P. Hutchins, Jr.,

Making Wooden Trays, &c.

No. 5,306. Patented Sep. 25, 1847.

Fig. 2

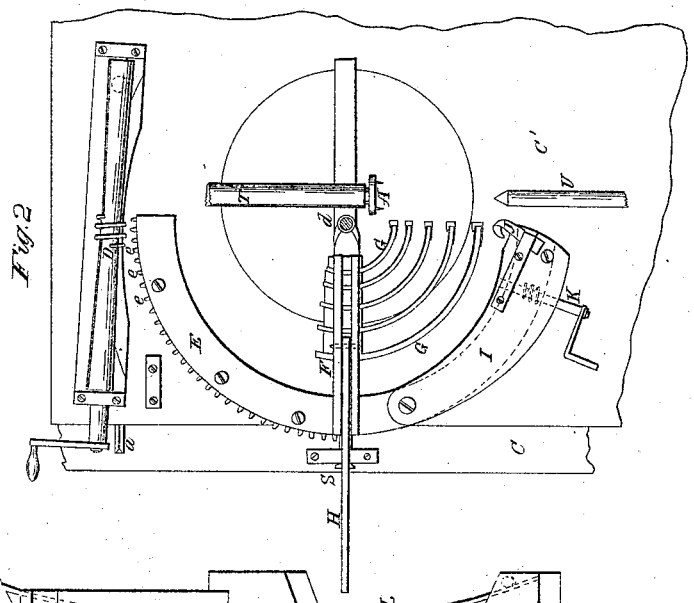
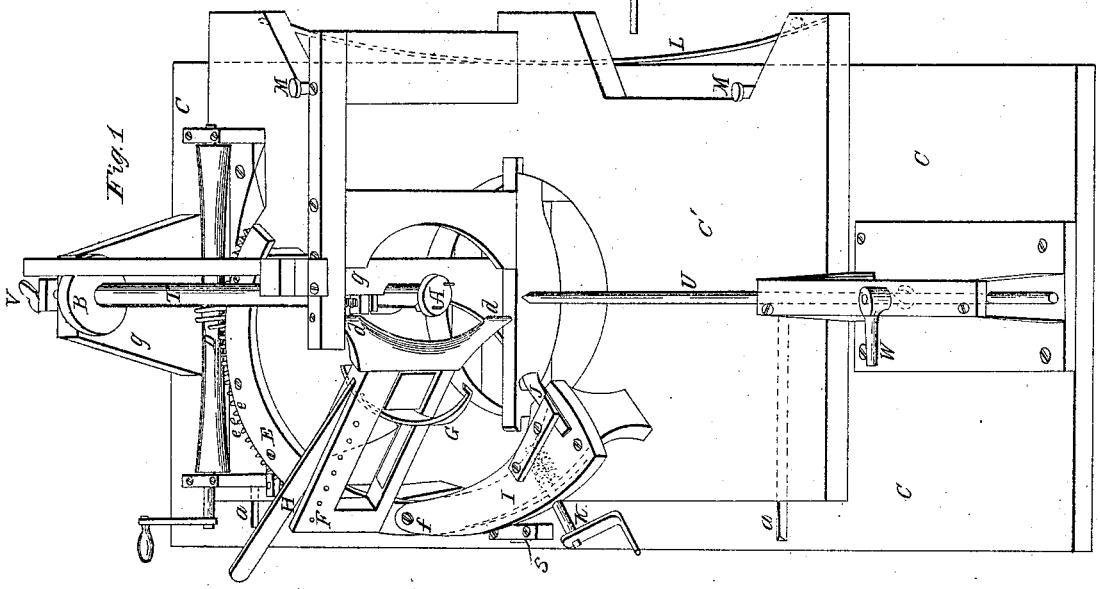


Fig. 1



UNITED STATES PATENT OFFICE.

PARLEY HUTCHINS, JR., OF WORTHINGTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINERY FOR TURNING BOWLS.

Specification forming part of Letters Patent No. **5,306**, dated September 25, 1847.

To all whom it may concern:

Be it known that I, PARLEY HUTCHINS, Jr., of Worthington, in the county of Hampshire and State of Massachusetts, have invented a new and useful Machine for Turning Wood Bowls or Dishes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a top view, with part of machine taken out.

The letters are the same for the same parts in both views.

The nature of my invention consists in turning bowls or dishes from blocks of wood or any other suitable material by means of one or more knives shaped in a curved form and placed in a frame made for holding them, which frame being made fast to the middle of a semicircular arm, said arm having cogs or teeth which are operated upon by an endless screw for the purpose of moving the said semicircular arm and knife-frame up to the revolving block of wood for the purpose of turning off bowls or dishes, as set forth and hereinafter described.

