Sept. 24, 1963 J. S. ROSE 3,104,473

CABINET DOOR SPACING

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Fig. 1

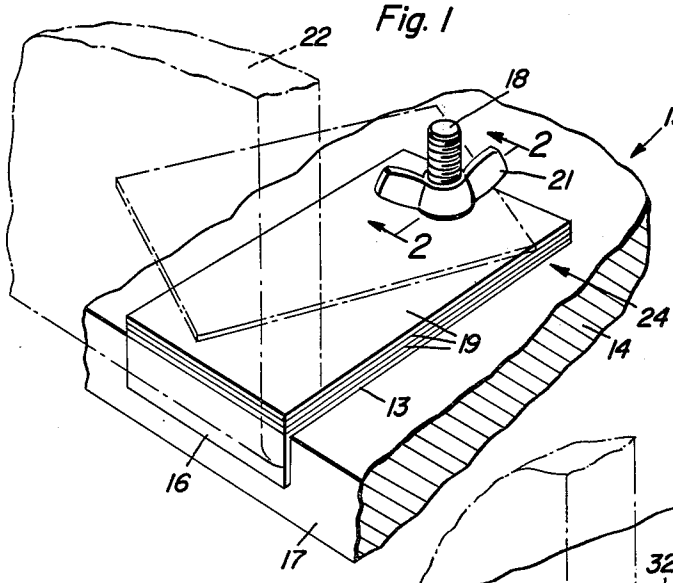


Fig. 2

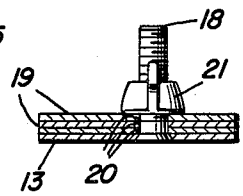


Fig. 5

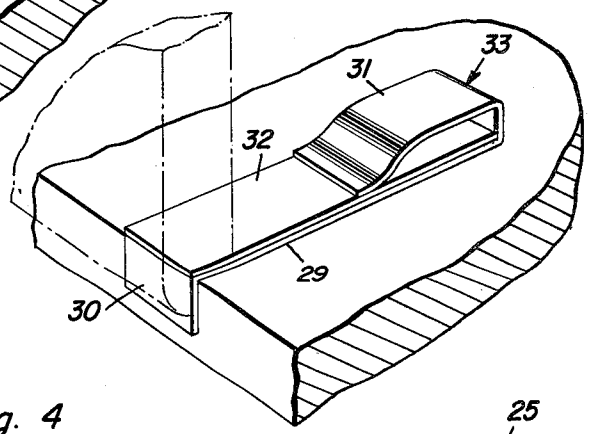


Fig. 6

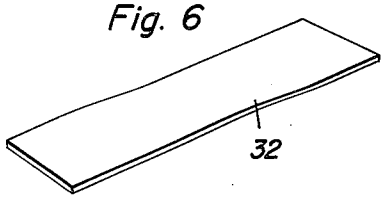


Fig. 4

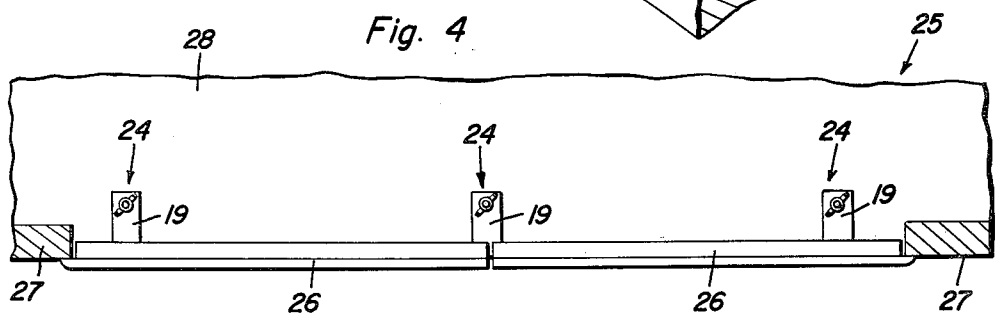
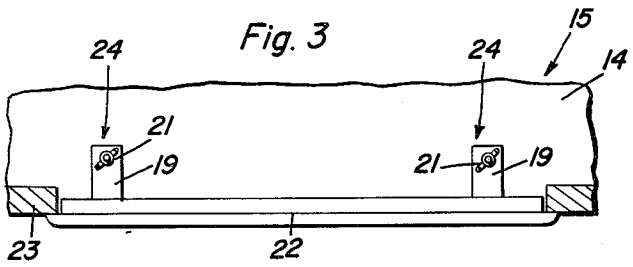


