April 30, 1963 A. F. FIELDER 3,087,520

PORTABLE RABBETING AND RECESSING TOOL

Filed Sept. 5, 1961 2 Sheets-Sheet 1

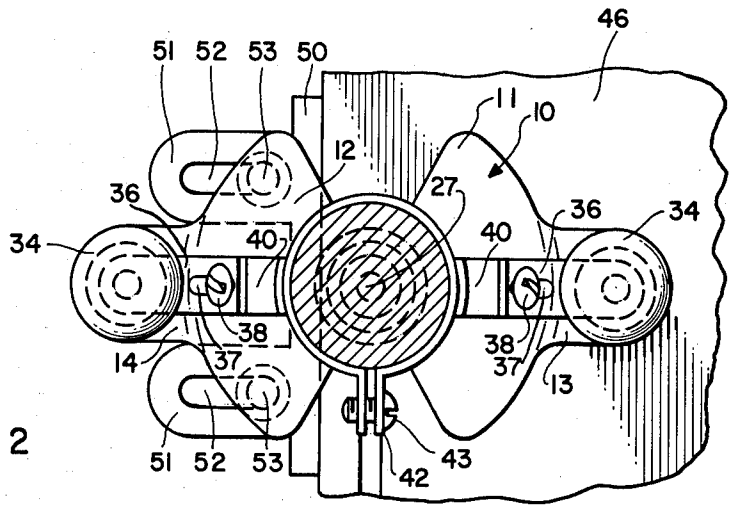


FIG 2

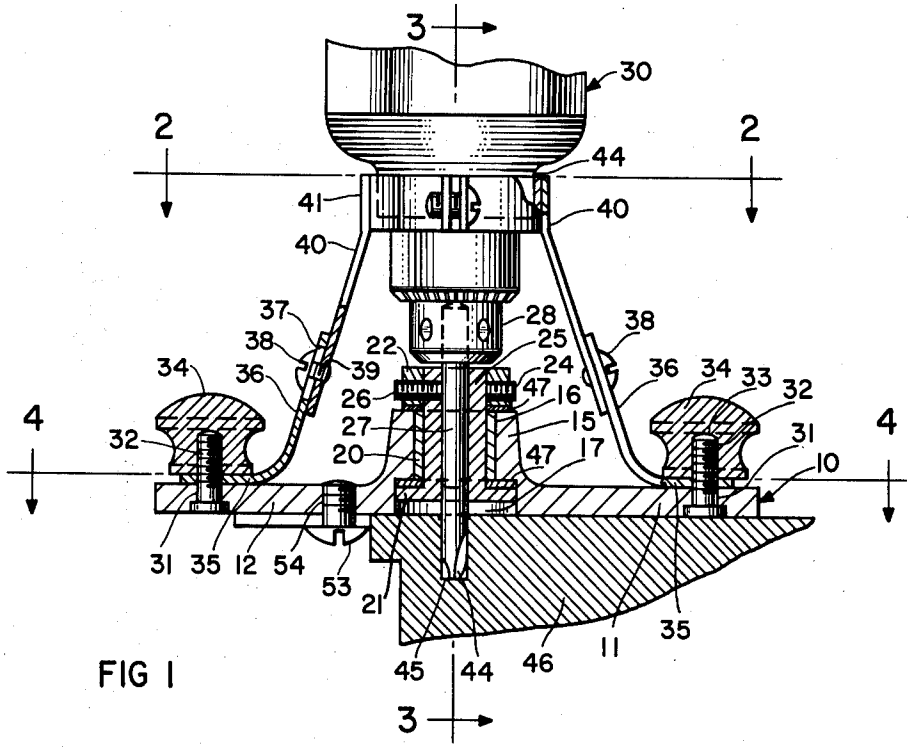


FIG 1

INVENTOR

ARTHUR FRANK FIELDER

BY Kimmel & Crowell

ATTORNEY

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PORTABLE RABBETING AND RECESSING TOOL

