

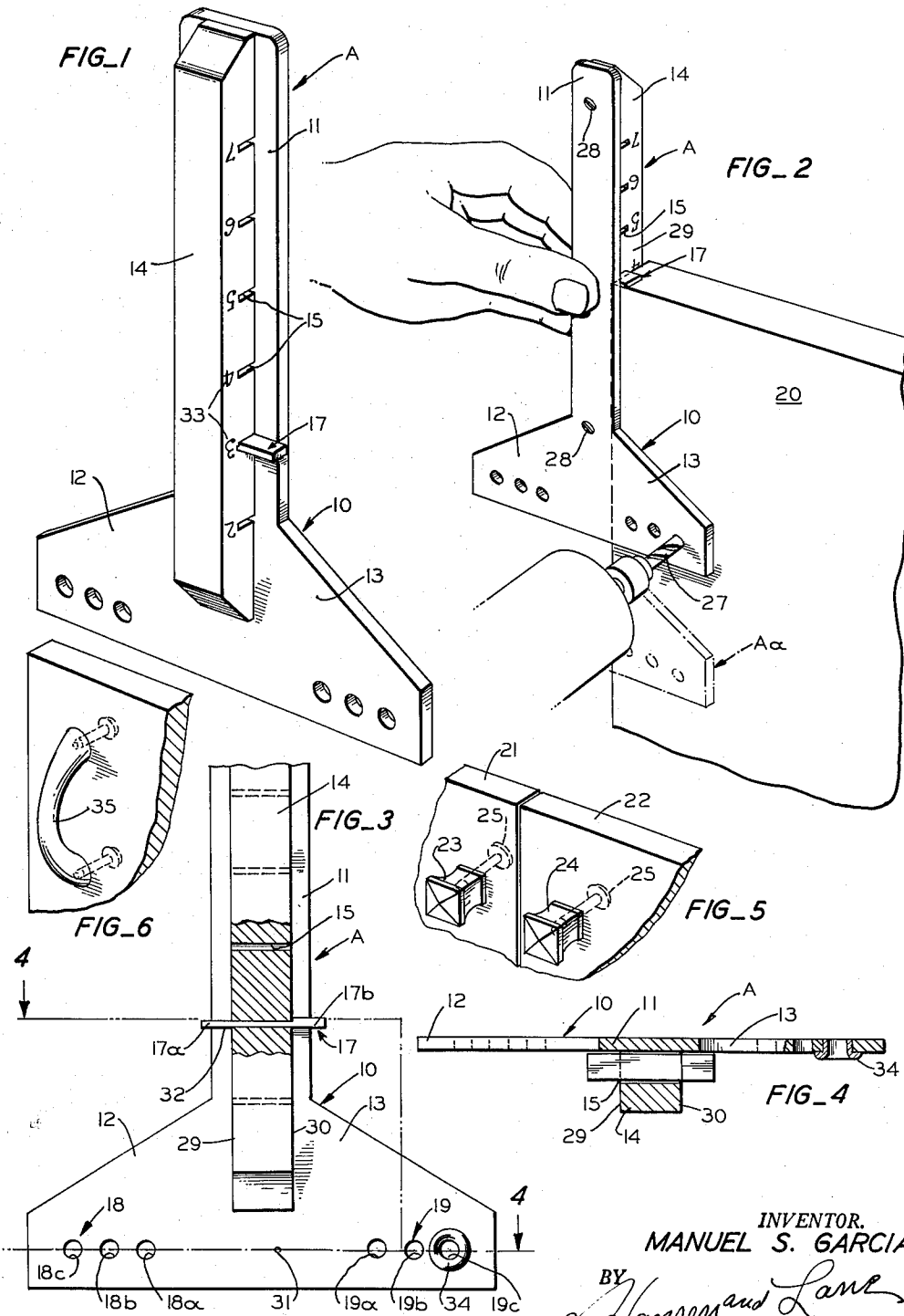
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DRILLING FIXTURE FOR MOUNTING CABINET DOOR PULLS

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DRILLING FIXTURE FOR MOUNTING CABINET DOOR PULLS

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The present invention relates to a drilling fixture, and pertains more particularly to a fixture for drilling holes for the installation of door pulls on kitchen and other types of cabinets.

