

April 20, 1954

S. W. BOATWRIGHT
CARPENTER'S TEMPLATE

2,675,626

Filed April 13, 1953

2 Sheets-Sheet 1

FIG. 1

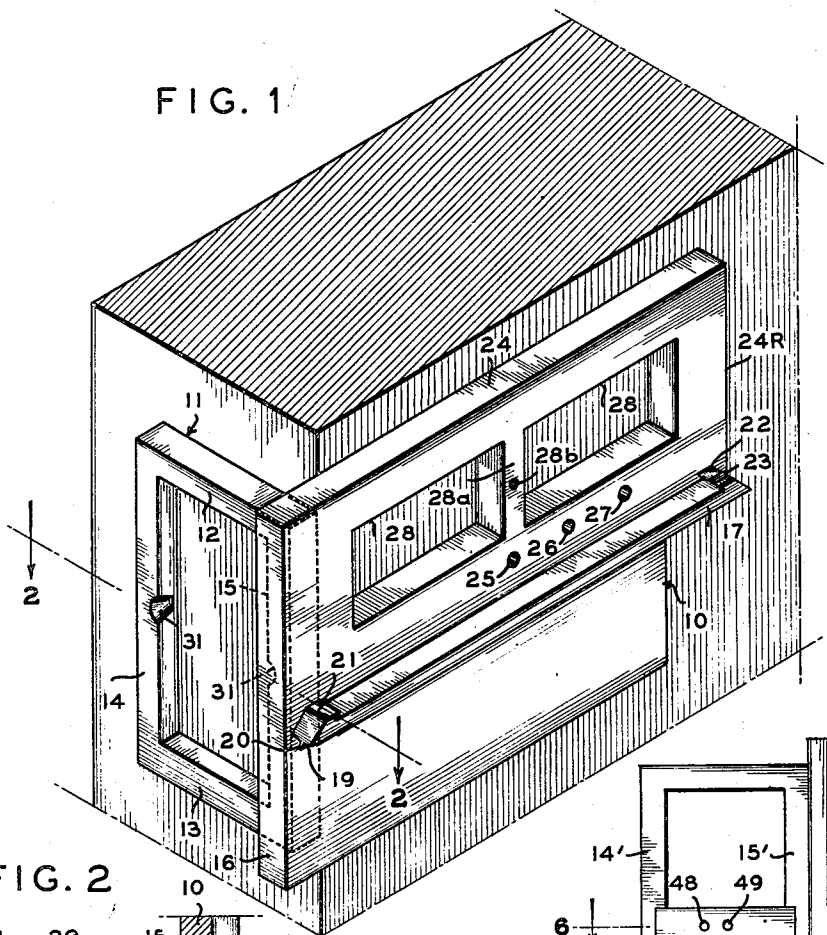


FIG. 2

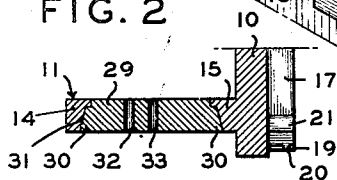


FIG. 5

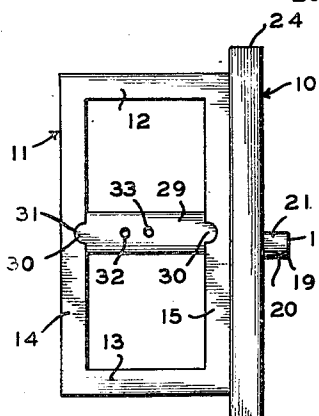
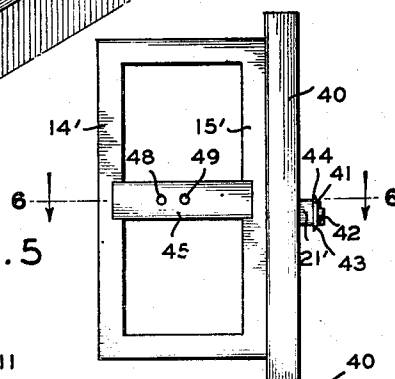


