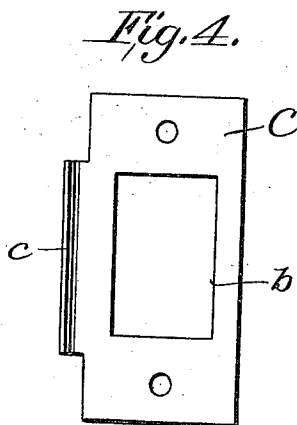
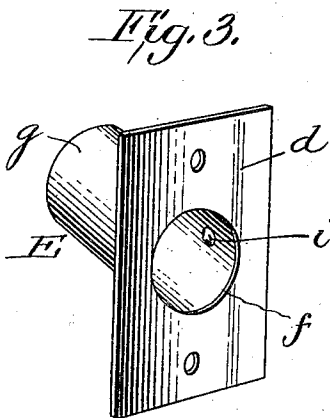
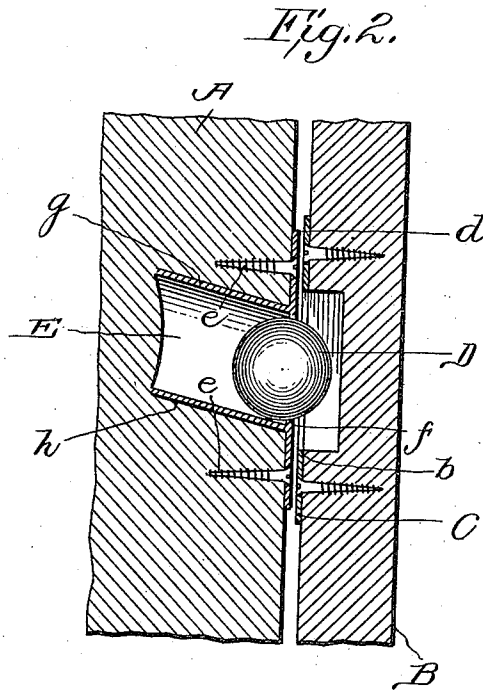
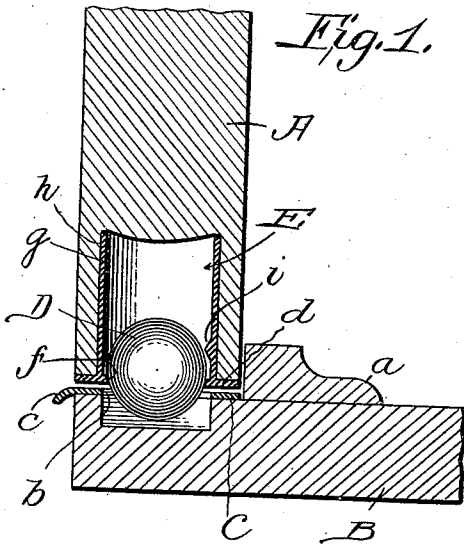


J. A. STUART.
DOOR CHECK.
APPLICATION FILED OCT. 13, 1903.

948,598.

Patented Feb. 8, 1910.



Witnesses

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JAMES A. STUART, OF HIGHLAND, CALIFORNIA.

DOOR-CHECK.

948,598.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed October 13, 1909. Serial No. 522,426.

To all whom it may concern:

Be it known that I, JAMES A. STUART, citizen of the United States, residing at Highland, in the county of San Bernardino and State of California, have invented new and useful Improvements in Door-Checks, of which the following is a specification.

My invention relates to door checks such as are calculated to retain doors in a closed position and yet release the doors when the same are subjected to push or pull.

The object of the invention is to improve the type of checks in which ball-shaped bolts and keepers therefor are employed, by so constructing and arranging the parts that it is unnecessary to employ springs or the like in order to assure proper operation of the ball-shaped bolts.

My invention will be best understood by reference to the following description when taken in connection with the accompanying illustration of one specific embodiment thereof, while its scope will be more particularly pointed out in the appended claims.

