March 1, 1949. J. D. DEL MONTE ET AL 2,463,024

HAND TOOL FOR CUTTING CIRCULAR OPENINGS

Filed Feb. 11, 1947

Fig. 1

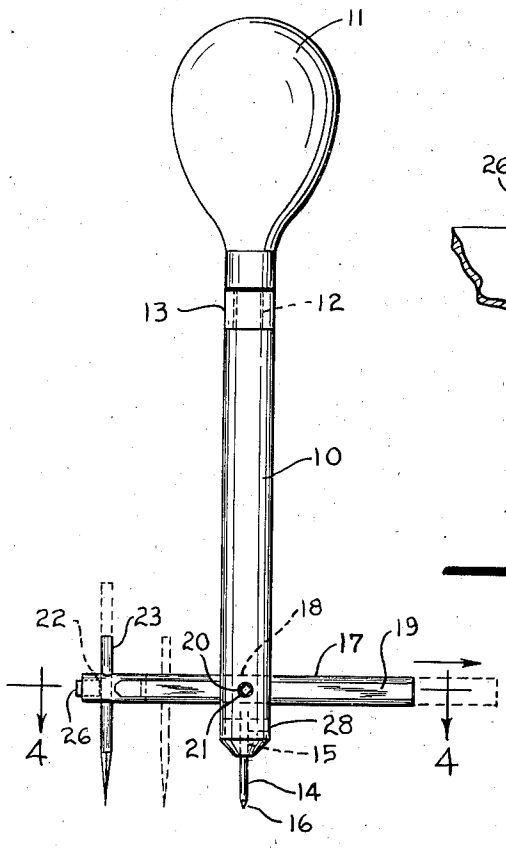


Fig. 2

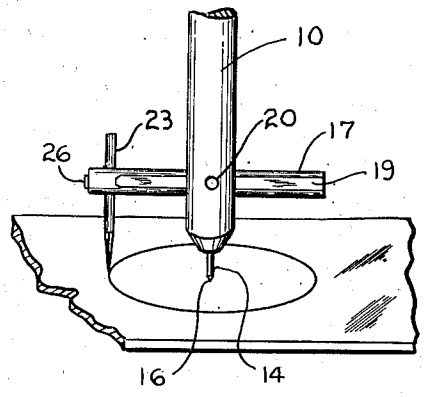


Fig. 3

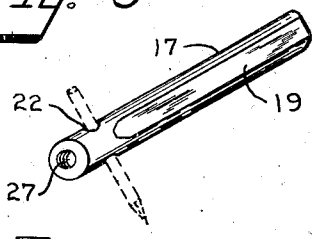


Fig. 4

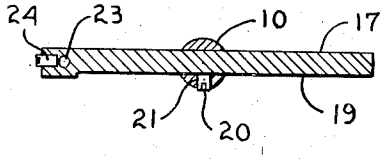
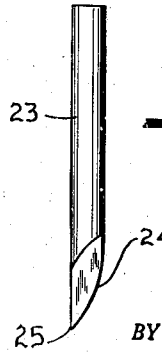


Fig. 5



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HAND TOOL FOR CUTTING CIRCULAR OPENINGS

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1 Claim. (Cl. 30—310)

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This invention relates to devices for cutting circular openings and while not limited thereto the same has particular reference to a hand tool for cutting circular openings in mountings for receiving coins and the like.

The invention has in view a hand tool of said character which is adapted to cut true circular openings having neat and sharp peripheral edges arranged at right angles to the surface of the mounting.

Another object of the invention is the provision of a cutting blade which is vertically adjustable for cutting openings of different depth or through varying thickness of mountings and which is readily adjustable for cutting openings of varying sizes.

Another object of the invention is the provision of a shank having a hand engaging means for steadying and holding the tool in upright relation and a hand engaging means for turning the tool for producing circular openings.

With the foregoing and other objects in view, reference is now made to the following specification and accompanying drawings in which the preferred embodiment of the invention is illustrated.