FIG. 3

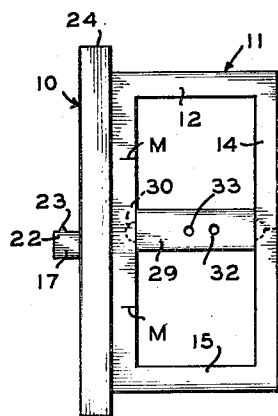


FIG. 4

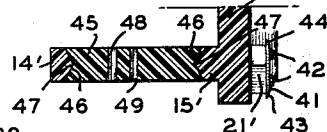


FIG. 6

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2 Sheets-Sheet 2

FIG. 11

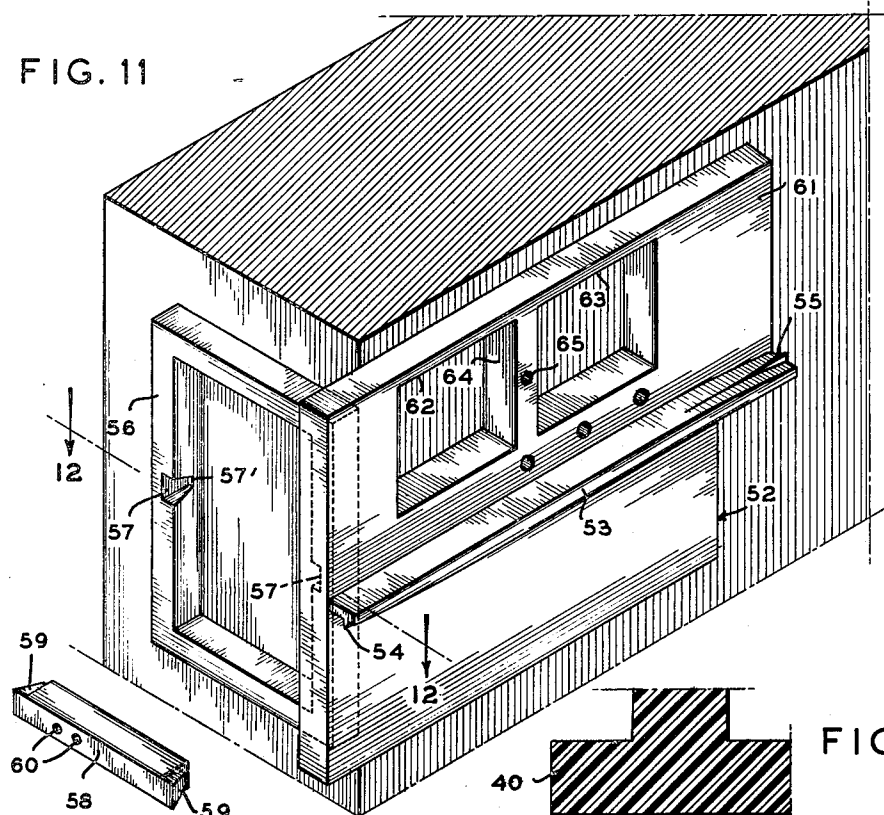


FIG. 12

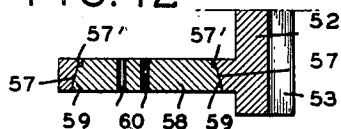


FIG. 8

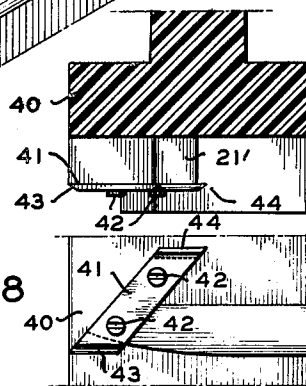


FIG. 9

FIG. 10

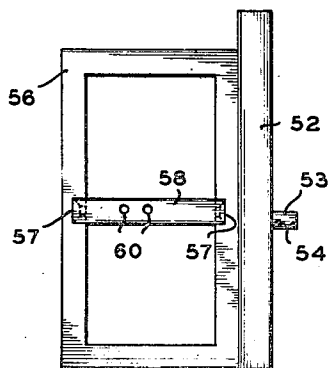
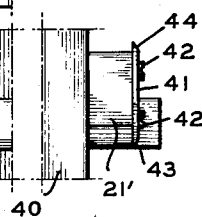


FIG. 13

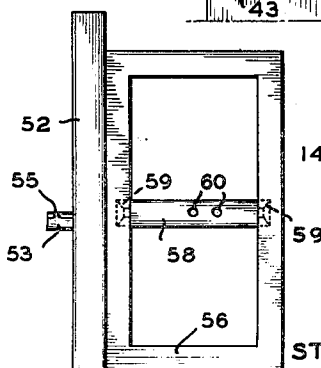


FIG. 14

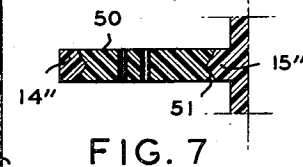


FIG. 7

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2,675,626

CARPENTER'S TEMPLATE

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Application April 13, 1953, Serial No. 348,436

9 Claims. (Cl. 33—197)

1

The present invention relates to a carpenter's tool or template for locating and marking hardware locations on doors or the like.