Fig. 3



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Fig. 7

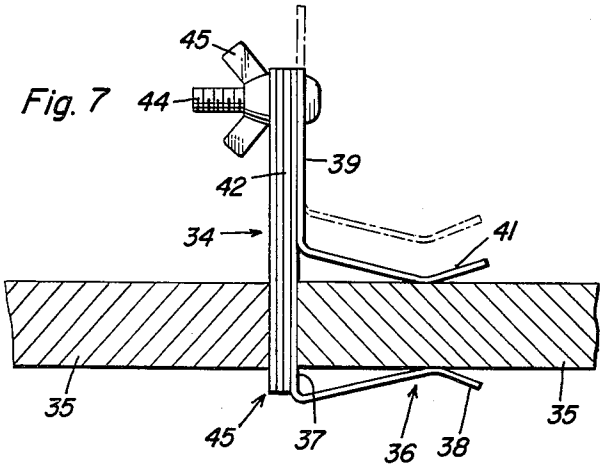


Fig. 8

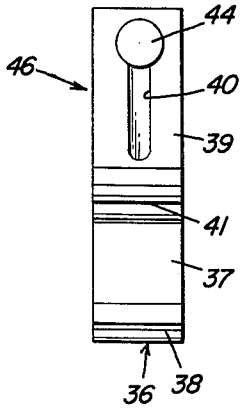


Fig. 9

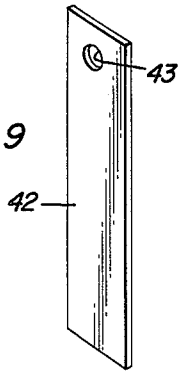


Fig. 10

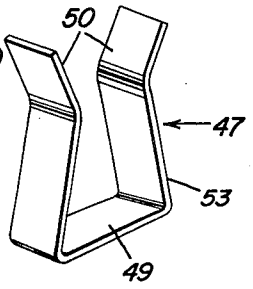


Fig. 12

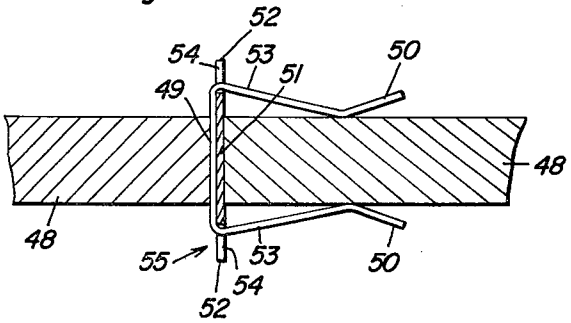
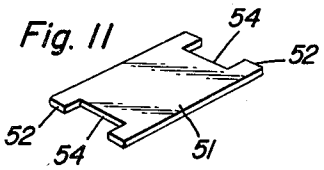


Fig. 11



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CABINET DOOR SPACING

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3 Claims. (Cl. 33—180)

This invention relates to new and useful improvements in gages particularly although by no means necessarily, for kitchen cabinet doors and has for its primary object to provide, in a manner as hereinafter set forth, novel means for facilitating the rapid and accurate marking of the cabinet or door frame for correctly locating the hinges and receiving the screws thereof when hanging the door.

Another important object of the invention is to provide a gage of the character described which is adapted to be used for properly spacing a pair of hinged, horizontally swinging doors.

Still another important object of the present invention is to provide a door gage of the aforementioned character which is readily adjustable for varying the elevation or spacing of the door or doors as desired.

