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BORING BIT GUIDE

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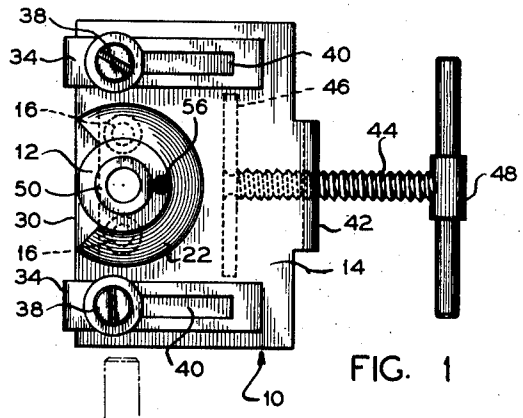


FIG. 1

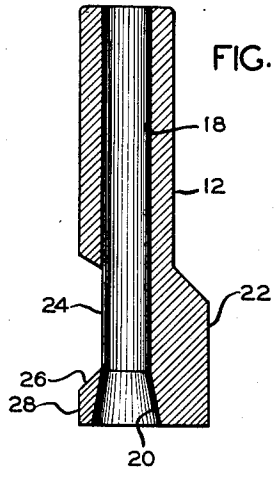


FIG. 4

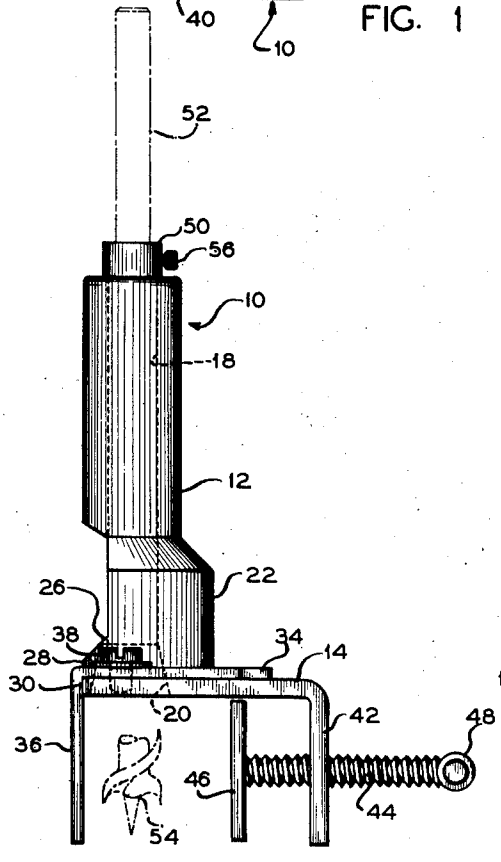


FIG. 2

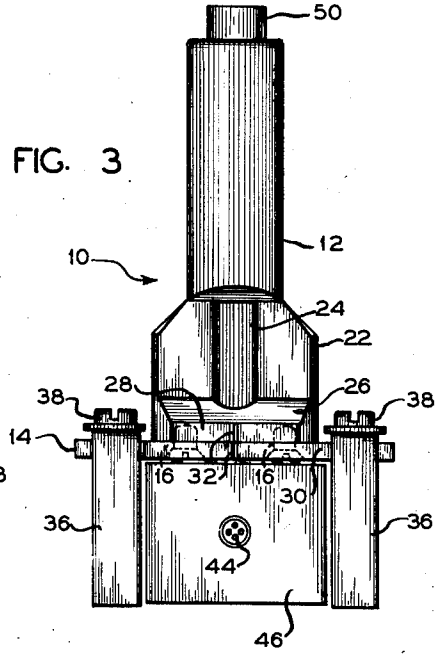


FIG. 3

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BORING BIT GUIDE

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2 Claims. (Cl. 77—62)

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This invention relates to woodworking and more particularly to an improved boring bit guide which may be used with hand or power operated boring tools for making dowel pin holes or a series of accurately aligned holes for any purpose.

Previous devices have been proposed for a similar purpose, but they have been too complicated and expensive or were awkward to manipulate and not readily adjusted to all kinds of work.

One object of the present invention is to provide a simple and inexpensive dowel pin hole boring guide which will overcome the disadvantages enumerated above.

Another object of the present invention is to provide a dowel pin hole boring guide which may be readily adjusted to fit all kinds of work and accurately aligned to drill holes in any desired position and having stop means adapted to be secured on the shank of the bit by which the maximum depth of the hole may be readily predetermined.

A still further object of the present invention is to provide a hole boring guide which is provided with a plurality of interchangeable bit guide posts each having a longitudinal bore of different diameter and which adapts the device for use with various types and sizes of bits and drills.

Still another object of the present invention is the provision of a boring guide which is provided with a longitudinal bore flared outwardly adjacent the lower portion to provide for proper clearance when used with conventional bits and a shaving outlet communicating with the bore.

Further objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing, wherein:

Fig. 1 is a top plan view of one preferred embodiment of the present invention;

Fig. 2, a side elevational view of the device shown in Fig. 1;

Fig. 3, a front elevational view of the device shown in Fig. 1; and

Fig. 4, a longitudinal sectional view of one of the interchangeable posts.

