

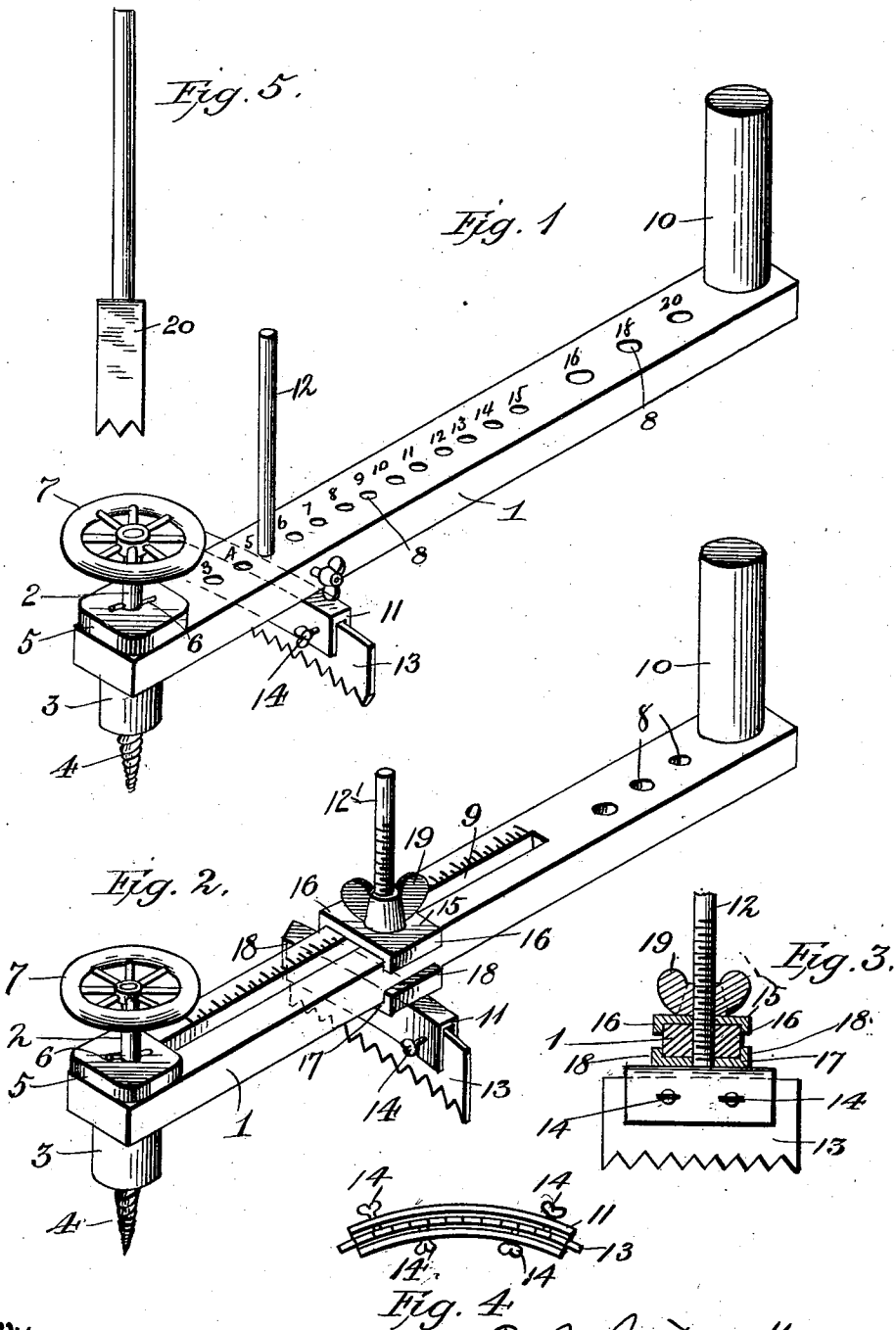
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Patented July 1, 1902.

E. O. CARTWRIGHT.
DEVICE FOR CUTTING CIRCLES.

(Application filed Mar. 13, 1902.)

(No Model.)



Witnesses
Francis L. Ormand
J. E. Lambert.

E. O. Cartwright Inventor
by Phil S. Duffie
Attorney

UNITED STATES PATENT OFFICE.

EUGENE O. CARTWRIGHT, OF AUGUSTA, ARKANSAS.

DEVICE FOR CUTTING CIRCLES.

SPECIFICATION forming part of Letters Patent No. 703,538, dated July 1, 1902.

Application filed March 13, 1902. Serial No. 98,098. (No model.)

