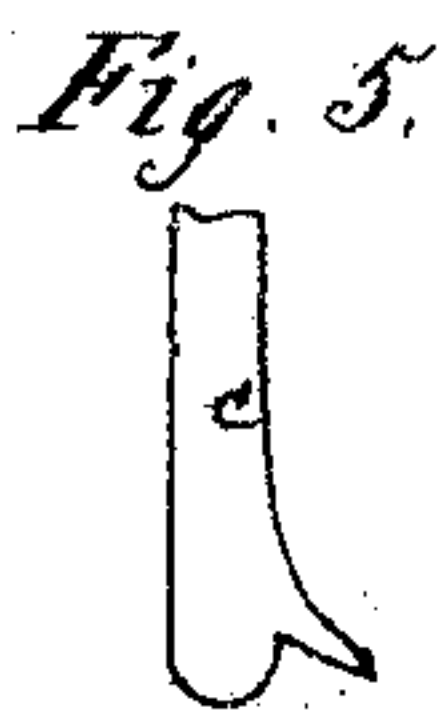
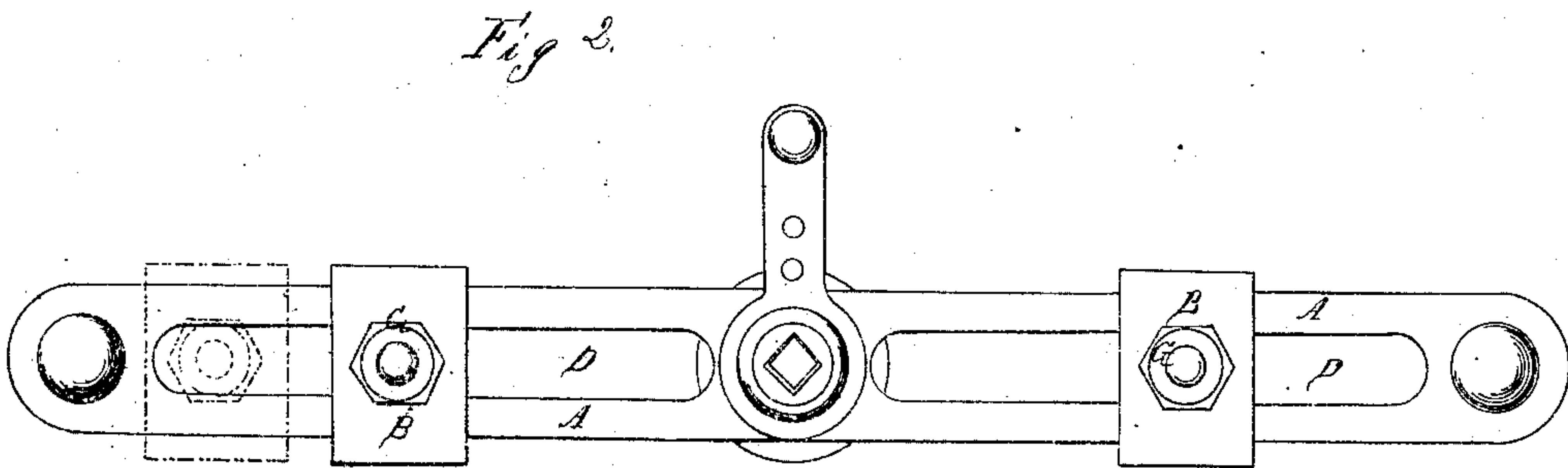
