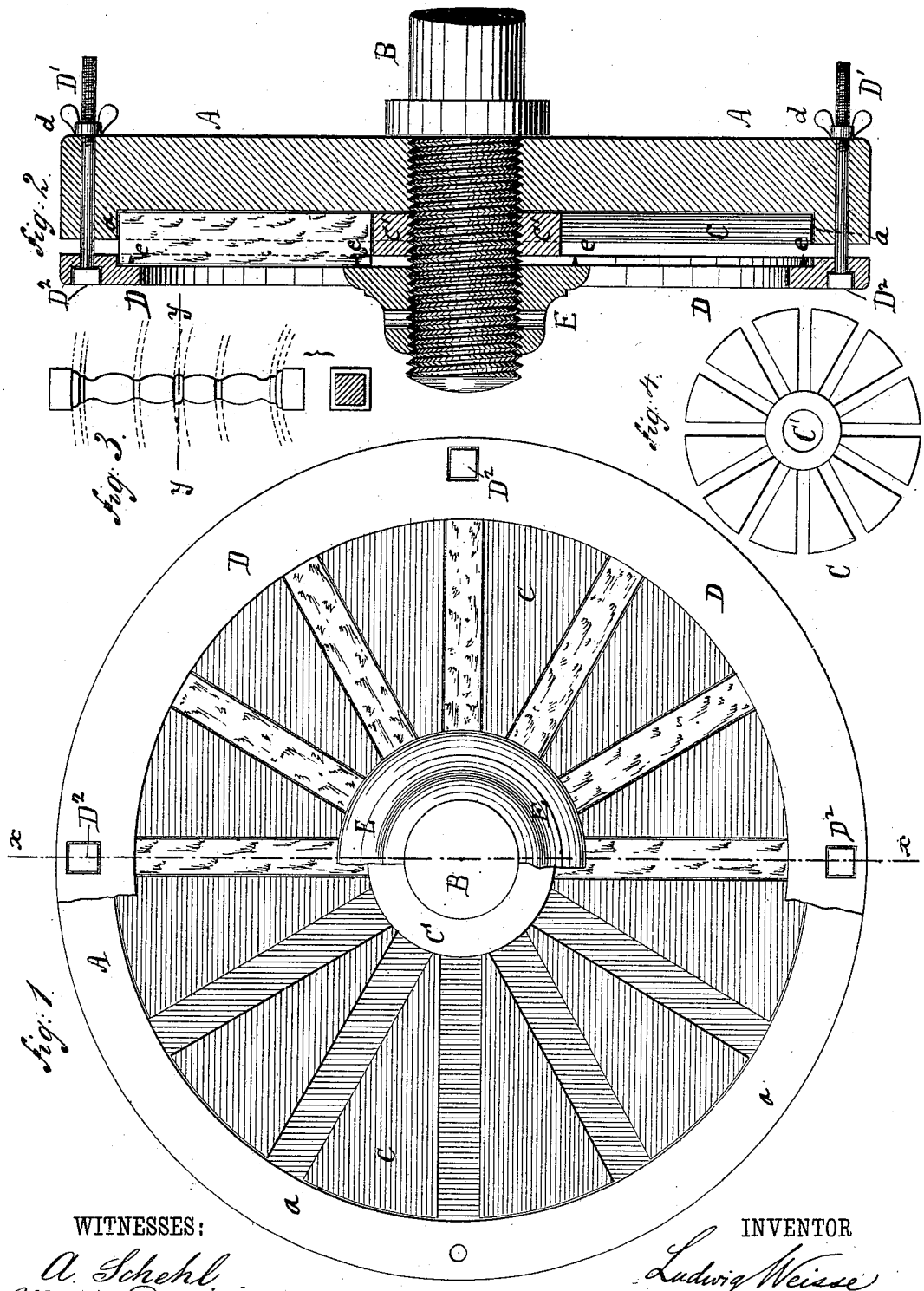
(No Model.)

L. WEISSE.

LATHE FOR TURNING POLYGONAL FORMS.

No. 298,528. Patented May 13, 1884.



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LUDWIG WEISSE, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND OSCAR HOLZER, OF SAME PLACE.

LATHE FOR TURNING POLYGONAL FORMS.

SPECIFICATION forming part of Letters Patent No. 293,528, dated May 13, 1884.

Application filed August 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG WEISSE, of the city, county, and State of New York, have invented certain new and useful Improvements in Lathes for Turning Polygonal Forms, of which the following is a specification.

This invention relates to lathes in which either a plain or profiled knife may be used for turning wooden strips or blanks into polygonal shapes for furniture, stair-railings, and other purposes.