In installing kitchen cabinet hardware it is customary to install the doors and drawers in these cabinets, and then to mark off the locations of the door and drawer pulls by measuring in from the sides and down from the top of the drawer or door. So called "finish" carpenters usually install these drawer and door pulls, and in some large home building tracts a crew of finish carpenters does nothing else but install the cabinets and apply the hardware thereon.

The present invention contemplates the provision of a drilling fixture for use in quickly and accurately installing door pulls on the doors of kitchen and other cabinets.

Another object of the invention is to provide a drilling fixture for use in drilling holes for the mounting screws for door cabinet hardware, and which will facilitate uniformly positioning the door pulls on a number of similar cabinet doors, either single or double.

Another object of the invention is to provide an improved and simplified drill fixture for use in installing the door pulls on double cabinet doors.

These, and other objects and advantages of the invention, will be apparent from the following description and the accompanying drawings, wherein:

FIG. 1 is a perspective view of a drilling fixture embodying the present invention.

FIG. 2 is a perspective view in reduced scale showing the fixture of FIG. 1 being used for drilling a hole for a door pull, the broken lines showing the fixture offset downwardly for drilling a second hole where a fixture, such as that shown in FIG. 6, is to be attached at both ends thereof.

FIG. 3 is a rear elevational view of the drilling fixture shown in FIGS. 1 and 2, a portion thereof being broken away.

FIG. 4 is a sectional view taken along line 4-4 of FIG. 3.

FIG. 5 is a perspective view in reduced scale showing the upper corners of a pair of cabinet doors with door pulls installed thereon.

FIG. 6 is a perspective view showing the corner of a cabinet door with a different type of door pull thereon.

Briefly, in the illustrated form of the invention, a drilling fixture A comprises a front plate 10 with a narrow upper portion 11, and a pair of laterally extending wings 12 and 13 at the lower end thereof. A rectangular back strip projection 14 is secured centrally lengthwise of the rear face of the front plate 10.

A plurality of parallel, transverse slotted openings 15 are provided through the back strip 14 at measured intervals to receive a positioning slide 17, which is insertable in any selected one of the slots 15.

A selected number of transversely aligned, symmetrical paired, drill guide holes 18 and 19 are provided in the wing portions 12 and 13, respectively.

The slide 17 supports the fixture A in adjusted position on a corner of a door 20 as shown in FIG. 2, and, by using a selected pair of the holes 18 and 19 in the wings 12 and 13, holes may be drilled in similar, but reversed, position in a pair of doors 21 and 22 (FIG. 5). When door pulls 23 and 24 are installed with their usual mount-

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ing screws 25 inserted in a usual manner in these holes, the pulls will be in matching position.

Referring to the drawings in detail, in the fixture A the front plate 10 is of suitable, and preferably light weight material, such as, for example, aluminum alloy or plastic material. The narrow upper portion 11 of the front plate 10 may be integral with the pair of similar, oppositely extending wing portions 12 and 13 at its lower end.

A plurality of similar, and similarly spaced, holes 18 and 19 of a size to receive a desired drill 27 therein, is provided in each of the wing portions 12 and 13. Each of the holes in one wing portion, for example the hole 18a, is paired with a similarly located hole 19a in the other wing portion.

The rectangular back strip portion 14 is fixedly secured to the rear of the narrow upper portion 11 of the front plate 10, and is centrally aligned therewith. The back strip portion 14 may be either molded integrally with the front plate 10, or may be secured thereto as by screws 18 (FIG. 2) or a suitable adhesive material, not shown. The side faces 29 and 30 of the back strip portion are perpendicular to the rear surface of the front plate 10 and parallel to each other, and the axes of the drill guide holes 18 and 19 are aligned to define a plane 31 perpendicular to the front plate 10 and the parallel side faces 29 and 30 of the back strip portion 14.

The slotted openings 15 through the back strip portion 14 are identical to each other, and are parallel to the plane 31 defined by the axes of the drill guide holes 18 and 19. The lower sides of successive slotted openings 15 are spaced from the plane 31 defined by the axes of the drill guide holes by selected measured increments, for example, one inch. The lowermost slot 15 in the illustrated form A of the invention may be two inches from this line, since door pulls are not ordinarily mounted with their mounting screws closer than that to the top of a door.