Referring now to the drawings in detail, a dowel pin hole boring guide 10 is provided with an interchangeable bit guide post 12 which is detachably secured to a bracket guide plate 14 by countersunk machine screws 16 shown in dotted lines in Fig. 3.

Post 12 is provided in various sizes with a longitudinal cylindrical bore 18 to fit the different diameters of bits and drills with which the device

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may be used. The lower part of the bore 18 is provided with an outwardly flared portion 20 which is adapted to fit the flared end of wood bits and provide a slight clearance.

The front part of the lower enlarged portion 22 of the interchangeable post 12 is cut away to provide a shaving outlet 24 which communicates with the bore 18. The forward edge of the post 12 is beveled outwardly at 26 to a vertical surface 28 which is contiguous and coplanar with the forward edge 30 of the guide plate 14. Surfaces 28 and 30 are shown as being provided with aligned marks 32 by which the device may be located for drilling a hole in the proper position. However, a single mark on either surface, preferably on surface 30, would serve the purpose.

Adjustable clamps 34 have a downwardly extending projection 36 and are slidably and adjustably mounted on guide plate 14 by slotted machine screws 38 extending through elongated slots 40. Guide plate 14 also has a downwardly extending projection 42 with a threaded opening through which extends a tightening screw 44. A clamping plate 46 is swivelly mounted on the end of tightening screw 44 which is provided with a T-handle 48.

An adjusting collar 50 is provided for use on the shank 52 of the boring bit 54 (shown in phantom lines in Fig. 2). The adjusting collar 50 is provided with a set screw 56 for tightening the collar on the shank 52 for adjustably limiting the maximum depth of the hole.

In the use of the device, after the proper size bit has been selected, the corresponding post 12 is secured to the guide plate 14 by screws 16 and the bit is inserted from the bottom into bore 18. A mark is then placed on the contiguous sides of the two pieces to be doweled together, and guide plate 14 is set on the edge of one of the pieces with the marks 32 in alignment with the mark placed on the piece. The adjustable clamps 34 are adjusted by means of the screws 38 to properly locate the center of the bit from one side of the piece which is to be drilled, and the tightening screw 44 is rotated by handle 48 until the clamping plate 46 is in tight clamping engagement with the opposite surface of the piece. Stop member 50 is secured by set screw 56 at the proper position on the shank 52 by set screw 56 to provide for the depth of hole desired, and bit 45 is rotated in a conventional manner by the usual hand or power-operated boring tools.

The device of the present invention may obviously be used for many other purposes besides drilling holes for dowel pins, although it is ideally

suited for this purpose. The guide may also be used for drilling a series of holes in the edge of a door or frame for the insertion of locks, and will serve equally well for drilling wood metal, plastics or other materials by using suitable drills or bits.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore this invention is not limited by that which is shown in the drawing or described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. A boring bit guide comprising a guide plate for engagement with the edge of a plank or the like, a downwardly extending projection at one edge of the guide plate, a tightening means mounted on said projection of said guide plate with a handle for operating such tightening means, a pair of angle shaped clamp members mounted on said guide plate with one leg of each angle member extending in substantially parallel relation to the projection of said guide plate and the other leg of each angle member adjustably and slidably mounted on the upper side of said guide plate whereby the angle members may be adjusted so that the said one leg of each may be adjustably fixed in spaced relation to said projection, said clamp members being spaced laterally of said tightening means whereby when the guide is positioned on the edge of a plank the clamp members are spaced from said tightening means laterally and longitudinally providing a three point support, a tubular shaped drill guide having an enlarged end mounted on said guide plate between said clamp members with its enlarged end abutting the upper surface of said guide plate, means for removably securing said drill guide by its abutting end in fixed relation to said guide plate whereby different drill guides may be substituted.

2. A boring bit guide comprising a guide plate for engagement with the edge of a plank or the like, a downwardly extending projection at one edge of the guide plate, a tightening means mounted on said projection of said guide plate with a handle for operating such tightening means, a pair of angle shaped clamp members mounted on said guide plate with one leg of each angle member extending in substantially parallel relation to the projection of said guide plate and the other leg of each angle member adjustably and slidably mounted on the upper side of said guide plate whereby the angle members may be adjusted so that the said one leg of each may be adjustably fixed in spaced relation to said projection, said clamp members being spaced laterally of said tightening means whereby when the guide is positioned on the edge of a plank the clamp members are spaced from said tightening means laterally and longitudinally providing a three point support, a tubular shaped drill guide having an enlarged end mounted on said guide plate between said clamp members with its enlarged end abutting the upper surface of said guide plate, means for removably securing said drill guide by its abutting end in fixed relation to said guide plate whereby different drill guides may be substituted, said drill guide having an enlarged bore adjacent its abutting end and being provided with a shaving outlet above said enlarged bore, and a collar for securement to a drill bit for engaging the upper end of said drill guide for limiting the penetration of the drill into the work.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
917,488	Roberts	Apr. 6, 1909
1,161,479	Kelley	Nov. 23, 1915
1,233,813	Schneckloth	July 17, 1917
1,629,053	Schrader	May 17, 1927
1,762,457	Uhrin	June 10, 1930
1,831,813	Levedahl	Nov. 17, 1931
2,439,008	Kellem	Apr. 6, 1948