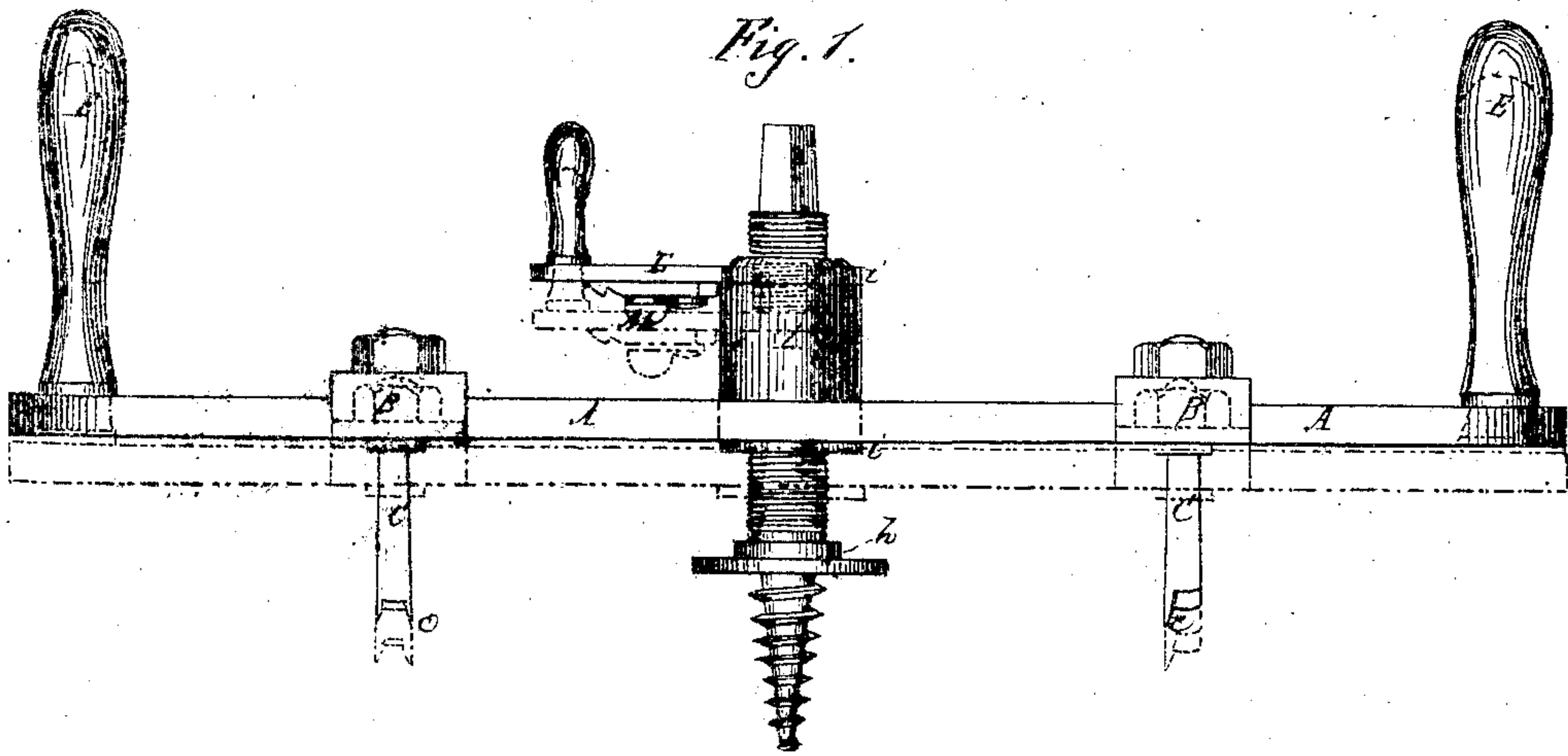