Although templates have heretofore been used they have not been satisfactory to perform the necessary functions for doors of different sizes and have not met with approval by the trade.

This application is a continuation-in-part of my pending application Serial No. 225,805 filed May 11, 1951, entitled the Carpenter's Template.

An object of the present invention is to provide a device particularly useful for carpenters for accurately marking the location of a door lock, hinge, or other door hardware used in building construction.

A further object is to provide locating means for door locks of different dimensions so that a single tool may be used for doors of different sizes.

Another object is the provision of a tool having a removable lock location means which may be secured to the tool at one time and removed therefrom at another.

A further object is to provide a tool for marking the hinge location and the lock keeper location on a door jamb as well as the door stop strip and door jamb trim.

Other and further objects will appear upon reference to the specification and the drawing, wherein:

Fig. 1 is a perspective view of the template showing the device in place on a door for locating the lock as well as the door knob and the covering plates;

Fig. 2, a section taken on the line 2—2 of Figure 1;

Fig. 3, a side elevation of the template of Figure 1;

Fig. 4, a rear elevation of the template of Figure 1;

Fig. 5, a side elevation of another form of the invention; and

Fig. 6, a section taken on line 6—6 of Figure 5.

Fig. 7, a sectional view of a modification similar to Fig. 6;

Fig. 8, an elevational view of the cutter shown in Fig. 5 with parts broken away.

Fig. 9, a plan view of the cutter of Fig. 8 with parts broken away;

Fig. 10, a side elevation of the cutter with parts broken away;

Fig. 11, an exploded view of another modification of the invention;

Fig. 12, a section on the line 12—12 of Fig. 11 with the removable part in position;

2

Fig. 13, a side elevation of the modification of Fig. 11; and

Fig. 14, an elevation of the opposite side of the modification of Fig. 11.

The present invention broadly includes a front plate with a side plate extending at substantially right angles thereto with an opening in the side plate for marking the location of a door lock. The front plate is provided with a rib of greater thickness than one plate of a hinge and such rib separates the front plate into two areas, of a size useful in marking hinge locations of different sizes of hinges. The rib includes a scribe edge for marking the amount of a door to be cut out for the butt hinges used therewith. The front plate may also include an opening for location for other types of door locks as well as apertures for locating other parts of door hardware. A removable element is supplied for attachment to the side member for locating a specific part of a door lock.

Referring more particularly to the drawing a front plate 10 of metal or other suitable material has integrally formed therewith a side plate 11 extending at right angles to the front 10 and including top and bottom bars 12 and 13 with rear bar 14 and front bar 15, the bar 15 being integrally attached to the front 10. The front 10 has its side edge 16 projecting beyond the side member 11 by an amount substantially equal to the thickness of the front member. An integral rib 17 is formed on the front surface of the front member and extends from edge 16 to edge 24R and has its lower edge substantially parallel to the bottom edge 18 of the front member. The rib 17 is provided with a cut-out portion 19 adjacent side edge 16 which leaves a cutting edge 20 which is in the plane of the bottom surface of the rib 17. Projecting upwardly from the ends of rib 17 are lugs 21 and 22 and projecting above lug 22 is a knife edge 23. It will be noted that the upper surface of lugs 21 and 22 determine an imaginary line which is substantially parallel to the upper edge 24 of front plate 10 and the cutting edge 23 of lug 22 projects upwardly a slight amount above such imaginary line as shown in Figure 4.

The front plate 10 is provided with apertures 25, 26 and 27 and a rectangular cut-out 28 is also provided through the front plate above the rib.

A removable bar 29 of substantially the same thickness as side member 11 is provided with a semi-conical frustum 30 at each end thereof. The front and rear side bars 14 and 15 are provided with semi-conical frustum-shaped recesses

3

31, 31 for cooperation with the frustum portions 30 of the bar 29 for accurately locating the removable bar 29 relative to said front and rear bars 15 and 14 respectively. The removable bar 29 is provided with apertures 32, 33 which are used in locating a center of a drill in making the opening in the door for receiving the lock. It will be noted that bar 29 is flush with the bars 14 and 15.

