

Feb. 7, 1950

C. F. BERRY

2,496,691

DOORSTOP AND HOLDER

Filed June 19, 1948

2 Sheets-Sheet 1

FIG. 1

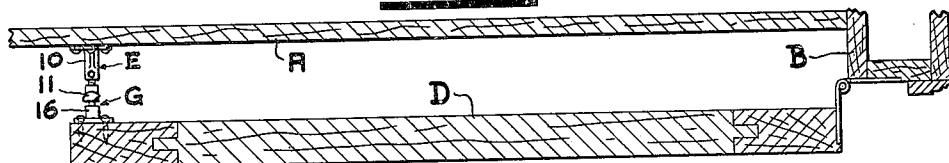


FIG. 2

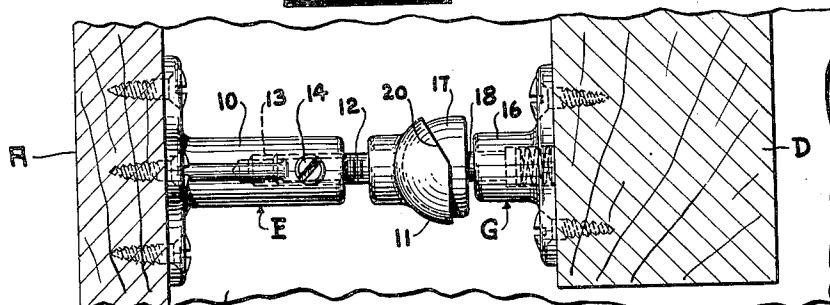


FIG. 3

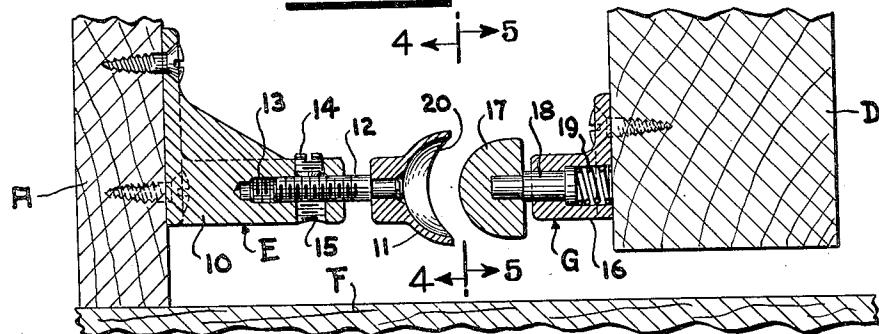


FIG. 4

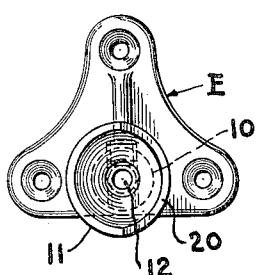
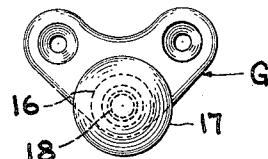


