(No Model.)

T. RAE.

DOOR CHECK.

No. 490,925. Patented Jan. 31, 1893.

Fig. 2.

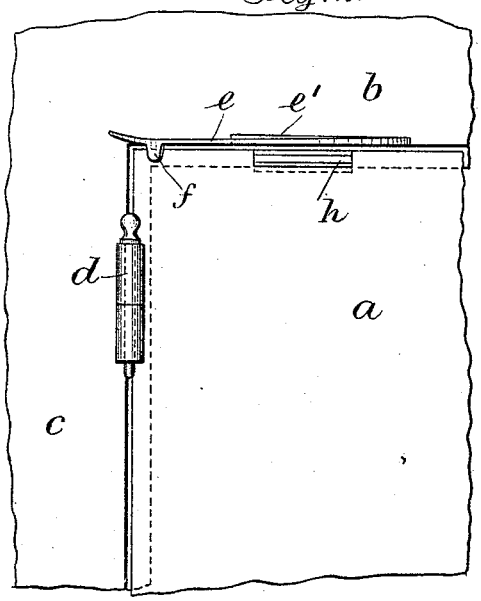


Fig. 1.

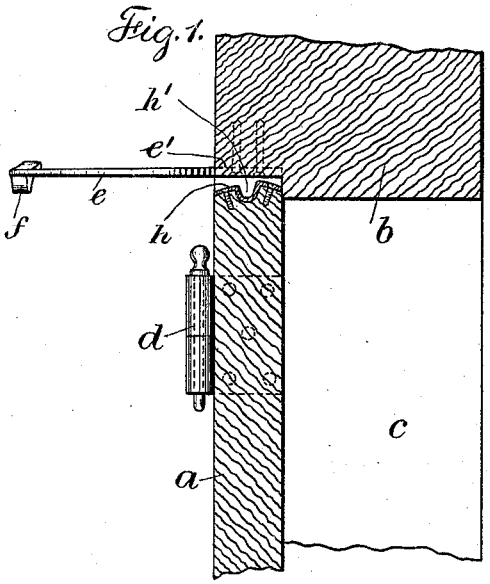


Fig. 3.

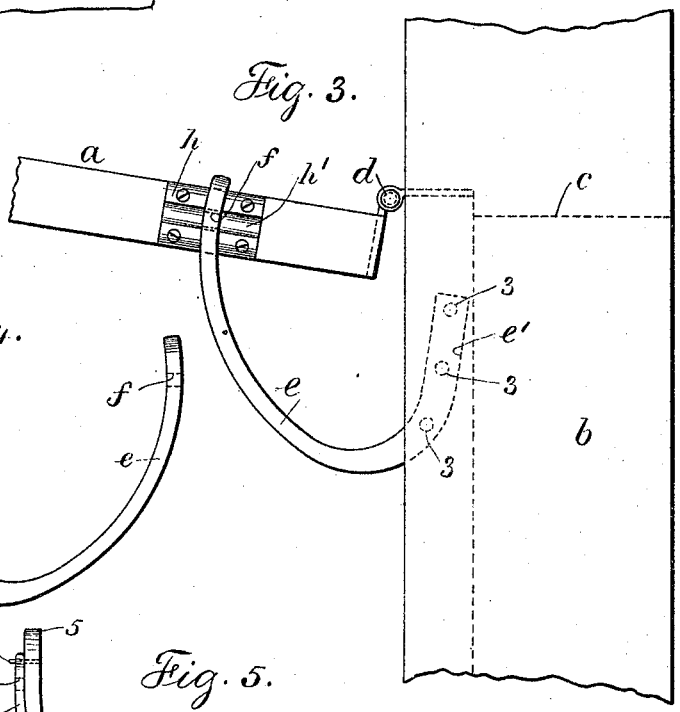


Fig. 4.

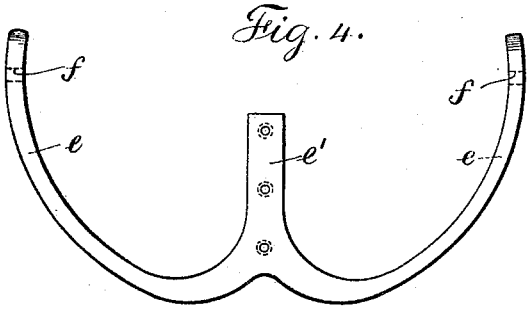


Fig. 6.

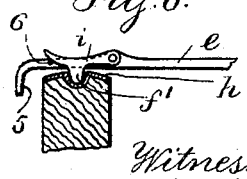
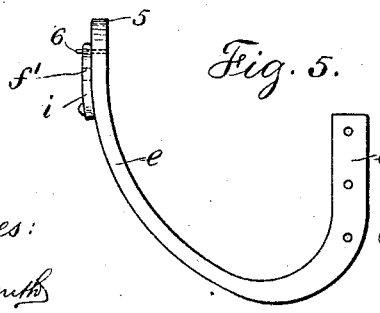


Fig. 5.