Another form of the invention is shown in Figures 5 and 6 in which the body thereof may be made of a plastic type material which may be slightly deformed for removably holding the lock recess locating bar. The front plate 40 thereof may be similar to front plate 10 and includes the longitudinal rib and the projecting lugs, but a blade element 41 made of steel or other material is secured to the front lug 21' by screws 42.

It will be understood that the blade 41 is recessed into the rib and lug in an obvious manner and a single blade may be used so that the lower edge 43 thereof serves the function of scribing edge 20 of the first modification and the other upper edge 44 serves the function of the other upper marking edge 23 of the first modification. Obviously a separate blade may be used on the lug corresponding to edge 23 if desired.

Another difference over the first modification is the means for securing the removable bar 45 to the rear and front side bars 14' and 15'. The ends of the removable guide bar 45 are provided with V-shaped notches 46, 46 at its ends. It will be noted that the distance between the apexes of the notches is substantially equal to the distance between the front and rear side bars 15' and 14' respectively. The front and rear side bars at their central locations are cut away to define a dihedral angle at 47, 47 which is substantially similar to the dihedral angle formed by the V-shaped notches 46, 46 in the ends of removable bar 45. The removable bar 45 may be removed by a slight deformation of the front and rear side bars 15' and 14' to permit the V-shaped notches to become disengaged from the dihedral angle portion of the side bars. The removable bar 45 is provided with apertures 48 and 49 which are similar to apertures 32 and 33 of the first form of the invention.

In one use of the present invention, the template is applied to the edge of a door in the manner shown in Fig. 1 with the front plate 10 in engagement with one surface of the door and the side member 11 in engagement with a side edge of the door. The template is located at the desired height of the door lock and the removable bar 29 is omitted. A scribe or knife edge is then moved along the inside edges of bars 12, 13, 14 and 15 of the side member thereby defining the location of the lock plate in a door of 1 3/4 inch thickness. The removable bar 29 is then positioned in the template with the template in the same location and the location of aperture 32 is marked on the door edge by means of a pointed instrument such as a nail, compass point, or icepick. Then, while the template is still held in the same location the location of apertures 25, 26 and 27 may be similarly indicated for determining the location of the door knob and attaching plate therefor. The template is then removed and the necessary openings are drilled and other material removed by a chisel in a conventional manner, using the outlines for accurately determining the edge of the recess

4

formed in the door. The advantage of the removable bar 29 should be apparent since by its removal, there is no interference with marking along the front and rear bars 15 and 14 the complete length thereof thereby keeping sharp edges. Also if a knife is used as a scribe there is no middle bar to engage the knife edge and consequently the knife does not become dull when used with the present invention.

The front and rear bars 15 and 14 are substantially 1/8 of an inch thick in each direction and spaced apart one inch making the device specifically suited for a door of 1 3/4 inch thickness and the width of the plate in a conventional door lock is one inch. However, some doors are 1 1/4 inch in thickness and such doors may be marked with the present invention by using the back edge of rear bar 14 for marking of the edge plate of the lock. The template is then applied to the rear surface of the door and the back edge of bar 14 then marks the front edge of the plate of the door lock. The bottom and top of the door lock plate may be marked by using a knife or scribe on top and bottom bars 12 and 13. The location of the hole to be drilled may be determined by the location of aperture 33 of bar 29 for the 1 3/4 inch door.

For marking the outline of a hinge, the front surface of front plate 10 is positioned on the edge of a door at the hinge location and (if it is a four inch hinge) lugs 21 and 22 will engage a surface of a door to be adjacent the pintle of the hinge and the outline of the hinge can be marked by a scribe passing along the top edge 24 of the front plate, the side edge 16 of the front plate and the rear edge 24R of the template. The amount of material to be removed may be indicated by drawing the marking edge 23 along the surface of the door leaving a small mark between the lines formed by the scribing tool which has previously marked the top and bottom boundaries of the hinge.

