

B. F. FOWLER.

DOOR STOP.

APPLICATION FILED OCT. 15, 1910

993,357.

Patented May 30, 1911.

Fig. 1.

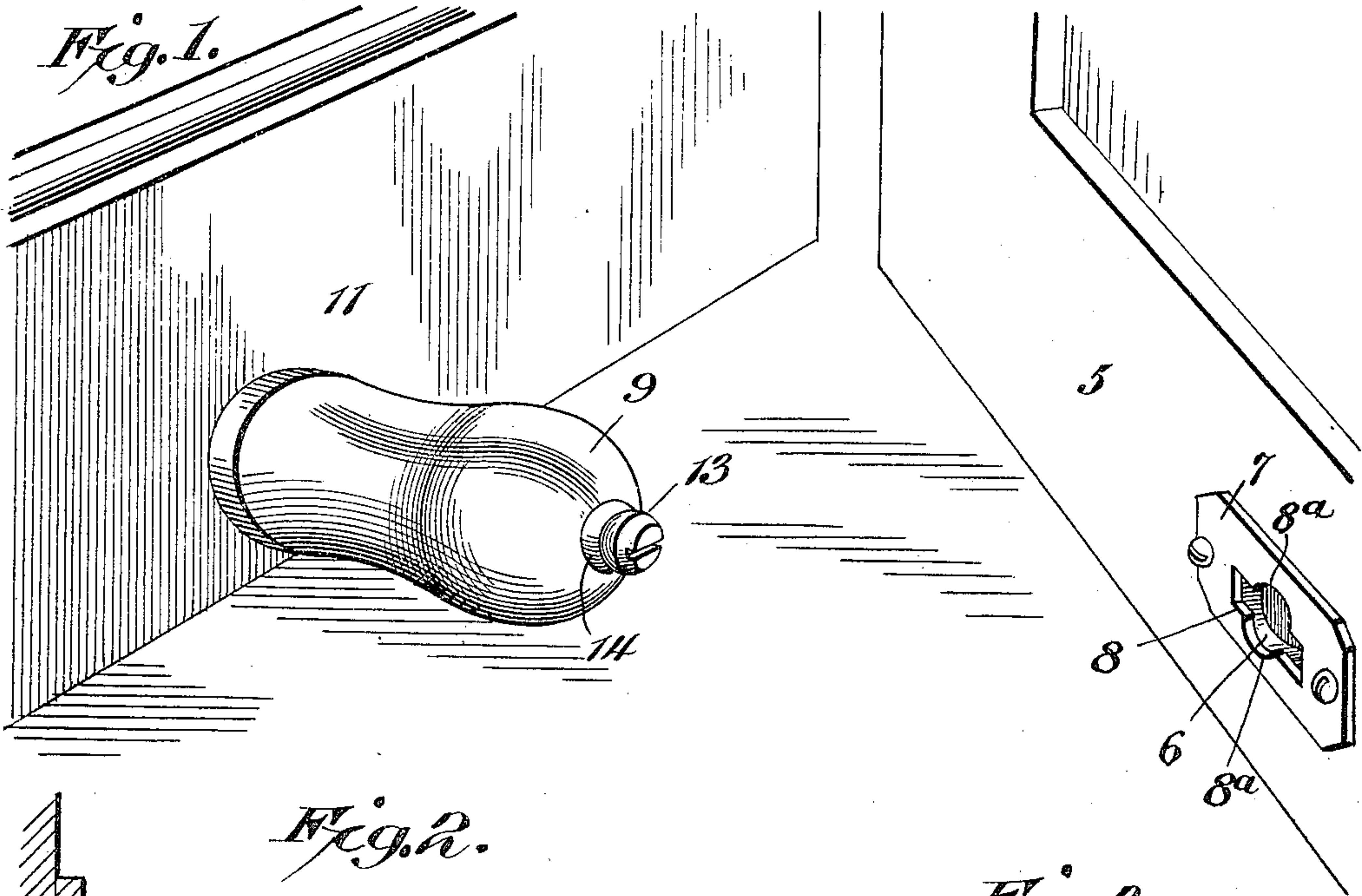


Fig. 2.

