A. R. Reese,

Making Barrels.

No. 70,263. Patented Oct. 29, 1867.

Fig. 1

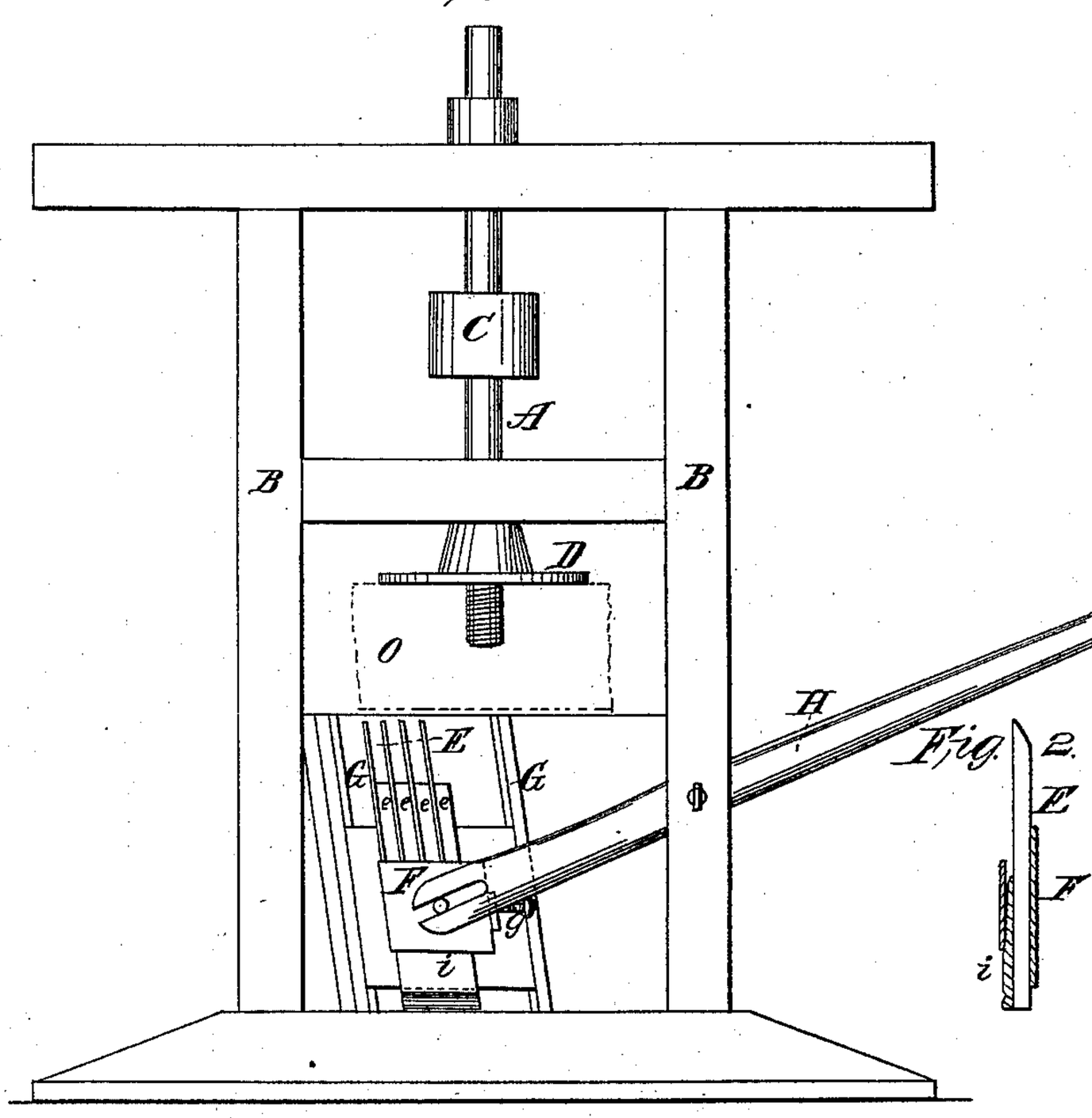

Fig. 2.