In the event that a 3 1/2 inch hinge is being used, the front plate 10 is positioned on the edge of the door to receive the hinge and the bottom surface of the rib 17 is made to engage the surface of the door to be adjacent the pintle and the outline of the hinge is determined by passing a scribe, knife or the like along the side edge 16, bottom edge 18 and a rear edge 18R of the front plate. To mark the amount of material to be removed, the template is moved so that the rib 17 extends at an angle to the front surface of the door while the front surface of plate 10 engages the edge of the door thereby bringing marking edge 20 into engagement with the front surface of the door and upon movement of the template from the line indicating one end of the hinge to the line indicating the other end of the hinge the mark made thereby shows the amount of material to be removed.

The openings 28 separated by bar 28a provided in the front plate 10 is useful for locating a door lock on relatively thin doors such as screen doors, storm doors or the like. In use the front face of the plate 10 engages the edge of the door and lugs 21 and 23 engage a surface of the door thereby locating the openings 28 at the desired distance from the surface of the door and the outline of the door lock plate is made by passing a knife, a scribe, or the like along the edges of the openings 28. An aperture 28b serves to locate a center for a drill for the removal of material to provide an opening for the door lock.

The present invention is also useful for mark-

ing the location of a keeper on the door jamb and this may be accomplished by positioning the side plate 11 against the door jamb and in this use the projecting edge 16 of front plate 10 is positioned against the edge of the jamb. The side plate 11 may be provided with marks M on the back thereof which may be used to mark the top and bottom edges of the keeper since the keeper is normally of less vertical dimension than the plate of the lock. The template may then be moved so that a top or bottom bar 12 or 13 may have one edge in registry with the mark previously made and the outline of the keeper may be accurately made with a knife, scriber, or the like.

The invention is also useful for locating the conventional door stop strip and this may be done by positioning the side member 11 in surface engagement with the jamb of the door with the front plate 10 extending into the opening for the door in a position parallel to a closed door and the side edge 16 of the front plate engaging the room side of the jamb. The location of the adjacent surface of the door stop may be marked by using a pencil, scriber or other mark means at the back surface of the rear bar 14.

The modification of the invention shown in Figs. 5 to 9 inclusive, may be made of a synthetic resin or other plastic material and the cutting blade 41 may be replaced when necessary and a new blade substituted therefor.

In Fig. 7 the removable bar 50 is similar to removable bar 45 but the notch at one end is made with a cam-shaped portion 51 which materially assists the insertion and removal of the bar 50 between the side bars 14'' and 15'' in this modification. There is a minimum of distortion of the side bars 14'' and 15'' and the bar may be inserted with the cam-shaped surface toward the inside or the outside and the outline of the door lock is maintained with an unbroken edge as described above.

Referring to Figs. 11 to 14, the main plate 52 is separated into two rectangular areas by a rib 53 approximately $\frac{1}{8}$ '' high and cutting edges 54 and 55 are provided at the bottom and top of the rib and such cutting edges are within the thickness of the rib so that they normally do not produce a mark on the edge of the door, but may make a mark when the rib 53 is positioned at an angle as described in the relation of cutter 20 to rib 17 in the first modification. The side plate 56 is provided with frusto-pyramidal recesses 57 on the front and back bars thereof and removable bar 58 is provided with frusto-pyramidal projections 59 at each end thereof for cooperation with the recesses for accurately positioning the bar 58 and locating the aperture 60 thereof in proper position for locating a door lock. It will be apparent that the removable bar 58 is positioned so that the surfaces are flush with the surfaces of side plate 56 and the cooperation of bottom 57' of the frusto-conical recesses and the cooperation portion of the projections 59 serve as stops for properly locating the removable bar 58.

Referring to Fig. 11, the outline for a 4 inch hinge may be indicated by placing the rib 53 against a surface of the door and the upper portion 61 of the front plate on the edge of the door so that the hinge outline may be marked around the periphery of the upper portion 61 in a manner described above. The amount of material to be removed may be marked by cutting edge 55

in a manner described with relation to cutting edge 20.

Door lock for a $1\frac{1}{4}$ '' door may be marked by placing the upper portion 61 of the template in engagement with the edge of the door and the rib 53 in engagement with the surface of the door and the outline of the lock may be marked by forming a mark around the inner periphery of the recesses 62 and 63 which are separated by a bar 64 with an aperture 65 therethrough to indicate a drill location. The dimension of the upper section 61 from the rib to the upper edge is $1\frac{1}{2}$ '' and the apertures 62 and 63 with bar 64 define an opening 1'' by $2\frac{5}{8}$ '' and such openings are spaced $\frac{3}{8}$ '' from the rib 53 and $\frac{1}{8}$ '' from the upper edge. It will be noted that side plate 56 has its lower edge substantially flush with lower edge of front plate 52.