Witnesses:
J. Stait
Chas. F. Smith

Inventor:
Thomas Rae
per Lemuel W. Serrell
atty

UNITED STATES PATENT OFFICE.

THOMAS RAE, OF NEW YORK, N. Y.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 490,925, dated January 31, 1893.

Application filed August 23, 1892. Serial No. 443,880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS RAE, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Improvement in Door Holders and Stops, of which the following is a specification.

Stops of various kinds have heretofore been employed for holding doors open at varying distances, and also for preventing doors from swinging open beyond a fixed point. These stops have been secured to the floor and to the base board or to articles of furniture. These stops are apt to be hit with the feet and in other ways, besides they are in the way and mar that to which they are attached.

In my improvement the holder and stop is out of the way and is where a person cannot come in accidental contact with it. I employ a curved or arc bar of spring metal connected at one end to the under side of the door casing above the door and extending outwardly in the path traversed by the door. The free outer end of the arc bar has a downward projection or lug that engages a grooved plate let in the top edge of the door by which the door is retained in place. These arc bars are placed according to the extent to which it is desired to open the door. I employ a double arc bar for doors that swing both ways.

In the drawings:—Figure 1. is a vertical cross section. Fig. 2. is an elevation. Fig. 3. is a plan with the door open. Fig. 4. is a plan of the double arc bar. Figs. 5. and 6. show by a plan and side elevation a modified construction of the arc bar.

The door is represented at *a;* the upper casing at *b.* and the side casing at *c.* and *d.* is the upper hinge of the pair usually employed to hang the door *a.*

e. represents the curved or arc bar preferably formed of a blade or plate of flat spring metal. The inner end *e'.* is let into the under side of the upper portion of the door casing *b,* and is attached thereto by several screws 3. The free outer end of the arc bar *e.* has a downward projection or lug *f.* A curved plate of metal *h.* having a central depression or groove is employed so as to engage the projection *f.* of the arc-bar in holding the door. This plate *h.* is let into the top edge of the door, the curved portion extending across the thickness of the door and the groove *h'.* extending lengthwise of the door, and it will be noticed that the plate at the edge of the groove *h'.* next the jamb of the door is higher than the opposite edge and when the door is swung open the projection *f.* rides over the plate *h.* and drops into the groove *h'.* and the higher edge of said groove as a shoulder bears against the projection *f.* preventing it leaving the groove or the door opening any farther.

To shut the door a quick movement of the door will cause the projection to jump out of the groove over the lower edge of the plate so that the door is free to be shut.

The placing of the inner end *e'.* of the arc bar *e.* farther from or nearer to the hinge *d.* and either parallel with the door casing or oblique thereto in either direction, determines the point where the projection *f.* will drop into the groove *h'.* and regulates the extent to which the door will be held open.

My improved arc bars may be made any part of a circle, the one shown being about a quarter circle.

In Fig. 4. I have shown a double arc bar for use with doors that swing both ways, such doors as are employed in churches, public buildings and halls and places of amusement. With this double arc bar I employ a grooved plate with both edges of equal height. With this construction such doors can be held open at both extreme places.

In the modification shown in Figs. 5. and 6, the projection *f'.* is part of the pawl *i.* and is employed with a grooved plate with edges of equal height. This pawl is on the outer convex edge of the arc bar *e.* The arc bar of Figs. 5. and 6. has a downwardly bent end 5. and pin 6. the end 5. acting as a stop to the door and the pin 6. preventing the falling of the pawl when the door is closed. In this modification the door is held open by the pawl and projection *f'.* and when the door is to be shut it is moved out to the stop or end 5. and is then moved quickly in the opposite direction thus causing the said pawl and projection by the momentum to jump over the grooved plate in freeing the door from the projection.

I claim as my invention:—

1. A door holder and stop composed of a spring arc bar adapted to be fastened at one end to the door casing and having a downward

projection near the other end to pass into a groove or recess at the top of the door and hold the same, substantially as specified.

2. A door holder and stop composed of an arc bar having a projection and adapted to be connected to a casing above a door, in combination with a grooved plate adapted to be connected to the top edge of a door, substantially as specified.

3. A door holder and stop composed of a spring arc bar *e*. having an inner end *e'*. to be secured to a door casing and having a downward projection *f*. at the other end, and a curved plate *h*. with a central depression or groove *h'*. adapted to be connected to the top edge of a door, the edge of the plate at one side of the groove being higher than at the other side substantially as and for the purposes set forth.

Signed by me this 11th day of August, 1892.

THOMAS RAE.

Witnesses:
GEO. T. PINCKNEY,
HAROLD SERRELL.