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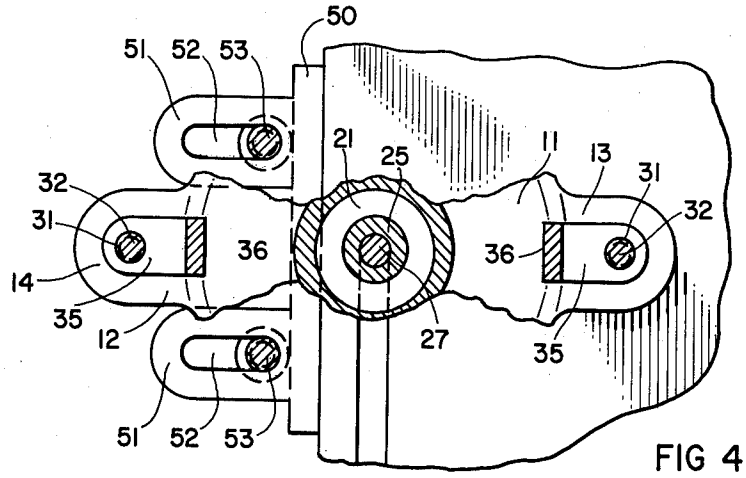


FIG 4

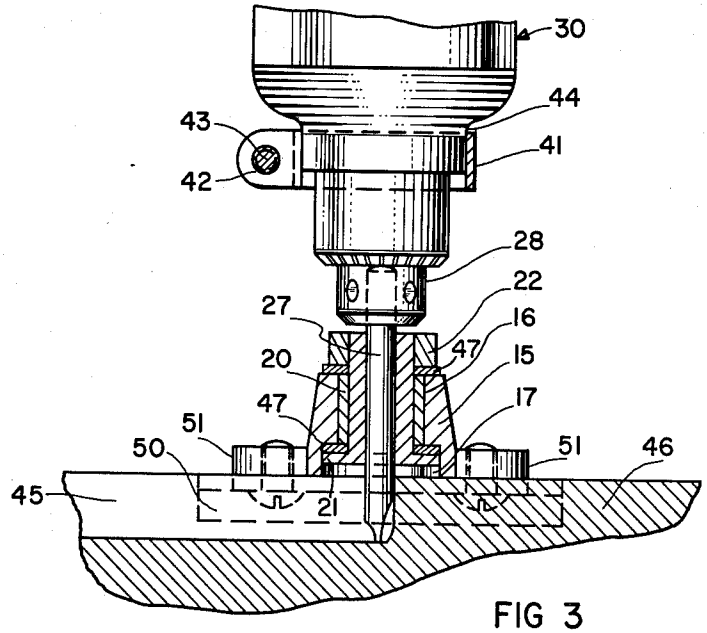


FIG 3

INVENTOR
ARTHUR FRANK FIELDER

BY Kenmel & Crowell

ATTORNEY

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3,087,520

PORTABLE RABBETING AND RECESSING TOOL

Arthur Frank Fielder, 907 S. Adelaide St., Fenton, Mich.

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3 Claims. (Cl. 144—136)

This invention relates to a portable rabbeting and recessing tool and has as its primary object the provision of such a device which may be employed with a conventional portable electric drill of quarter inch size or larger or smaller as may be desirable.

An additional object of the invention is the provision of a device of this character which when used in conjunction with a suitable template, will cut out recesses for door hinges or lock plates, which may be also used for rabbeting the sides of doors for kitchen cupboards, cutting slots, cutting tenon grooves for drawer sides and bottoms, beading edges, and various other related uses all with the use of the single portable electrical drill.

An additional object of the invention is the provision of a device of this character which may be readily adjusted to accommodate various sizes of drills, and also to set the drill tool to a desired depth.

Still another object of the invention is the provision of a device of this character which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture and utilize.

Still other objects will in part be obvious and in part be pointed out as the description of the invention proceeds and shown in the accompanying drawings wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawing:

FIGURE 1 is a side view, partly in section and partly in elevation, showing the device of the instant invention in association with a conventional electric drill and a tool held thereby.

FIGURE 2 is a sectional view taken substantially along the line 2—2 of FIG. 1 as viewed in the direction indicated by the arrows.

FIGURE 3 is a sectional view taken substantially along the line 3—3 of FIG. 1 as viewed in the direction indicated by the arrows; and

FIGURE 4 is a sectional view taken substantially along the line 4—4 of FIG. 1 as viewed in the direction indicated by the arrows.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawing in detail, the device of the instant invention comprises a body generally indicated at **10** which is preferably constructed of aluminum or other suitable material and which comprises two opposite flat platelike portions **11** and **12**, each of which has an extending end portion **13** and **14**, respectively.

