Oct. 16, 1951 E. VOGEL 2,571,633

DOOR HINGE

Filed Aug. 30, 1946

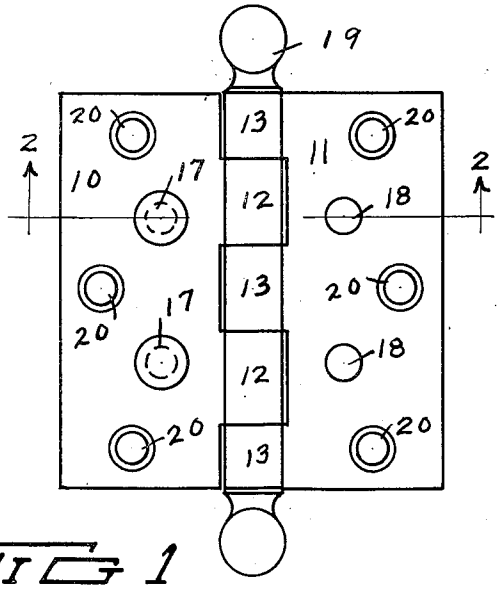


FIG. 1

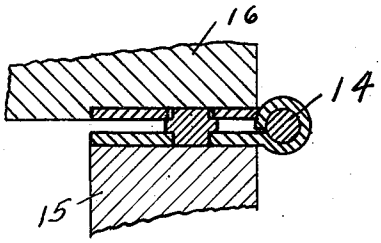


FIG. 2.

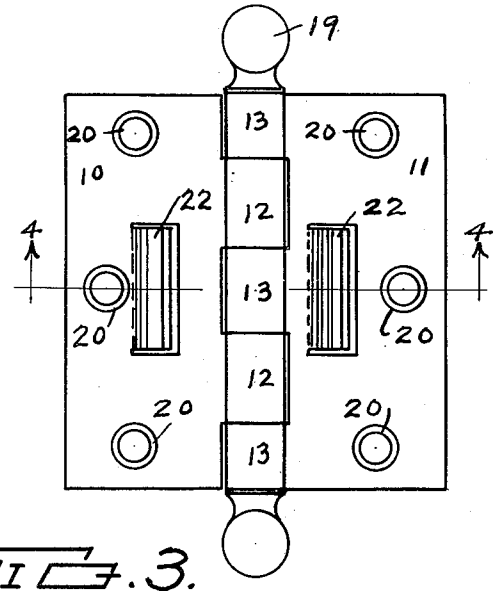


FIG. 3.

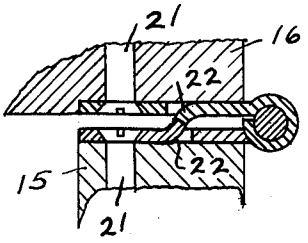


FIG. 4.

Inventor

EDWARD VOGEL.

By Howard J. Whelan.

Attorney

Patented Oct. 16, 1951

2,571,633

UNITED STATES PATENT OFFICE

2,571,633

DOOR HINGE

Edward Vogel, Baltimore, Md.

Application August 30, 1946, Serial No. 693,940

1 Claim. (Cl. 16—137)

1

This invention relates to building hardware and more particularly to hinges for doors.

It is an object of this invention to provide a new and improved door hinge that will avoid one or more of the disadvantages and limitations of the prior art.

Another object of the present invention is to provide a new and improved door hinge that will obstruct the removal of the door from the casement or frame even though the hinge pin is lifted out, when the door is closed.

A further object of the invention is to provide a new and improved hinge attachable to doors and cabinets that will automatically lock its plates in position when the door to which they are attached is closed. This will occur in spite of the fact that its hinge pin is removed, and the door cannot be detached from the casement in that position.

Other objects will become apparent as the invention is more fully set forth.

For a clearer appreciation of the invention and its principles, reference is made to attached drawings and the description following, wherein a particular form of the invention is outlined by way of example to illustrate its principles and the method of its operation, while the claim points out the scope of the invention.

Referring to the drawings, in which:

Figure 1 is a front elevation of a door hinge embodying this invention,

Figure 2 is a sectional view taken along line 2—2 of Figure 1, in closed position,

Figure 3 is a front view of the modification of the hinge shown in Figure 1, and

Figure 4 is a sectional view taken along line 4—4 of Figure 3, in closed position.

Similar reference numerals refer to similar parts throughout the drawings.

The conventional type of door hinge consists of two flat plates folded around at one end into spaced cylindrical sections suitably spaced apart to allow the sections of one to interlock with those of the other, and through which a hinge pin is inserted to hold them together. It is a matter of little trouble to remove the pin from the sections to separate the plates from each other, and then pry the door with one plate attached, from the casement to which the other plate is attached. In this manner the door can be removed and the doorway entered, without obstruction. This has been done frequently by persons seeking unauthorized and quiet entry into a building. Afterwards, the door may be replaced readily and the pin in each hinge reinserted, to hide the fact of the entry.

2

In this invention, the structure is very similar consisting of two flat plates 10 and 11 respectively having sections 12 and 13 interlockable with one another. The sections are bent into hollow cylindrical forms to make projecting ribs extending down one end of the plates, so that a hinge pin 14 may be inserted into them to keep the sections in alignment and from lateral displacement. The sections extend to the side of their respective plates, to enable them to extend outside the face of the door 15 and casement 16, in the usual manner. The plate 10 however is surmounted by a boss element or prong 17 near its middle portion. Aligned suitably with this boss 17 is a hole 18 in the other plate 11 into which it fits when the door is closed and the plates are brought together inside the jamb of the doorway. They are both preferably bevelled to provide for a certain amount of adjustment. When the boss and hole are so aligned, they bolt themselves together cooperatively so that the door cannot be pulled out of the doorway, even though the hinge pin 14 is removed. Further the locking action is very effective since the resistance to such is in shear where the material of the hinge offers the most substantial opposition. The pin 14 preferably has a head 19 to limit its travel in the sections and afford means for its removal. Holes 20 are distributed about the plates for the insertion of screws 21 usable for holding them to the door and its frame. The provision of the boss and hole adds little to the cost of the hinges and therefore does not interfere with same being produced economically.

In the modified form indicated in Figures 3 and 4, the locking elements 22 consist of cutout portions of the plates which are angularly bent so as to butt against each other when in closed position. This arrangement enables the plates to be stamped out economically and avoids the extra pieces and holes that are required when the bosses are used.

While but two general forms of the invention are shown in the drawings and described in the specification it is not desired to limit this application for patent to this particular form, as it is appreciated that other forms could be made that would use the same principles and come within the scope of the appended claim.

Having thus described the invention what is claimed is:

A hinge comprising a pair of leaves joined by a removable pintle, the hinge being closed when the leaves are parallel and overlie each other, the face of one leaf having a tongue extending

outwardly at an acute angle therefrom toward the pintle, the face of the other leaf having a tongue extending outwardly at an acute angle therefrom away from the pintle, each tongue being directed toward and abutting the tip of the tongue on the other leaf in a plane oblique to the plane of the leaves when the hinge is closed, whereby upon removal of the pintle sliding separation of the leaves when the hinge is closed is precluded in one direction.

EDWARD VOGEL.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
167,576	Skidmore	Sept. 7, 1875
1,412,875	Knuth	Apr. 18, 1922
1,421,746	Thorne	July 4, 1922
1,923,721	Glenn	Aug. 22, 1933