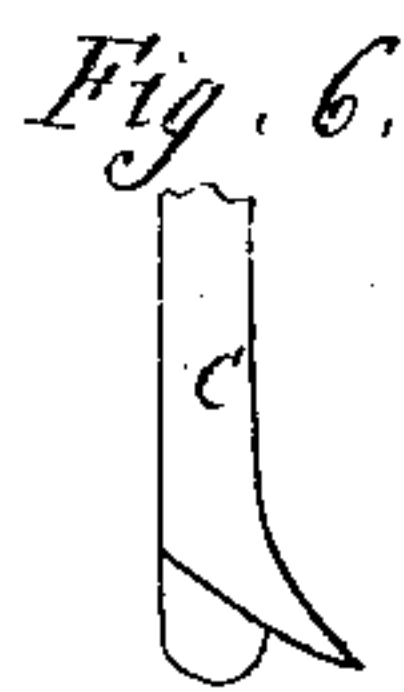
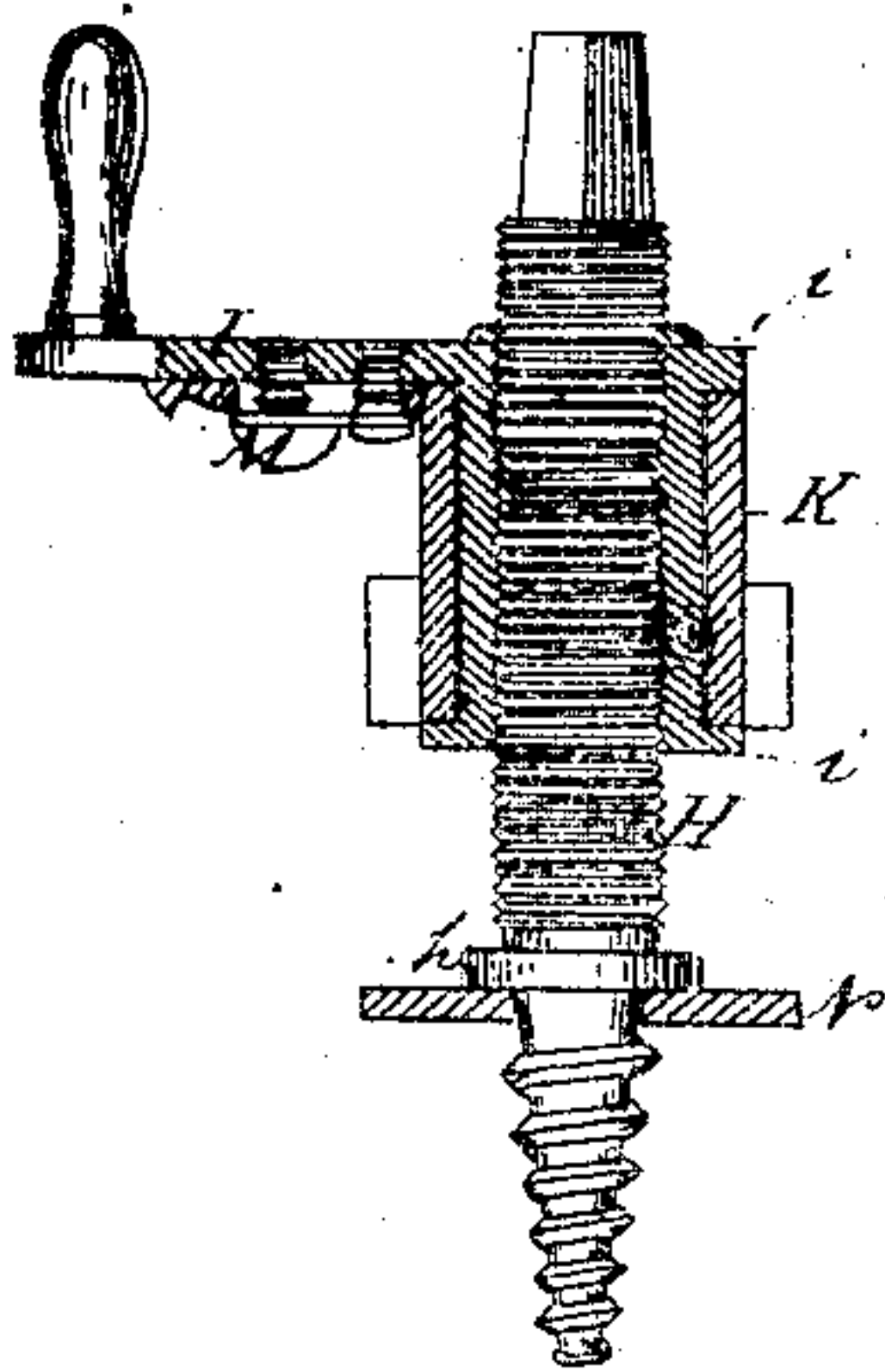