At the center or convergence of the platelike portions **11** and **12** is an upwardly extending boss or protuberance **15** having a central bore or opening **16** therein, at the lower extremity of which is an enlarged circular recess **17**.

Interiorly of the bore **16** there is provided a steel collar **20**. A separate sleeve **22** seats on the top of the boss **15**. The sleeve **22** is provided with openings through which extend set screws **24** which secure the sleeve **22** to a rotatable steel bushing **25** centrally mounted therein. Additional set screws **26** extend through aligned openings in sleeve **22** and bushing **25** to secure the bushing to a tool **27** such as a drill bit which is mounted in the chuck **28** of a conventional electric drill generally indicated at **30**, of any desired type. The

bushing **25** has an integral lower flange **21** seating in the recess **17**.

Each of the projecting portions **13** and **14** is provided with an opening or bore **31** through which extends a screw **32** which extends into the threaded interior bore **33** of an operating knob **34**, with the component parts being identical for each of the extensions **13** and **14**. Beneath the lower portion of each knob **34** extends an aperture in horizontal flange **35** of an L-shaped support leg **36**, which is slotted as at **37** to receive a clamping screw **38** which extends through a corresponding threaded aperture **39** or the like in an upper support leg **40**. The two oppositely disposed upper support legs **40** terminate in a clamping ring **41** having clamping ears **42** (FIG. 3) thereon which are secured together by means of a set screw **43** about the lower portion **44** of the drill body **30**, the arrangement being such that the effective length of the legs **36** and **40** may be varied by means of the screws **38** to support the drill **30** and consequently the drill bit **27** a suitable distance above the plate **10** to ensure the accurate penetration of the point **44** of the drill bit **27** into the groove **45** of the piece of wood **46** being operated upon.

Fiber friction washers **47** are interposed between the top of the recess **17** and the flange or collar **21** and the top of the boss **15** and collar **20** and the sleeve **22**.

A work guide or fence is provided beneath the plate portion **12** and comprises a straight-edged vertical flange **50** having a pair of normally horizontal ears **51** extending therefrom, each ear being provided with a longitudinal slot **52** through which extends a screw **53**, the screws **53** engaging in suitable threaded bores **54** in plate portion **12**, the arrangement being thus such that the flange portion **50** may be varied as to its spacing from the drill bit, to vary the relative spacing of the groove or rabbet **45** from the edge of the work **46**.

From the foregoing the use and operation of the device should now be readily understandable. The fence **51** is first set to appropriately distance the working point **44** of the bit **27** from the edge of the work **46**. The height of the drill is then adjusted by means of the screws **38**, and the drill positioned within the clamping ring **41** and secured in position by means of the screw **43**. The drill is started, and the device may be guided by means of the knobs **34** to ensure a straight groove tenon or rabbet. Obviously, by the use of suitable templates recesses for door hinges and lock plates may be cut with a minimum of effort and difficulty.

From the foregoing it will now be seen that there is herein provided an improved portable rabbeting and recessing tool which accomplishes all the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative, and not in a limiting sense.

I claim:

1. In a portable recessing and rabbeting tool, the combination of a base having oppositely disposed guide knobs thereon, a central boss in said base, means defining an aperture in said boss, said boss having a top and a bottom, means defining a recess in said bottom of said boss, a bushing rotatably supported in said aperture of said boss and having a portion extending above the top of said boss and an integral flange seating in said recess, a sleeve telescopingly received over said portion of said bushing extending above said top of said boss, means defining an aperture through said bushing, a drill bit received by said aperture in said bushing, means carried by said base for supporting a portable electric drill, said

drill being operatively connected to said drill bit for rotation of said drill bit, means removably connecting said sleeve to said bushing and means removably connecting said sleeve to said drill bit for rotation of said sleeve and bushing with said drill bit.

2. A portable recessing and rabbeting tool in accordance with claim 1 wherein said means for supporting said drill comprises a pair of lower support legs having bottom flanges secured to said base by said guide knobs, a pair of upper support legs, a clamping ring carried by said upper support legs and receivable over a portion of said drill to hold said drill in spaced relation to said base and means adjustably connecting said upper and lower support legs to vary the length of said means for supporting said drill.

3. A portable recessing and rabbeting tool in accordance with claim 1 having further, in combination, a guide fence secured to the underside of said base, a pair of ears secured to said guide fence having elongated slots therein, means defining threaded bores in said base and screws extending through said slots and engaging in said threaded bores.

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