The positioning slide 17, with its flat, lower face 32, has a shank portion 17a of a size for fitted insertion into any selected one of the slots 15, preferably with a snug sliding fit so that it will not fall out by its own weight. A thicker head portion 17b is provided on the slide 17, which limits the insertion of the slide into the slots 15 to substantially the extent shown in FIG. 3. In this latter position of the slide 17, the shank 17a projects outwardly from one side of the back strip portion 14, while the head portion 17b projects on the other side. By manually grasping the head portion 17b the slide 17 may be withdrawn from any slotted opening 15 in which it may be inserted, and may be reinserted, flat side downwardly, into any selected one of the slotted openings 15. The flat under face 32 of the slide 17 will then be located a selected number of inches, or other selected increment of measure, up from the plane 31 defined by the axes of the drill guide holes 18 and 19. An index number 33 is provided adjacent each slotted opening 17 indicating its distance, in the selected increments of measure, from the plane 31 of the hole axes.

In using the fixture A it will be assumed that the three pairs of holes 18a, 19a, and 18b and 19b, and 18c and 19c are, respectively, one, one and one-half, and two inches from the side faces 29 and 30, respectively, of the back strip portion 14, and that the slotted openings 15 are spaced from the plane 31 of the drill guide holes 18 and 19 by increments of one inch, beginning at two inches. It will be further assumed that it is desired to mount the pair of door pulls 23 and 24 (FIG. 4) four inches down from the top, and two inches in from the free edges of the pair of cabinet doors 21 and 22.

The slide 17 would then be withdrawn from any other slotted holes, such as, for example, the one designated

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by the numeral "2" shown in FIG. 1, and would be reinserted in the slotted hole designated by the numeral "4." The fixture A would then be positioned on one of the doors in the manner shown in FIG. 2, with the slide 17 resting on the top edge of the door, the side face 30 of the back strip portion 14 pressed firmly against the free edge of the door, and the wing portion 13 closely overlying the external face of the door. A drill 27 would then be inserted in the outermost hole 19c, which, as stated previously herein, is assumed to be the desired two inches from the side face 30 of the back strip portion 14. Using this hole 19c as a guide, the drill 27 would be driven through the door, thereby drilling a hole in the door. A usual door pull screw 25 would then be inserted from the inside of the door through the hole thus drilled, and screwed into the door pull 24 in a usual manner. The other door pull 23 would then be similarly mounted on the other, or left hand door (FIG. 4), using the corresponding hole 18c in the other wing portion 12. The door pulls 23 and 24 would thus be mounted symmetrically on their respective doors.

While the fixture A shown in FIGS. 1-3 and 5 may be used for a long time without damage providing the drill is inserted in the guide holes 18 or 19 before starting the drill, still it may be desirable to face the holes 18 and 19 with a suitable hard material, such as, for example, case hardened steel. In such case a bushing 34 of such material may be fitted into the holes 18 and 19. Such reinforcements may be desired particularly if the entire fixture A is to be made, for example, of unitary molded plastic material, which material is usually easily cut by an edged tool.

If it is desired to use door pulls such as that 35 shown in FIG. 6, and having two mounting screws, the fixture A would be used as shown in FIG. 2, wherein a first hole is drilled with the fixture in its solid line position, and a second hole is drilled with the fixture in its broken line position Aa. Obviously for such use, the slotted openings 15 would have to be spaced apart in increments corresponding to the spacing of the screw holes in the door pull 35 to be mounted.

The invention provides a simple, accurate and easily used drilling fixture, which greatly facilitates the mounting of door pulls, and which may be carried in a mechanic's tool box where it occupies little space and is always ready for use.

While I have illustrated and described a preferred embodiment of the present invention, it will be understood, however, that various changes and modifications may be made in the details thereof without departing from the scope of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as new and desire to protect by Letters Patent is defined in the following claims.

I claim:

1. A drilling fixture for use in drilling holes for the mounting screws for the door pulls of a pair of cabinet doors comprising a front plate, a back strip secured substantially medially of the rear face of the front plate, said back strip having a pair of parallel side faces disposed perpendicularly to the rear face of the front plate, said front plate having an equal plurality of drill guide holes therein on each side of the back strip and adjacent an end of the front plate, the axes of said drill guide holes being disposed in a plane perpendicular to the rear face of the front plate and to the two parallel side faces of the back strip, each of the drill guide holes on one side of the back strip being the same distance from the side face of the back strip nearest thereto as a corresponding hole on the other side of the back strip is to the other side face of the back strip, said back strip having a plurality of slide receiving holes transversely therethrough at measured, spaced intervals from the plane defined by the axes of the drill guide holes in the front plate, and a slide, having a flat face and adapted to be

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inserted with said flat face downward, in any selected one of said slide receiving holes, said slide being of a greater length than the width of the back strip so as to project beyond both side faces of the back strip when inserted in a selected slide receiving hole.