To all whom it may concern:

Be it known that I, EUGENE O. CARTWRIGHT, a citizen of the United States, residing at Augusta, in the county of Woodruff and State of Arkansas, have invented certain new and useful Improvements in Devices for Cutting Circles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention is a device for cutting any kind of a circular or half-circular slot or hole in wood, iron, or any kind of metal. This device can be set to cut a circle or a slot any size within the length of its arm. The ordinary size of this device will be made to cut any circle, say, from three (3) to about twenty-four (24) or thirty (30) inches in diameter.

In the accompanying drawings, Figure 1 is a perspective view of my device when made chiefly of wood. Fig. 2 is a perspective view of my device when made more complicated and chiefly of steel. Fig. 3 is a cross-sectional view of Fig. 2, partly in section and partly in perspective. Fig. 4 is a bottom plan view of the clamp for holding the saw and an edge view of the saw. Fig. 5 is a face view of one of the devices for cutting the material.

My invention is described as follows: 1 is the arm. This arm is provided at one end with an axle 2, which runs down through the arm, and below the said axle there is secured on the same a spool 3, its upper end fitting against the lower face of said arm. The lower end of axle 2 extends below the end of the spool 3 and has a gimlet-point 4, so that it may be turned into the wood or other material to be cut. The said axle 2 is held in place by a nut 5, and said nut 5 is held in place by a pin 6, and on the top of the said axle 2 is secured a small hand-wheel 7. Said arm is provided from one end to the other with vertical perforations 8, numbered from "3" to "20." This arm may be much longer, if desired, and may have more perforations.

In the more complicated device I use a slot 9 instead of the perforations. In the drawings the slot 9 does not reach to the en-

tire end of the arm, but may do so. The swinging end of the arm is provided with a handle 10. A clamping device 11 is secured to the lower end of a cylindrical arm 12, and said cylindrical arm passes up through one of the perforations 8 and may be moved out farther to the end of the arm as I wish to enlarge the circle. This clamping device 11 is circular, and a saw 13 is fitted between the front and rear flanges of this device; but there is room enough between the inner walls of these two flanges to allow the saw to be curved by means of thumb-screws 14, adapting it to any circle desired to be cut.

In the more complicated device, Fig. 2, I use a threaded cylindrical circular arm 12' instead of a plain arm, as shown in Fig. 1, and in this device I use two clamping-plates—an upper clamping-plate 15, provided at each end with downwardly-extended flanges 16, which clamp each edge of the arm and keep it from spreading, and a lower clamping-plate 17, having at each end upwardly-projecting flanges 18, performing the same function that the downwardly-extended flanges perform.

The lower end of the threaded arm 12 is secured to the upper edge of the clamping device 11 and passes up through circular perforations in the plates 15 and 17 and slot 9 in the arm 1, and working on this threaded arm 12' is a thumb-nut 19, which turns down and clamps the pieces just described together and holds the saw firmly in position.

The upper face of the arm 1 of the more complicated device is provided with a scale, so that I can cut my circle any size I may desire, to the sixteenth or thirty-second part of an inch.

For cutting iron, steel, and the like I prefer to use a small iron-saw 20. This tool 20 consists of a bit having three or more teeth and an arm similar to arm 12, above described, the arm passing through one of the perforations 8. The said arm may be provided with threads and may be used on the more complicated device. (Shown in Fig. 2.)

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

1. A device for cutting circular slots or circles, consisting of a swinging arm, having secured in one end an axle 2, passing vertically

through said arm, its lower end terminating in a gimlet-point; a spool 3, secured on the lower end of said axle, and against the lower face of the arm; a hand-wheel 7, rigidly secured to the upper end of the said axle; said axle held in place by a nut 5, and a pin 6; a handle 10, secured on the swinging end of said arm; a cylindrical arm passing up through said swinging arm, and adjustably secured in said arm, by means of a nut; a clamping device secured to the lower end of said cylindrical arm, and a saw 13, adjustably secured in said clamping device, by means of thumb-nuts 14, substantially as shown and described and for the purposes set forth.

2. A device for cutting circular slots or circles, consisting of a swinging arm, having secured in one end, an axle, terminating in a gimlet-point; a hand-wheel rigidly secured to the upper end of said axle; a handle secured to the swinging end of said swinging arm; a threaded cylindrical arm passing down

through said swinging arm; a clamping device secured to the lower end of said threaded circular arm; a saw secured in said clamping device; nuts passing through the walls of said clamping device, and adapted to curve said saw; a clamping-plate fitting against the upper edge of said clamping device, and the lower face of the swinging arm; a clamping-plate fitting against the upper face of said swinging arm, each plate provided with flanges grasping the edges of said swinging arm; a thumb-nut turning down on said cylindrical threaded arm, and adapted to clamp said clamping device and said plates to said swinging arm, substantially as shown and described and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

E. O. CARTWRIGHT.

Witnesses:

T. E. BONNER,

O. E. JOHNSON.