The lower section of front plate 52 is designed for marking a 3 inch hinge similar to that above.

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 the invention is not limited by that which is shown in the drawing and described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. A template for locating door hardware comprising a main plate having parallel top and bottom edges and a side edge perpendicular to said top and bottom edges, a side plate mounted on said main plate and extending at right angles thereto and positioned inwardly from and parallel to said side edge by an amount substantially equal to the offset of door trim with respect to a door jamb, said side plate being provided with an opening therethrough of a size substantially equal to the face plate of a door lock, the side plate being provided with semi-conical frustum recesses on opposite sides of said opening and in communication with said opening, said recesses opening on the outside surface of said side plate and terminating short of the inside surface of said side plate, a removable bar of a length substantially equal to the width of said opening and having end portions of semi-conical frustum shape whereby said removable bar may be positioned within said opening with the frustum portions interfitting with the frustum shaped recesses, said removable bar being of substantially the same thickness as said side plate and having a plurality of apertures therein for cooperation with a scriber to mark a point, the main plate being provided with a rib intermediate its top and bottom edges and substantially parallel thereto, said rib including marking means for indicating the thickness of a hinge, said main plate being provided with a door lock locating recess spaced from said rib, said main plate being provided with a plurality of apertures for cooperation with a scriber for locating points on a door face.

2. The invention according to claim 1 wherein marking means are provided on said side plate for locating a keeper on a door jamb.

3. The invention according to claim 2 wherein the side plate is fixed to said main plate on the surface opposite said rib, said side plate being spaced inwardly from the side edge and arranged parallel thereto and perpendicular to said main plate.

4. A carpenter's template comprising a main plate having a top and bottom edge substantially parallel and a side edge substantially per-

7

pendicular to said top and bottom edges, the other side edge of said plate having a part thereof perpendicular to said top edge with another part thereof offset to said first part and perpendicular to said bottom edge and said offset being a definite distance, a rib on said main plate extending substantially parallel to said top and bottom edges and a portion thereof defining the offset, said rib being provided with a cutting edge at each end thereof but with one cutting edge at the top and the other at the bottom of said rib.

5 The invention according to claim 4 wherein a side plate is fixed to said main plate on the surface thereof opposite said rib, said side plate being spaced from the side edge and arranged parallel thereto and perpendicular to said main plate, said side plate being provided with an opening therein having frustum recesses in the side plate communicating with said opening and extending from the outside surface of said side plate and terminating short of the inside surface thereof, a removable bar having frustum shaped ends for engaging said frustum shaped recesses whereby said removable bar may be accurately located, said removable bar being of substantially the same thickness as said side plate, and having at least one aperture therethrough for loca-
10 tion of a point on a door edge.

6. A template comprising a plate having a rectangular opening therein, said plate being provided with frustum shaped recesses on opposite sides of said opening and communicating there-
15 with, said frustum shaped openings extending from one surface of said plate and terminating short of the other face thereof, a removable bar of substantially the same thickness as the said plate and having frustum shaped ends for recep-
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8

tion in said frustum shaped recesses, said bar being provided with means thereon for locating a center.

7. The invention according to claim 6 wherein
25 second frustum shaped recesses are formed extending from the other surface of said plate and terminating short of said one face of said plate, said recesses being of a size and shape whereby the outline of the opening is maintained in at least a portion of the material of said plate and said removable bar is provided with cooperating frustum shaped portions for engagement with said recesses, said bar and said plate being of resilient material.

8. A carpenter's template comprising a resilient plastic plate having an opening therethrough with the outlines of the opening indicating the face plate of a door lock, recesses formed on each face of said plate on opposite sides of said opening and communicating with said opening each recess tapering from its face toward the other face and terminated short of said other face whereby a continuous outline of said opening is maintained, a removable bar provided with projections at each end cooperable with said recesses for retaining said bar in fixed position, said bar having means thereon for indicating the location of a point for assisting in mounting a lock, the resiliency of said plate permitting slight deformation of said plate whereby the insertion and removal of said bar may be accom-
30 plished.

9. The invention according to claim 8 in which the removable bar has one of its projections of cam shape for guiding the bar into position by a movement transverse to the bar.
35

No references cited.