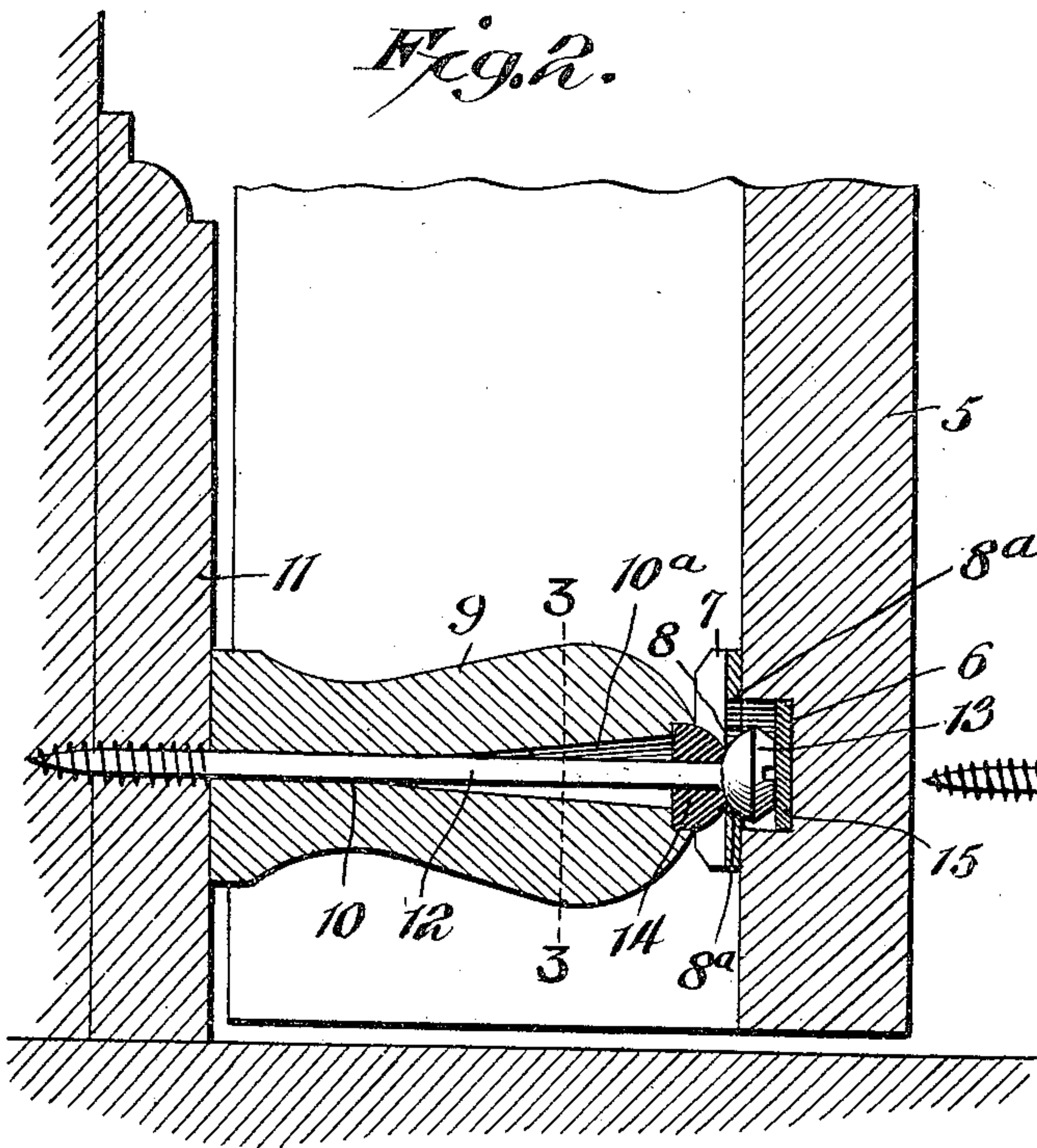


Fig. 3.