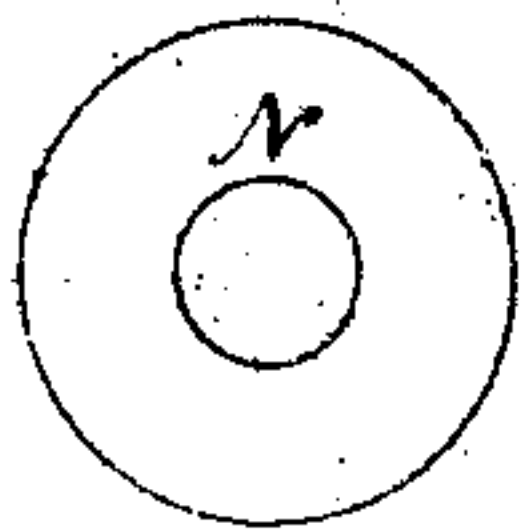
*A. Roff*  
*Wood-Boring Machine.*  
*N<sup>o</sup> 76103* *Patented Mar. 31, 1868.*



*Fig. 3.*



*Fig. 4.*



*Witnesses;*  
*A. Roff*  
*Amesbury Ind*

*Inventor;*  
*Almon Roff*  
*By Daniel Breed Atty*

# United States Patent Office.

ALMON ROFF, OF SOUTHPORT, CONNECTICUT.

*Letters Patent No. 76,103, dated March 31, 1868.*

## IMPROVEMENT IN WOOD-BORING MACHINES.

*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, ALMON ROFF, of Southport, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Circular and Ornamental Cutters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention or machine is intended principally for carpenters and other mechanics who have occasion to cut circles or curves in wood, especially for ornamental purposes. My invention consists of one or more cutters upon a rotating arm or arms provided with a central screw for fixing and holding such rotating arm, and also provided with a feed independent of the rotation of the cutters. In the accompanying drawings—

Figure 1 is a side view or elevation of my machine.

Figure 2 is a top view of the same.

Figure 3 is a transverse section through the centre of the machine.

Figure 4 is a detached view of the washer used for setting the central screw in a perpendicular to the surface to be cut.

Figures 5 and 6 are detached views of the cutters and knives.

In the construction of my machine a central screw, H, is made with two screw-threads, as seen in fig. 3. The screw-thread at the lower end is very coarse, and intended to screw into the piece of wood to be cut, and thus fix the machine stationary. A loose washer, N, is laid upon the surface of the wood, in order to secure the perpendicular position of the central screw. The upper and finer thread of this central screw is provided with a tubular nut, K, which is firmly connected to the crank L for the purpose of feeding, as will be hereafter explained. The two arms A and A' are made in one piece, and provided with a tubular collar, I, as shown in figs. 1 and 2. The arms have slots D and D' and slides B and B' for adjusting and holding the cutters C and C', as seen in figs. 1 and 2. The cutters may be of various forms, according to the work to be done. Two of these forms are represented in figs. 1, 5, and 6. For cutting circles the arms are locked to the nut K and crank L, by means of a sliding bolt, M, figs. 1 and 3, and the operator takes hold of the handles E and E' and turns the arms and cutters constantly in one direction, the cutters being thus fed down upon the central screw as the work proceeds. In cutting parts of circles, the right-hand cutter, fig. 1, is removed, and the left-hand cutter is employed alone. In this operation the arms are not locked to the feed-nut and crank, and the crank is occasionally turned to give the necessary feed, while this single cutter is worked back and forth instead of being revolved. The central screw may be fastened by being driven into the wood, or by being passed through the board and held by a nut or by a flange fastened by wood-screws or by any other proper means.

My machine will perform a great variety of work, circular, ornamental, and inlaying.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In combination with a central stationary screw or shaft, the feed-nut K, whether locked to the rotary arms, or operated by the crank L, constructed to operate substantially as set forth.

ALMON ROFF.

Witnesses:

DANIEL BREED,  
EDM. F. BROWN.