FIG. 5



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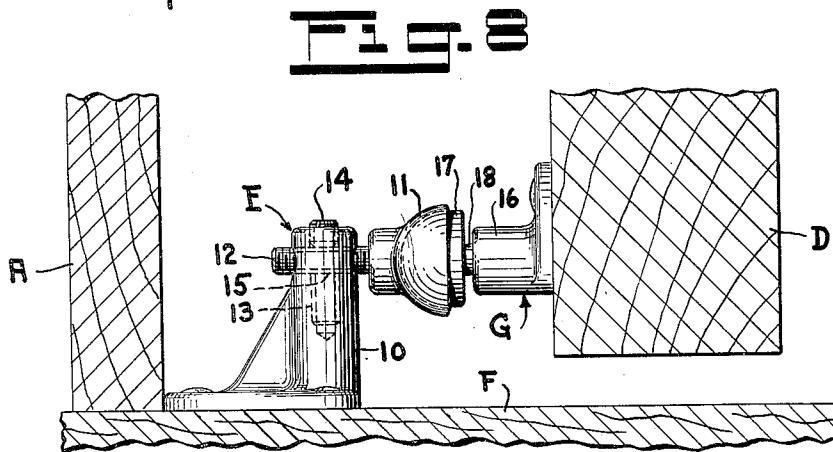
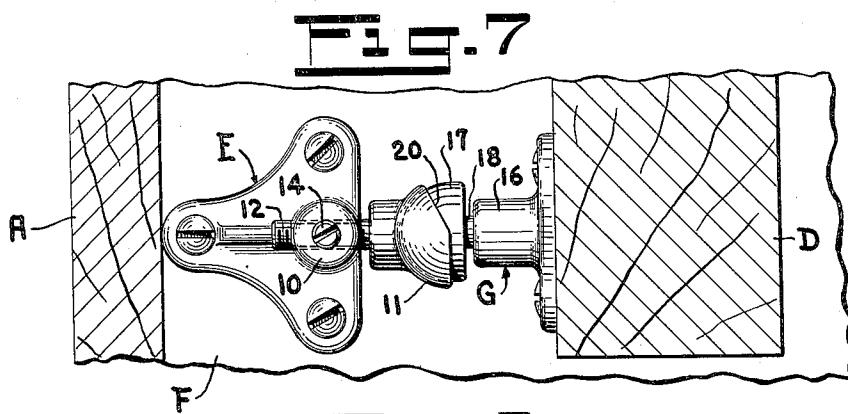
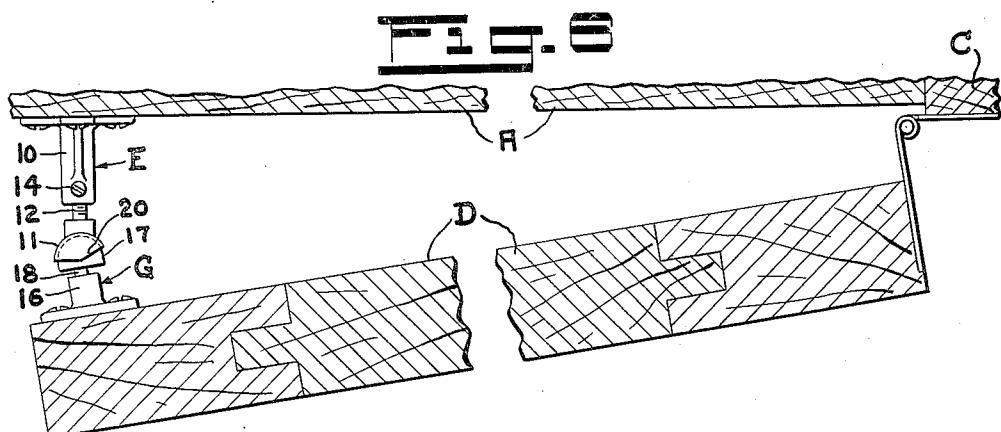
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UNITED STATES PATENT OFFICE

2,496,691

DOORSTOP AND HOLDER

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Application June 19, 1948, Serial No. 34,019

3 Claims. (Cl. 292—70)

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The invention relates to devices for stopping and holding doors in an open position. Such devices generally consist of a stationary member secured to a floor or wall and a member secured to the door, and which members are designed to interlock mechanically. Other types designed for mounting entirely on a door comprise tilting or reciprocating means adapted to be tilted or depressed to impinge upon the floor, and in some forms are combined with a releasing device.

The object of this invention is to provide a device which may be readily applied; will not become inoperative due to wear of frictionally or mechanically interlocking parts; will not mar a floor or floor covering; and one requiring no tripping or releasing means. In carrying my invention into effect I provide a stationary member and a door member which interlock magnetically.

The invention is illustrated in the accompanying drawings, in which:

Figure 1 is a sectional view illustrating a door held in open position by the magnetic holding device.

Figure 2 is an enlarged top view of the device in the holding position and showing the stationary member secured on a wall.