A represents the chuck, on which the block of wood is secured and from which the bowls or dishes are to be turned; B, pulley, which gives motion to the chuck A; C, stationary bottom piece; *g g*, standards for mandrel, which contains the chuck; C′, movable bottom containing endless screw D and semicircular arm E with knife-frame F.

The bottom of movable frame C′ moves on slides *a a*; *e e*, &c., cogs or teeth on semicircular arm E, knife-frame F fastened to the middle of the semicircular arm E at one end, the other end turning upon pivots *d d*; G G, &c., turning-knives; H, lever for securing firmly the knife or knives; I, movable piece containing the gouge J; K, screw for regulating the gouge; L, spring which acts upon the movable frame C′; M M, pins which prevent the movable frame from sliding too far.

V is a set-screw, which, in conjunction with the clasp W on the center-pin U, adjusts the chuck and center-pin longitudinally, and thereby moves the block of wood with regard to the knife so as to determine entirely or in conjunction with the sliding frame C′ the thickness of the bowl to be cut.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The chuck A is elevated to a proper height for the operation of the machine, being fixed on one end of a mandrel T with a set-screw V. The other end of the mandrel receives the pulley B, by which motion is given to the chuck A, holding the piece of wood from which bowls or dishes may be turned. A center-pin U holds the other side of the block, and has a set-screw or clasp W, as represented. The knife-frame F turns upon its pivots *d d* in a cross-piece at bottom and at the top of the movable frame C′, and, being firmly fixed to the semicircular arm E at the other end, is moved forward with the knife or knives to the revolving block of wood by means of the endless screw D, acting upon cogs or teeth *e e*, &c., on the outside of a part of the semicircular arm E. The other part of said arm E and nearest to the chuck A contains a gouge J, secured to a movable piece I. The gouge is for the purpose of turning off the outside of the round part of the block, as represented in the annexed drawings, and which is done previous to putting the knives in their frame.

The movable piece I, containing the gouge J, works upon a pivot *f*, and is moved forward or backward by means of a screw K, as described above.

I make the turning-knives in any of the known modes for turning curves, and curve them to suit a small or large curve, having one for every size bowl or dish that I wish to turn or cut from a block of wood. The turning-knife is fastened to a piece of wood or iron, and is let or set into the knife-frame F, then held to its place by the lever H until the operation of cutting or turning a bowl is completed. It is then lifted up and the knife taken out, when a smaller knife is substituted for cutting a smaller bowl from the piece of wood yet left unturned, &c.

To facilitate the operation of turning off bowls or dishes, as above stated, I employ one, two, three, four, or more knives at a time by putting them in one frame, and cause each knife to turn off its own bowl or dish, as shown in Fig. 2 of the annexed drawings, and

any number of knives are, when properly arranged in said frame, held together and made permanent by means of said lever H, as before described, and, as in case where only one knife is used.

The operation of my machine is commenced by setting the pulley B in motion, which turns the mandrel which contains the chuck A, whereon that piece of wood or block is affixed from which it is intended to turn bowls or dishes. The semicircular arm E is moved around by means of the endless screw D working in the cogs *e e*, &c., on the periphery of a part of the semicircular arm E toward the chuck A, thereby bringing the knife or knives in knife-frame in contact with the block of wood which is revolving rapidly, causing the knives to enter and cut one or more bowls or dishes in a very short time, using one or more knife or knives for the performance of the above said operation. The mandrel T, its set-screw V, and the center-pin U and its clasp W are intended to operate in conjunction with the frame C′ and its fixtures in determining the thickness of the bowls or dishes to be cut when one knife is used. The movable frame C′, containing the semicircular arm E, knife-frame F, endless screw D, &c., runs upon the slides *a a*. The object of this arrangement is to assist in accommodating the knife to the thickness and size of the block of wood and to assist in varying the thickness and size of the bowls or dishes. This is accomplished by the set-screw S, which moves the platform C′ toward or from the chuck A, and this motion brings the knife nearer to or farther from the external surface of the block.

Having thus fully and clearly described the construction and operation of my machine for turning wood bowls or dishes, what I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the semicircular arm E with the knife-frame F, holding one or more knives, and adjustable piece I, holding the gouge J, for the purpose of turning wood bowls or dishes, and, in combination therewith, the manner of regulating the thickness and size of bowls or dishes to be turned off by means of the sliding or movable bottom C′ and the adjustable mandrel T and center-pin U, for the purpose of turning wood bowls or dishes, in the manner as herein set forth and described.

September 15, 1847.

PARLEY HUTCHINS, JR.

Attest:

D. WALKER,

T. M. MILBURN.