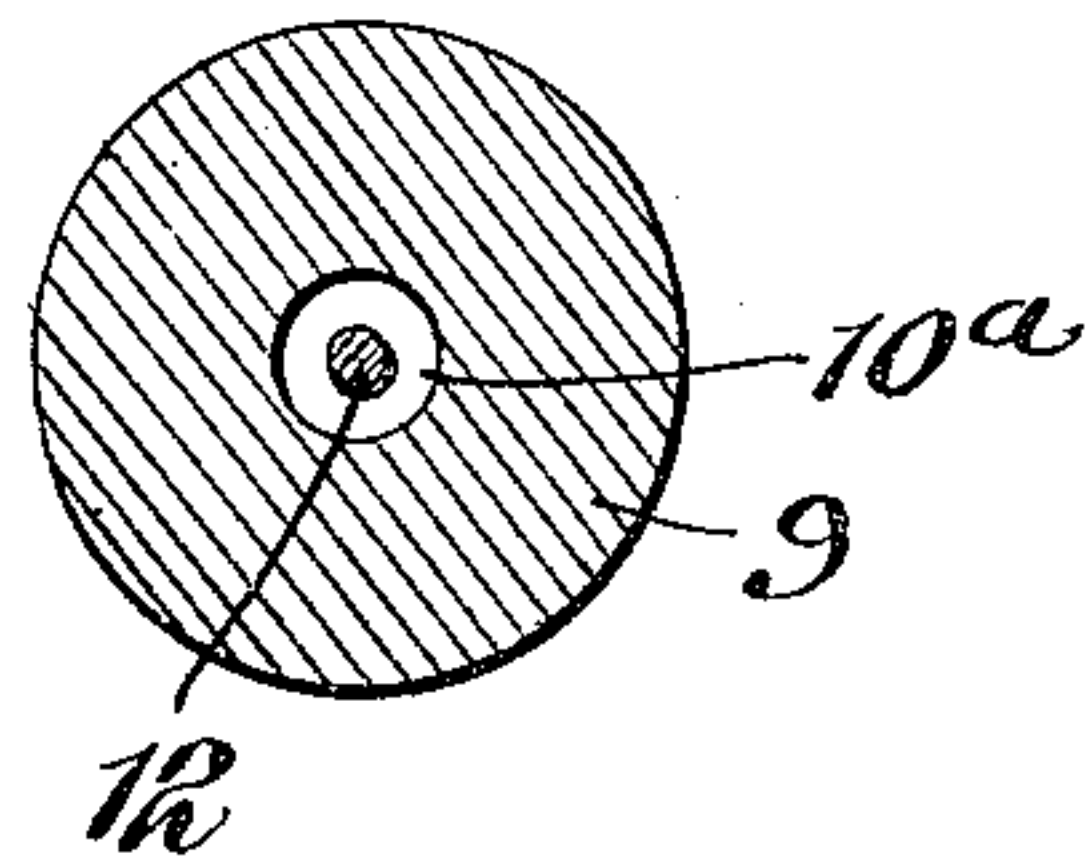
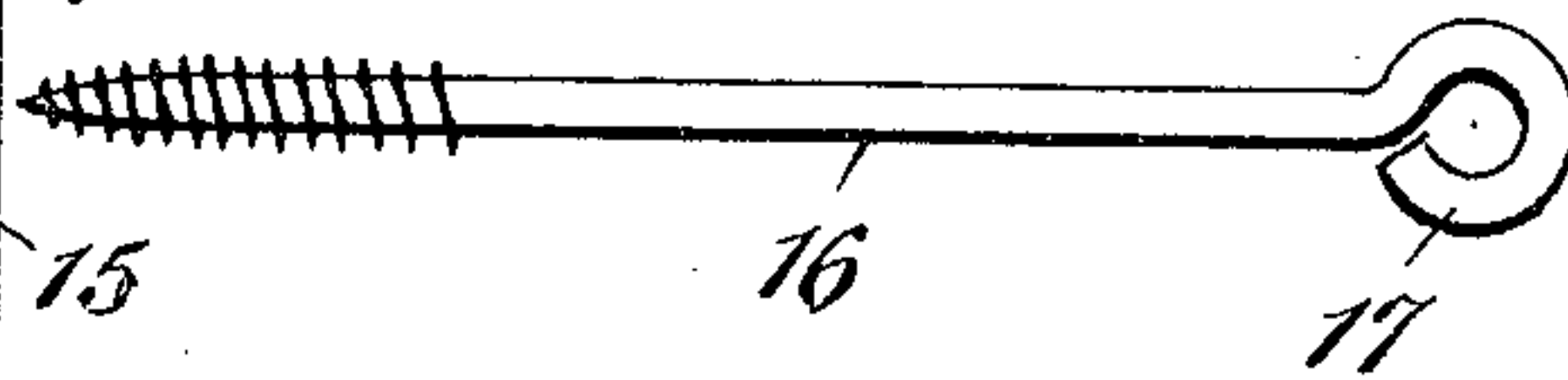