Figure 3 is a vertical central section through both members of the holding device.

Figures 4 and 5 are end views of the stationary and movable members of the holding device looking in the direction of the arrows 4—4 and 5—5, respectively, of Figure 3.

Figure 6 is an enlarged view similar to Figure 1, but showing a door held at an angle to a wall, when hinged to a hanging strip close to a wall, and

Figures 7 and 8 are plan and side views, respectively, of the device showing the stationary member secured on a floor instead of on a wall as in Figure 2.

Referring to the drawings, A indicates a wall; B in Figure 1, the usual door casing; C in Figure 6, a hanging strip for a door hung close to a wall; D a door; E the stationary member of the door holder adapted to be secured to a wall as in Figures 1, 2, 3 and 6, or upon a floor F as in Figures 7 and 8; and G is the moving member of the door holder secured on the door D at a point where members E and G will engage as seen in Figures 1 and 6 when the door is wide open.

The stationary member E of the holding device comprises a body or post 10 having a flange for securing the post to a wall A as shown in Figure 2, or to a floor F as shown in Figure 7, and an adjustable contact element of magnetic material

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in the preferred form of a cup or socket 11 mounted on a screw-threaded stem 12. The post 10 is provided with a longitudinal screw-threaded bore 13 into which the screw-threaded stem 12 is adjustably threaded when member E is secured to a wall A and is held in adjusted position by set-screw 14 as shown in Figures 2 and 3. The screw-threaded bore 15 for set-screw 14, Figure 3, extends through the post 10 perpendicular to bore 13 and is adapted to receive stem 12 when member E is secured to floor F, the stem being held in adjusted position by set-screw 14 threaded into bore 13 as shown in Figures 7 and 8.

15 The moving member G of the holding device comprises a flanged base element 16, preferably of non-magnetic metal, adapted to be secured to a door D, and a magnetic element, preferably in the form of a hemispherically shaped permanent magnet 17 which is mounted on a stem 18 slidable in the bore of the base against the pressure of spring 19. The convex surface of magnet 17 corresponds with the concave surface of the cup or socket 11 so as to make overall contact when seated therein.

20 To insure free entrance of magnet 17 into socket 11 without frictional engagement with the rim as the magnet approaches at an angle to the axis of the socket, especially when a door is hinged close to a wall as shown in Figure 6, part of the socket rim is cut back or bevelled at an angle to the vertical plane on the side nearest the door hinge as indicated at 20.

25 It will be understood that I do not limit myself in carrying the invention into effect to the specific form of the stationary and moving members as illustrated in the drawings since it will be evident that different forms may be employed without departing from the spirit of my invention, and that the magnetized element may be mounted on the stationary member of the device.

30 What I claim is:

35 1. In a device of the class described, the combination of a base member, a post projecting vertically therefrom, a contact element of magnetic material adjustably mounted on said post, a base member of non-magnetic material, a post 40 slidably mounted therein, a spring against which said post is seated, and a permanent magnet 45 mounted on said last-named post adapted to make contact with the aforesaid contact element.

50 2. In a device of the class described, the combination of a stationary member, a cup-shaped contact element of magnetic material mounted thereon, a member adapted to be secured to a

door, a ball-shaped magnetized contact element mounted on said door member for contacting the cup-shaped element, and part of the rim of said cup-shaped element sloping at an outwardly diverging angle to the axis of the cup to permit the ball-shaped element to enter the cup at an angle to the cup axis.

3. In a device of the class described, the combination of a stationary member consisting of a base, a contact socket of magnetic material, and a screw-threaded stem on which said socket is mounted for adjustable seating on said base, and a moving member consisting of a base adapted to be secured to a door, a permanent magnet of hemispherical form, a stem slidable in said base and on which said magnet is mounted, a spring against which said stem is

seated, and part of the rim of said socket sloping at an outwardly diverging angle to the axis of the cup to permit the magnet to enter the socket at an angle to the cup axis.

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