In the drawings: Figure 1 is a horizontal section taken through a door and its casing and illustrating the door as detachably secured in its closed position through the medium of my novel check. Fig. 2 is a vertical section of the same. Fig. 3 is a perspective view of the case for the ball-shaped bolt. Fig. 4 is a face view of the keeper.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is a portion of a swinging door.

B is a portion of the door casing on which is a stop *a*.

C is the keeper, and D and E are the ball-shaped bolt and the case, respectively, of the member adapted to cooperate with the keeper. The keeper C is provided with a seat *b* which is preferably of a greater height than the diameter of the bolt D in about the proportion shown, so as to assure engagement between the bolt and the keeper when the door sags or when the keeper is not accurately positioned relative to the height of the bolt. In the present and preferred embodiment of my invention, the keeper C is carried by the door casing B, and is suitably connected to the casing so that the lip *c* with which the keeper is preferably provided, extends slightly beyond the face of the casing, as shown in Fig. 1.

The ball-shaped bolt D and the case E

constituting the member for cooperating with the keeper are carried by the door A, which may be a screen door or a door of any other description to which my improvements are applicable. The case E comprises a face plate *d* adapted to be connected by screws *e* or other suitable means to the edge of the door A, and having an opening *f*, of smaller diameter than the bolt D, and a tubular portion *g* that is inclined upwardly and inwardly from the face plate *d*, Figs. 2 and 3, for an important purpose hereinafter set forth, and is preferably open at its inner end, this latter to permit of the ball-shaped bolt being readily dropped in the tubular portion *g* precedent to the placing of the same in the hole *h* bored or otherwise formed in the door. In its inner side and at a point diametrically opposite the lip portion of the keeper when the door is closed, the tubular portion *g* of case E is provided with a protuberance *i*, designed to cooperate with the ball-shaped bolt D.

In the practical operation of my improvements, it will be observed that as the door approaches its closed position, the keeper C will strike the ball or ball-shaped bolt, and the ball or bolt will roll and move upwardly and rearwardly in the tubular portion *g* of the case E. Immediately thereafter, however, the ball will gravitate back to its normal position and will protrude through the opening *f* in case E and into the seat *b* in the keeper C, and thereby hold the door against opening until it is subjected to stress. It will also be observed that in the event of the door starting to open under the pressure of wind, the portion of the keeper remote from the protuberance *i* engages the ball and forces the same into contact with the said protuberance *i* which then forms a resistance to the upward and inward movement of the ball and in that way holds the door against opening until the door is subjected to the considerable stress incidental to a person pushing against or pulling the same.

It will be gathered from the foregoing that the ability of the ball-shaped bolt to move upwardly as well as inwardly when the ball strikes the keeper, enables the ball to subsequently gravitate to and remain in engagement with the seat *b* of the keeper and renders it unnecessary to employ a spring or other expensive and weak device for assuring outward movement of the bolt after the same is pushed back by the keeper. From

this it follows that my novel check is not only cheaper, but is more durable than those embodying a spring or the like for acting against the ball-shaped bolt.

5 While I have shown and described one form of my invention, it is to be understood that I am not limited to the details or the form or relative arrangement of parts disclosed, but that modifications may be made
10 therein to a considerable extent without departing from the spirit thereof.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

15 1. In means for the purpose described, the combination with a swinging door and its casing, of a keeper carried by the one and having a seat, and the other carrying a ball-shaped bolt and having an opening of
20 smaller diameter than the bolt and also having an upwardly and inwardly inclined socket for inward and outward movement of the bolt, and a protuberance in said socket at a point remote from the forward side of

the door, and adapted to coöperate with the 25 ball-shaped bolt, substantially as specified.

2. In means for the purpose described, the combination with a door and its casing, of a keeper carried by the one and having a seat, and a member for coöperating with the 30 keeper, carried by the other; the said member comprising a ball-shaped bolt, and means confining said bolt and having a face plate in which is an opening of smaller diameter than the bolt and also having a tubular portion 35 extending upwardly and inwardly from the face plate, and a protuberance in said tubular portion at a point remote from the forward side of the door and adapted to coöperate with the ball-shaped bolt, substan- 40 tially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES A. STUART.

Witnesses:

J. D. BOLEY,

W. J. NORWOOD.