Other objects of the invention are to provide an adjustable door gage of the character set forth which will be comparatively simple in construction, strong, durable, compact, of light weight and which may be manufactured at low cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view, showing a gage constructed in accordance with the present invention in position for use;

FIGURE 2 is a view in vertical longitudinal section through an end portion of the device, taken substantially on the line 2—2 of FIGURE 1;

FIGURE 3 is a fragmentary view in horizontal section through a portion of a cabinet showing, in top plan, a pair of gages in use on a single door;

FIGURE 4 is a view substantially similar to FIGURE 3 but showing a plurality of gages embodying the present invention in use for hanging a pair of hinged doors;

FIGURE 5 is a perspective view, showing a modified form of the invention in position for use;

FIGURE 6 is a detail view in perspective of one of the removable leafs or shims used in the embodiment of FIGURE 5;

FIGURE 7 is a top plan view of another modification, showing the device in position on a pair of doors, the latter being shown fragmentarily in horizontal section;

FIGURE 8 is a view in front elevation of the modification of FIGURE 7;

FIGURE 9 is a detail view in perspective of one of the leaves or shims used in the modification of FIGURE 8;

FIGURE 10 is a perspective view of another embodiment of the device;

FIGURE 11 is a perspective view of the leaf or shim forming a part of the modification of FIGURE 10; and

FIGURE 12 is a view in horizontal section through the modification of FIGURE 10, showing the device in use.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated in FIGURES 1 to 5, inclusive, of said drawing comprises an elongated, generally rectangular base or plate 13 of suitable resilient metal or other material which is adapted to rest on the usual bottom or floor 14 of a conventional kitchen cabinet 15. At one end, the base or plate 13 terminates in a depending flange or lip 16 which is adapted to abut the front edge 17 of the cabinet bottom 14.

Fixedly mounted on the other end portion of the plate 13 is an upstanding threaded stud or shank 18. Pivotally and removably mounted on the shank 18 is any desired number of shims or leaves 19 which also are substantially rectangular and which may be of any desired dimensions. Aligned holes 20 (FIGURE 2) in the shims 19 accommodate the shank 18. A wing nut 21 is threaded on the shank 18 for retaining the shims 19.

It is thought that the use of the device will be readily apparent from a consideration of the foregoing. Briefly, referring to FIGURE 3 of the drawing, reference numeral 22 designates a single door to be hingedly installed on the cabinet 15. To support the door at the desired elevation preparatory to securing the hinges to the frame structure 23 of the cabinet 15, a pair of the gages, as indicated at 24, are positioned at spaced points on the cabinet bottom 14. The door 22 with the hinges (not shown) secured thereon is then positioned on the gages 24 and said hinges are engaged with the frame 23. Of course, any desired number of the shims 19 are used. The shims which are not needed may be removed or swung to an out-of-the-way position on the shank 18. The shims which are used are secured against swinging movement on the shank 18 over the base or plate 13 by tightening the wing nut 21. The door 22 is held centered in the door opening with one hand. Then, with the other hand and using an ice-pick or other suitable instrument, the frame 23 is pierced or punched through the hinges to facilitate starting the screws in the correct location in an obvious manner.

In FIGURE 4 of the drawing reference numeral 25 designates generally a cabinet of the type comprising a pair of doors 26 to be hung. For this job three of the gages 24 are used with the free or inner ends of the doors resting on the intermediate gate, as shown. The doors 26 are to be hingedly mounted on the frame members 27 of the cabinet 25. Of course, the three gages 24 are mounted on the bottom or floor 28 of the cabinet.

In the embodiment of FIGURES 5 and 6 of the drawing, reference numeral 29 designates an elongated base or plate of resilient metal or other suitable material. The base or plate 29, which may also be of any desired dimension, is adapted to rest on the bottom or floor 14 of the cabinet 15 and said base or plate terminates at one end in a depending flange or lip 30 which is adapted to abut the front edge 17 of the bottom 14. The other end portion of the base or plate 29 is upwardly, reversely, downwardly and then rearwardly bent in a manner to provide a resilient clip 31 for removably securing one or more elongated shims or leaves 32 in position on said base or plate 29. The shims 32 may also be of any suitable material and dimensions. Thus, a gage 33 is provided the use of which is similar to that of the gage 24. When the shims 32 are inserted the clip 31 is tensioned thereby for frictionally gripping and retaining said shims.

In FIGURES 7, 8 and 9 of the drawing reference numeral 34 designates generally a gage to be used for spacing from each other a pair of cabinet doors 35 to be hung. The gage 34 includes a clamp or clip 36 to be removably mounted on the free end portion of one of the doors 35, said clip comprising an elongated base, plate or bar 37 having one end portion bent and angulated to provide a resilient jaw 38. Mounted for longitudinal sliding adjustment on the other end portion of the stationary bar 37 is a relatively short bar, plate or base 39 having in one end portion thereof a longitudinal slot 40. The other end portion of the bar 39 is bent and angulated to provide a resilient jaw 41 which is opposed to the jaw 38 and cooperable therewith for receiving under tension and frictionally gripping one of the doors 35 therebetween for removably mounting the clip or clamp 36 thereon.