In the accompanying drawings, Figure 1 represents a front view of my improved lathe for turning square or polygonal bodies. Fig. 2 is a vertical transverse section of the same on line *x x*, Fig. 1. Fig. 3 is a detail side view, and a section on line *y y*, of a piece of wood turned according to my method; and Fig. 4 is a detail view of the radially-slotted disk that retains the wooden blanks in position for turning.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a disk of suitable size and material that is firmly applied to the end of a shaft, B, that revolves in suitable bearings. The face of the disk A is depressed, so as to provide the required space for a radially-recessed guide-disk, C, the recesses of which serve to hold the wooden strips or blanks of square cross-section that are to be turned off. The guide-disk C is made with a central hub, C′, that is placed on the threaded end of the shaft B. A circumferential shoulder, *a*, of the main disk A serves to support, in connection with the guide-disk C and its hub C′, the strips or blanks to be turned at their ends and sides, so as to prevent them from changing their position. The size of the radial recesses of the guide-disk C varies according to the different lengths and thicknesses of the blanks to be turned, preferably as many guide-disks being used in connection with the revolving main disk A as there are different sizes of blanks to be turned off. The ends of the strips or blanks are rigidly attached to the main and guide disks A and C by a clamping-ring, D, of the same diameter as the main disk A, and by a central clamping-ring, E, which latter is screwed upon the threaded end of the shaft, so as to press on the inner ends of the blanks. The exterior ring, D, is rigidly clamped against the outer ends of the strips by means of screw-bolts D′, having square heads D^2, that enter into square recesses of the clamping-ring D, screw-bolts being attached to the main disk A by thumb-nuts *d*, as shown clearly in Fig. 2. The clamping-rings D and E are provided at their inner faces with projecting spurs or teeth *e*, that exert an additional binding action against any displacement of the strips or blanks on the main disk. The cutting-knife is held in front of the revolving disk, and moved either along a guide-rest having the same profile as that which is to be reproduced on the wooden strips, or a profiled cutting-knife of the same length as the wooden strips may be used, by which the strips are cut to the proper shape. The transverse lines of the profiles formed on the blanks are concentric to the center of the main disk, as shown in Fig. 3, while the sides of the finished articles are perfectly straight between the longitudinal edges of the same.

When the main disk A is made of proper size so that the blanks can be secured thereto at some distance from the center of the revolving shaft, the curvature of the transverse lines of the profile is hardly noticeable. When one side of the strips is turned off, the clamping-rings D E are loosened sufficiently to admit the removal of the blanks from the recesses of the guide-disk C, after which they are then turned and reinserted into the disk C, so that their next adjoining side is exposed.

The clamping-rings are tightly clamped against the ends of the strips, and the exposed side turned off, and so on until the blanks are finished on all sides according to the profile. In this manner a large number of profiled wooden pieces, to be used in the manufacture of furniture, for stair-railings, and other purposes, may be turned in square or polygonal shape and according to any desired profile in a shorter time and with a higher degree of perfection than by the methods heretofore employed.

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

1. The combination, substantially as described, of a rotary main disk, a supplement-

ary disk arranged on the face of the main disk, and provided with radial slots adapted to receive polygonal blanks to be turned, a central clamping-nut which shuts over the inner ends of said blanks, a circumferential clamping-ring which shuts over the outer ends of said blanks, and means for adjustably securing said ring to the main disk.

2. The combination, substantially as set forth, of a rotary shaft, a main disk fixed thereto having an outward circumferential flange, a supplementary disk of smaller diameter adapted to fit within the flange of the main disk, said supplementary disk being provided with radial slots adapted to receive polygonal blanks to be turned, a central clamping-nut which shuts over the inner ends of said blanks, a circumferential clamping-ring which shuts over the outer ends of said blanks, and means for adjustably securing said ring to the main disk.

3. The combination, substantially as set forth, of a rotary main disk, a supplementary disk arranged on the face of the main disk and provided with radial slots adapted to receive polygonal blanks to be turned, a central clamping-nut which shuts over the inner ends of said blanks, a circumferential clamping-nut which shuts over the outer ends of said blanks, provided with spurs or teeth for grasping the same, and means for adjustably securing said ring to the main disk.

4. The combination, substantially as described, of a rotary disk provided with a circumferential flange, a central clamping-nut for holding the inner ends of polygonal blanks to be turned, a circumferential clamping-ring also for holding said blanks, and means for adjustably securing said ring to said disk.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

LUDWIG WEISSE.

Witnesses:
PAUL GOEPEL,
CARL KARP.