Fig. 3

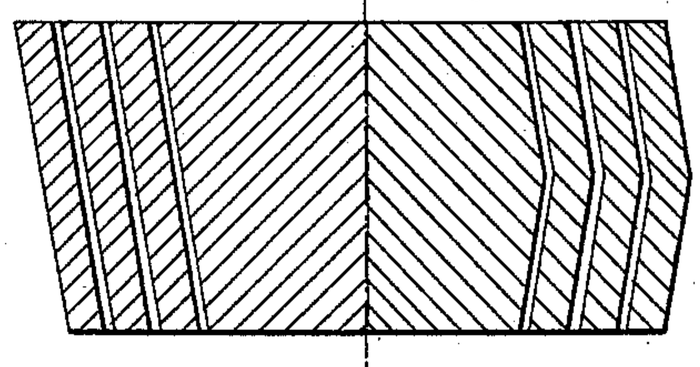

Fig. 4

Witnesses.

J. B. Peyton

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by his Attys

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United States Patent Office.

ADAM R. REESE, OF PHILLIPSBURG, NEW JERSEY.

Letters Patent No. 70,263, *dated October* 29, 1867.

IMPROVEMENT IN MACHINES FOR MAKING WOODEN WARE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ADAM R. REESE, of Phillipsburg, in the county of Warren, and State of New Jersey, have invented certain new and useful Improvements in Machinery for Turning Buckets, Kegs, or other similar articles from a solid block of wood, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings which make part of this specification, and in which—

Figure 1 represents a view in elevation of my improved machine.

Figure 2, a view showing the mode of fastening the cutters in the cutter-stock.

Figures 3 and 4 represent sections through the block; fig. 3 showing the blocks cut through with a straight taper for buckets, &c., and fig. 4 showing the block cut through with a double taper to form kegs.

It is the object of my invention simultaneously to cut from a solid block a series of concentric hollow cones or frusta of cones to form the sides of buckets or kegs, and to this end my improvement consists in combining a mandrel revolving in a fixed position on a vertical axis, and carrying the block to be cut, with a series of parallel cutters moving up and down in a frame at a slight angle to the mandrel, as hereinafter described.

In the accompanying drawings a mandrel, A, is shown as mounted in suitable bearings in a frame, B, and rotated by a band encircling the pulley C, or in any other well-known and proper way. A face-plate and screw, D, secured upon the mandrel, holds the block to be cut. The cutters E are arranged parallel to each other, and side by side in a sliding frame, F, moving in guides G, and moved up and down by a lever, H, or in some other well-known way. To secure the cutters in their holder, they are placed side by side, with blocks *e* between them, and cramped by a set-screw, *g*, at the sides, and a wedge, *i*, at the front. By this means the cutters can readily be removed and replaced.

The operation of the machine is as follows: A rapid rotation is given to the block O, shown in red in fig. 1. The cutters are then steadily moved up against the block, into which they cut at an angle to the mandrel, as shown in fig. 1, cutting out a series of concentric cones, as indicated in fig. 3. In practice, however, I prefer to cut the block nearly through, and then to separate the cones by cutting the block transversely. The form shown in fig. 3 answers best for vessels of a uniform taper, such as buckets, &c. To cut vessels tapering both ways from the centre, such as white-lead kegs for instance, I cut the block half way through at one angle, and then reverse it in the holder and cut the other way. It is obvious that the taper of the cones could be varied by changing the angle at which the cutters enter the block. It is also obvious that either the guide-frame or the cutter-frame may be rendered laterally adjustable to vary the distance of the cutters from the mandrel, and consequently the size of the cones to be cut.

The buckets are intended to be made of green wood, and to have a bottom of seasoned wood inserted. The shrinking of the bucket will make it tight. The bucket might also be split after being cut, and a bottom inserted and hooped in the usual way. In turning kegs, should the bulge of the inner one exceed the diameter of the kerf of the outer keg, the splitting of the outer one would of course be necessary before the removal of the inner one.

Previous to my invention the only way of turning buckets, of which I have any knowledge, was either by a single straight cutter moving horizontally, and acting on a block rotating on a horizontal axis, or by a series of parallel curved cutters having a swinging horizontal movement, and acting on a block carried by a horizontal axis. The former plan would cut but one cone at a time, the latter would cut a series of concentric curves, but the curved knives are objectionable from their tendency to spring, and in both machines the chips would be apt to clog the spaces between the cones, all of which objections are obviated by my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the vertical mandrel, revolving in a fixed position, and carrying the block, with a series of parallel straight cutters moving in an inclined path, nearly vertical, at an angle to the block, for the purpose of simultaneously cutting a series of concentric frusta of cones from a solid block.

I also claim the combination of the mandrel with the cutters, and the guides, arranged and operating substantially as described.

In testimony whereof I have hereunto subscribed my name.

ADAM R. REESE.

Witnesses:

EDM. F. BROWN,

J. I. PEYTON.