Pivotally and removably mounted on the base, plate or bar 37 of the clip 36 is any desired number of elongated shims or leaves 42 of suitable material and dimensions. The shims 42 are provided in one end portion with holes 43 for the reception of a threaded shank or bolt 44 which also passes through the slot 40 and an opening provided therefor in one end portion of the member 37. A wing nut 45 on the bolt 44 secures the assembly.

Briefly, in use a pair of gage units, as indicated at 46, are mounted on one of the doors 35 to be hung, preferably adjacent the top and bottom thereof. When the clip 36 is slipped on the door 35 the jaws 38 and 41 are tensioned in an obvious manner for frictionally gripping said door. By loosening the wing nut 45 the jaw 41 may be adjusted longitudinally on the member 37 whereby the clip 36 will readily accommodate doors of various widths. With a pair of gages 46 mounted on one of the doors 35, the pair of doors are centered in the cabinet opening and spaced a desired distance from each other by said gages. Of course, the spacing of the doors may be varied as desired by removing or adding shims 42. The shims not needed may be removed or swung to an out-of-the-way position on the bolt 44 and secured by tightening the nut 45.

In the embodiment of FIGURES 10, 11 and 12 of the drawing, reference numeral 47 designates generally a substantially U-shaped clip or clamp of suitable resilient metal or other material which is adapted to be removably mounted on one of a pair of doors 48 to be hung. The clip 47, which may also be of any desired dimensions, includes an elongated plate, base or bight 48 and a pair of opposed, coacting, angulated resilient jaws 50. Removably mounted in the clip 47 on the base or bight 49 thereof is any desired number of shims or leaves 51 also of suitable dimensions and materials. The shims 51 are elongated and projecting longitudinally from the ends thereof are pairs of spaced lugs or the like 52 which straddle the legs 53 of the clip 47 for retaining said shims in position therein, said lugs defining notches or recesses 54 which receive said legs.

The gage 55 of FIGURES 10, 11 and 12 of the drawing is used in a manner substantially similar to the gage 46. That is, a pair of the gages 55 are mounted on the free end portion of one of a pair of doors 48 to be hung, preferably adjacent the top and bottom of said door. The jaws 50 of the clip 47 receive and frictionally grip the door therebetween. With the desired number of shims 51 in position in the clip 47 the doors 48 are spaced from each other the desired distance.

The foregoing is considered as illustrative only of the

principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A door spacing gage comprising a generally U-shaped clip to be removably mounted astraddle an edge portion of a door, said clip including a stationary base bar and a longitudinally adjustable bar slidable thereon, opposed coacting resilient jaws on one end of the bars for receiving and gripping the door therebetween, at lease one shim mounted for swinging adjustment on the stationary bar, and common means for frictionally securing the slidable bar and the shims in adjusted position on the stationary bar.

2. A door spacing gage comprising a generally U-shaped clip to be removably mounted astraddle an edge portion of a door, said clip including a stationary base bar and a longitudinally adjustable bar slidable thereon, opposed coacting resilient jaws on one end of the bars for receiving and gripping the door therebetween, at least one shim mounted for swinging adjustment on the stationary bar, and common means for frictionally securing the slidable bar and the shims in adjusted position on the stationary bar, said slidable bar having a longitudinal slot in its other end portion, said means including a nutted bolt mounted on the other end portion of the stationary bar and engaged in the slot and in one end portion of the shim.

3. A door spacing gage comprising a stationary bar, an adjustable bar slidable longitudinally on one side of the stationary bar, coacting resilient jaws on one end of the bars for receiving and gripping a door therebetween for removably mounting the gage on an edge thereof, said adjustable bar having a longitudinal slot in its other end portion, a bolt in the other end portion of the stationary bar engaged in the slot, a plurality of removable shims on the other side of the stationary bar mounted for swinging adjustment on the bolt, and a wing nut threaded on the bolt for frictionally securing the adjustable bar and the shims in adjusted position.

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