Fig. 4.



WITNESSES

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DOOR-STOP.

993,357.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed October 15, 1910. Serial No. 587,271.

To all whom it may concern:

Be it known that I, BENJAMIN F. FOWLER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Door-Stop, of which the following is a specification.

My invention relates to door checks and holders, and particularly to that class of devices which are used to hold a door in open position.

The principal object of my invention is to provide a device of this character which shall be extremely simple in its construction, composed of few parts, and yet thoroughly effective and positive in its operation, and further, one which may be manufactured and supplied at slight cost, and that may be readily applied.

The invention consists in the construction and combination of parts hereinafter described, and more fully pointed out in the appended claims, reference being had to the accompanying drawings, forming a part of this specification.

In the drawings, Figure 1 is a perspective view of my invention showing it applied. Fig. 2 is a longitudinal sectional view through the center of my device showing the parts in position to retain the door open. Fig. 3 is a section on line 3—3 of Fig. 2. Fig. 4 is an elevation of a modified form of shank.

In the accompanying drawings, in which like letters refer to corresponding parts in the several views, 5 represents a swinging door which is provided in its base with a recess 6, over which is placed a keeper plate 7, substantially oblong in shape and provided in its center with an opening 8, substantially oblong in form, but with the top and bottom edges thereof cut out and curved as at 8^a so as to form in the center a circular opening. This plate is attached to the door by screws, and when placed over the recess 6, the latter being slightly larger than the opening 8 in plate 7 (see Fig. 2), causes the lower wall or edge of the opening 8 to extend above the bottom wall of the recess.

9 is a knob having an axial opening 10 extending longitudinally through the same, said opening flaring or tapering outwardly toward the outer end of said knob as at 10^a, beginning approximately one-third of the distance of the knob measuring from its base.

The knob is affixed to the washboard 11 by means of a screw-threaded shank or member 12, which is longer than said knob and extends through the opening thereof and tightly engages the inner portion of said opening. The shank 12 is provided on its outer end with an enlarged substantially circular head 13, having a flat outer face and a slot or nick provided in said face which is adapted to be engaged by a screw driver when applying the device. The peripheral surface of the head is beveled backwardly and outwardly from the flat outer face to a point and then curved inwardly until it meets the shank. Surrounding the shank and seated in a recess in the outer end of knob 9 is a substantially circular piece of rubber or other resilient material 14, the outer end of which abuts against the inner curved wall of the head. It will be readily seen that the shank 12 is held away from the flared portion of the opening 10 of the knob 9 by the resilient material 14.