2. A drilling fixture for use in drilling holes for the mounting screws for the door pulls of a pair of cabinet doors comprising a front plate having a narrow, elongated upper portion and a pair of laterally extending wing portions at its lower end, a back strip secured medially lengthwise of said narrow upper portion and having a pair of parallel side faces disposed perpendicularly to the rear face of the front plate, each wing portion having an equal plurality of drill guide holes therein, the axes of said drill guide holes being disposed in a plane perpendicular to the rear face of the front plate and to the two parallel sides of the back strip, each of the drill guide holes in one wing portion being the same distance from the side face of the back strip nearest thereto as a corresponding hole in the other wing portion is to the other side face of the back strip, said back strip having a plurality of slide receiving holes transversely therethrough at measured, spaced intervals from the plane defined by the axes of the drill guide holes in the front plate, and a slide, having a flat face and adapted to be inserted with said flat face downward in any selected one of said slide receiving holes, said slide being of a greater length than the width of the back strip so as to project beyond both side faces of the back strip when inserted in a selected slide receiving hole.

3. A drilling fixture for use in drilling holes for the mounting screws for the door pulls of a pair of cabinet doors comprising a front plate, a back strip secured substantially medially of the rear face of the front plate, said front plate having an equal plurality of drill guide holes perpendicularly therethrough on each side of the back strip and adjacent an end of the front plate, the axes of said drill guide holes being disposed in a plane perpendicular to the longitudinal center line of the back strip, each of the drill guide holes on one side of the back strip being paired with a correspondingly positioned hole on the other side of the back strip, said back strip having a plurality of slide receiving holes transversely therethrough at measured, spaced intervals from the plane defined by the axes of the drill guide holes in the front plate, and a slide, adapted to be inserted into any selected one of said slide receiving holes, and of a greater length than the width of the back strip so as to project beyond both sides of the back strip when inserted in a selected slide receiving hole.

4. An arrangement according to claim 3 wherein the slide receiving holes are of substantially rectangular cross sectional shape, and the slide has a shank portion of similar cross sectional shape and a thicker head portion, the under side of the shank and head portion being coplanar.

5. A drilling fixture for use in drilling holes for the mounting screws for the door pulls of a pair of oppositely hinged cabinet doors comprising a front plate with a flat rear face, a back strip having parallel side faces secured substantially medially of the rear face of the front plate, said front plate having a row of drill guide holes therethrough, the axes of said drill guide holes being disposed in a plane perpendicular to the rear face of the front plate and to the longitudinal center line of the back strip, each of the drill guide holes being spaced a selected distance from the side face of the back strip nearest thereto and being paired with a hole spaced an equal distance from the opposite side face of the back strip, a plurality of anchoring means at measured, spaced intervals along said back strip from the plane defined by the axes of the drill guide holes, and a positioning member formed for anchored engagement by a selected one of said anchoring means, portions of said positioning member projecting beyond both sides of the back strip and with

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their lower faces spaced at equal distances from the plane defined by the drill guide hole axes.

6. A drilling fixture for use in drilling holes for the mounting screws for the door pulls of a pair of oppositely hinged cabinet doors comprising a front plate of inverted T-shape with a flat rear face, a back strip secured substantially medially of the rear face of the stem portion of the T-shaped front plate, the head portion of said front plate having a row of drill guide holes therethrough, the axes of said drill guide holes being disposed in a plane perpendicular to the rear face of the front plate and to the longitudinal center line of the back strip, each of the drill guide holes being spaced a selected distance from the side face of the back strip nearest thereto and being paired with a hole spaced an equal distance from the

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opposite side face of the back strip, a plurality of anchoring means at measured, spaced intervals along said back strip from the plane defined by the axes of the drill guide holes, and a positioning member formed for anchored engagement by a selected one of said slide anchoring means, portions of said positioning member projecting beyond both sides of the back strip and with their lower faces spaced at equal distances from the plane defined by the drill guide holes axes.

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