In the drawings:

Fig. 1 is a view in elevation of a hand tool for cutting circular openings constructed in accordance with the invention.

Fig. 2 is a fragmentary perspective view thereof shown in position on a mounting.

Fig. 3 is a perspective view of the adjustable arm with the blade shown in dotted outline in position therein.

Fig. 4 is a transverse sectional view taken approximately on line 4—4 of Fig. 1.

Fig. 5 is an enlarged view of the cutting blade.

Referring to the drawings by characters of reference, the tool includes a shank 10 having an enlarged rounded upper end 11 which forms a handle member adapted to be grasped in one hand of the operator for rotating the shank. Adjacent the handle member 11 the shank is provided with a circumferentially extending groove or recess 12 in which is freely arranged a ring or band 13 adapted to be grasped between the thumb and finger of the other hand of the operator for steadying the shank and for holding the same in upright relation as the shank is rotated.

The shank 10 is provided with a center pin 14 secured in a centrally located bore 15 in the lower end portion thereof and arranged with the outer end of the pin protruding therefrom and formed with a point or sharpened extremity 16 adapted

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for engagement in the mounting to thereby form the center or axis about which the tool is rotated in cutting the circular openings.

In order to provide means for cutting circular openings of different sizes in mountings for coins and the like and with sharp edges at right angles to the surface of the mounting, an arm 17 is provided which is slidably fitted in a horizontally extending opening 18 in the shank adjacent the pin 14 to thereby dispose the arm 17 in horizontal alignment with the mounting and projecting radially outwardly from the shank 10 when the same is arranged in vertical relation for forming the circular openings.

The arm 17 is formed with a flat vertical face 19 on one side thereof which is adapted to be engaged by a tightening element 20 threadedly engaged in an opening 21 in the shank 10 for securing the arm 17 in position in the opening 18, the tightening element 20 being formed with a socketed outer end adapted to be engaged by a tool for loosening the same so that the arm 17 may be adjusted in the opening 18 for varying the effective length of the arm 17 for cutting circular openings of different sizes.

Extending downwardly through the outer end of the arm 17 is a cutter blade 23 formed with a downwardly and rearwardly curved cutting edge 24 which terminates in a point 25 at the rear edge of the cutter blade. The cutter blade is adapted to be secured in the opening 22 by means of a securing element 26 threadedly engaged in an opening 27 in the end of the arm 17 and which is adapted to be loosened for adjusting the cutter element 23 for varying the length of the blade below the lower end 16 of the center pin 14 for cutting circular openings through different thicknesses of mounting. The center pin 14 is releasably secured in the bore 15 by means of a stud or screw 28 engaging in a threaded opening in the shank 10.

In operation and use the band 13 is grasped between the thumb and finger of one hand of the operator for steadying the shank 10 and holding the same in vertical relation while the handle member 11 is grasped by the other hand of the operator for turning the shank together with the arm and cutter blade 23. For this purpose the handle member is made relatively large to facilitate turning of the tool and while the same is turned the band 13 is held stationary or against rotation by the operator.

What is claimed is:

In a hand tool for cutting circular openings, a shank having an enlarged upper end defining

a handle member adapted to being grasped in one hand by the operator for rotating the tool, said shank being formed with a circumferentially extending groove adjacent said handle and having a centrally disposed bore in the lower end thereof and an opening extending transversely therethrough adjacent said bore, a band member freely arranged in said groove adapted to be grasped by the thumb and finger of the other hand of the operator for steadying and holding the tool in upright relation, a center pin having a sharpened extremity secured in said bore, an arm slidably mounted in said opening in the shank for disposing the same in horizontal laterally extending relation and formed with a vertical opening in the outer end thereof, a cutter blade adjustably secured in the opening in said arm and

having a forwardly disposed downwardly and rearwardly curved cutting edge terminating in a pointed extremity and means adjustably securing said arm in the opening in said shank for varying the effective length of the shank for cutting circular openings of different sizes.

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REFERENCES CITED

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

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Number	Name	Date
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