When the parts are in position, the head of the shank 12 is adapted to enter the circular part of the opening in plate 7 and catch against the lower edge or wall of said opening and thus securely retain the door in an open position. The shank 12 when in its normal position, is held in a plane slightly below the lower edge or wall of the circular portion 8^a of opening 8 in plate 7, but when it strikes said edge, the shank 12 vibrates and moves upwardly and then drops down so as to enter and rest in the said circular portion and engage behind plate 7, where it is frictionally held.

15 is a packing of leather or other material which is placed in the recess 6 to provide a buffer for the head of shank 12.

Referring to Fig. 4, 16 is a modified form of screw-threaded shank to be used in place of member 12, and is provided on its outer end with a head in the form of an eye as at 17. When the type of shank shown in Fig. 4 is used, the keeper plate attached to the door is changed in its position so that the end angular portions of the opening 8 may be utilized; in other words, the keeper plate shown in Fig. 1 is provided with a peculiar shaped opening adapted to be used with either the round-headed shank, or the shank having the head in the form of an eye, the keeper plate being adjusted in its position to accommodate itself to either the one shank or the other, to accord with conditions in

which the shank with the round head is better adapted to suit than the shank with the eye head, and vice versa.

The advantages of the particular shape of head on the shank shown in Figs. 1 and 2 are obvious, when considered in connection with the foregoing description, and in the light of the disclosure of Fig. 2. The beveled front wall permits the end of the shank to slide easily over the lower wall of the circular portion 8^a of the opening 8 of the keeper plate 7, while the curved rear wall of the said head engages behind the inner side of said plate and holds the door stop in an engaged position therewith. When in the engaged relation shown in Fig. 2, it will be noted that the rubber cushion 14 bears against the outer face of the keeper plate; indeed the circular portion 8^a of the opening 8 of said plate engages between the outer curved wall of the rubber cushion and the inner curved wall of the head of the shank. By reason of the provision of the rubber cushion 14, and the packing 15 in the recess 6 of the door, the action of engaging the door stop with the keeper plate is practically noiseless.

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

1. In a door check, a knob having an axial opening extending longitudinally thereof and flaring toward the outer end from an intermediate point, a headed shank adapted to enter and fit snugly the contracted portion of said opening and retain said knob in position, and a cushion fitted on the shank in rear of the head and closing the flared end of the opening of the knob and mounted rigidly in said end.

2. In a door check, a knob having an axial opening extending longitudinally through the knob and having a portion thereof flared or tapered toward the outer end of said knob, said flared portion beginning at a point approximately one-third the distance of the knob from its inner end, a rubber cushion fitted in a recess of the outer end of the knob and closing the flared portion of the opening, said cushion having an opening

therethrough and provided with a rounded outer face projecting from the end of the knob, and a headed shank adapted to pass through the openings of the cushion and knob and secure said knob in position, the part of the cushion surrounding the shank in rear of its head bearing against said head.

3. A door check comprising a knob having an axial opening extending longitudinally throughout the same and having a portion of said opening flared outwardly toward the outer end of said knob, a rubber cushion seated partially in a recess in the outer end of the knob and closing the flared portion of the opening, said cushion having an opening therethrough and provided with a rounded outer face which projects from the end of the knob, a headed shank passing through the openings of the cushion and knob and fitting snugly the opening of the cushion and also the small portion of the opening in the knob, the inner end of the shank being threaded to permit the fastening of the knob in place, the outer end of the shank projecting beyond the cushion and having a head formed thereon substantially circular in shape, the peripheral face of said head being beveled backwardly and outwardly from its front end to a point and then curved inwardly to meet the shank, the curved inner wall of the head bearing against the curved outer wall of the cushion around the opening therein, and a keeper plate having an opening therein formed with a circular portion to receive the head of the shank, said plate being mounted in position so that the lower edge or wall of the opening therein is adapted to be engaged by the curved rear wall of said head on the inside and by the curved outer wall of the cushion on the outside.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

BENJAMIN F. FOWLER.

Witnesses:

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F. J. HAYNES.