

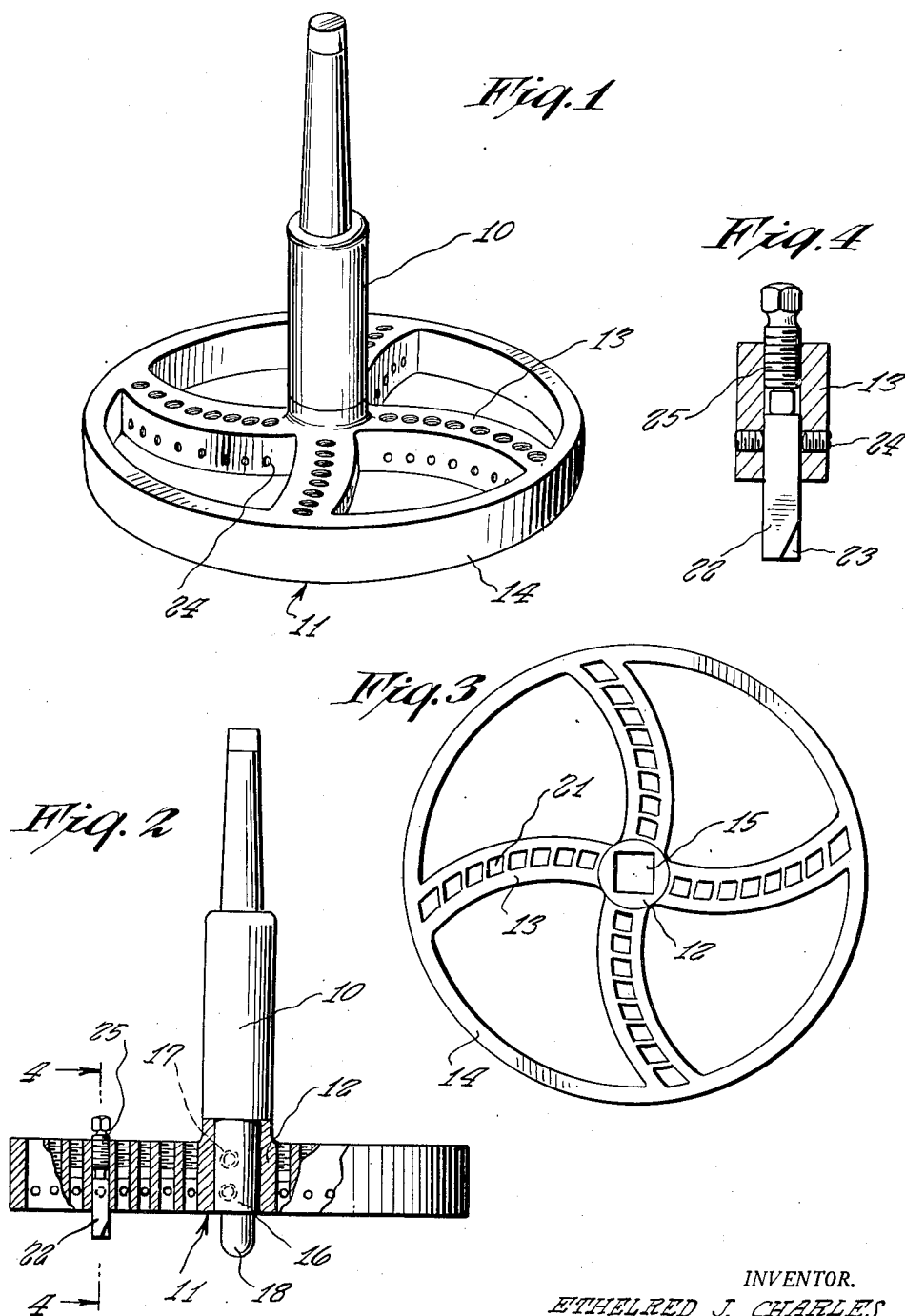
Nov. 25, 1952

E. J. CHARLES

2,618,991

CIRCLE CUTTER

Filed Dec. 31, 1948



INVENTOR.
ETHELRED J. CHARLES
BY
Carl Miller
ATTORNEY

UNITED STATES PATENT OFFICE

2,618,991

CIRCLE CUTTER

Ethelred J. Charles, Brooklyn, N. Y.

Application December 31, 1948, Serial No. 68,653

1 Claim. (Cl. 77—69)

1

This invention relates to a circle cutter.

It is an object of the present invention to provide a circle cutter for use with drill presses and the like machines for cutting from sheet material circles wherein the same tool can be employed for cutting different size circles and wherein there is a plurality of cutting tool openings radially spaced from a hub center.

It is another object of the present invention to provide a circle cutter wherein the arms for containing the cutting element are protected with a circle portion and wherein the operator is kept from getting his fingers in the path of these arms by such guard.

Other objects of the present invention are to provide a circle cutter which is of simple construction, inexpensive to manufacture, compact, easy to adjust for different size circles and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

Fig. 1 is a perspective view of the circle cutter embodying the features of the present invention.

Fig. 2 is a side elevational view of the circle cutter with portions broken away to show the interior construction thereof.

Fig. 3 is a bottom plan view of the circle cutter.

Fig. 4 is a vertical sectional view taken on line 4—4 of Fig. 2.

Referring now to the figures, 10 represents a shank portion adapted to fit a drill press or the like machine and to which there is fitted a cutter portion 11 having a hub 12, radially extending arcuate shaped arms 13 and a circle ring 14 integrally connected to the arms. The hub 12 has a square opening 15 for receiving a squared portion 16 of the shank 10 and to which the hub is fixed by set screw 17. A round projection depends from the squared portion 16, as indicated at 18, and this will fit into an opening for retaining the shank portion 10 properly aligned with the material. The disc to be cut preferably has a central opening into which the depending portion 18 is projected.

In each of the arms and extending upwardly from the bottom faces thereof are square openings 21 for receiving a cutting tool 22 having a cutting edge 23 thereon. This tool is held in place by set screws 24 extending laterally through the arm for engagement with the tool. The ver-

2

tical position of the cutting elements 22 is fixed by a vertically adjustable threaded screw stop 25 threaded into each of the openings 21 at the top ends thereof.

A cutting tool can be applied to each arm so as to effect a multiple cutting operation upon the material. The ring portion 14 will serve as a guard to prevent the operator from getting his fingers into the path of the arms and tool elements.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

Having thus set forth and disclosed the nature of my invention, what is claimed is:

A circle cutter comprising a shank adapted to be fitted into a drill press or the like machine, a squared portion on the lower end of the shank, a cutting wheel having a hub with a squared opening adapted to receive the squared portion of the shank therein, means for securing the shank to said wheel, radially outwardly curved arms extending from the hub portion each having a series of openings threaded therein, said openings each being threaded in the upper portion thereof, a cutting tool in one of the openings and projecting downwardly from the bottom face of the arm, an adjustable stop adapted to be threadably connected to the threaded portions of the openings against which the cutting tool may abut, said squared portion of said shank having a depending centering projection, a circular ring integral with the ends of said arms and extending therearound to serve as a guard for the operator, and set screw means in the arms for fixing the cutting element against downward displacement from the openings.

ETHELRED J. CHARLES.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
295,466	Wallace	Mar. 18, 1884
1,049,455	Clarkson	Jan. 7, 1913
1,467,430	Hurd	Sept. 11, 1923
1,898,051	Head	Feb. 21, 1933
2,468,562	Lank	Apr. 26, 1949