No. 667,761. Patented Feb. 12, 1901.

E. BLAMEY.

DOOR CHECK.

(Application filed June 7, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

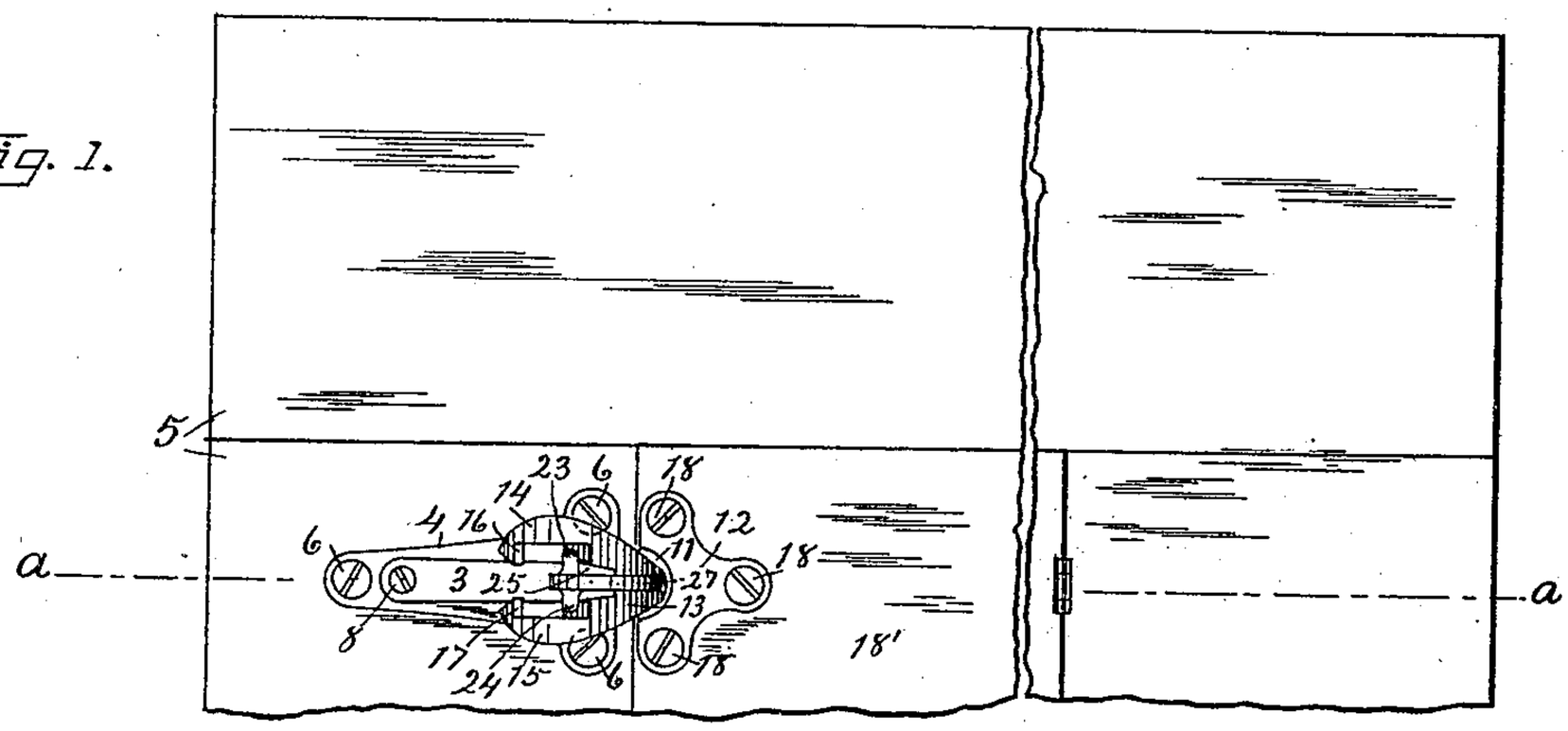
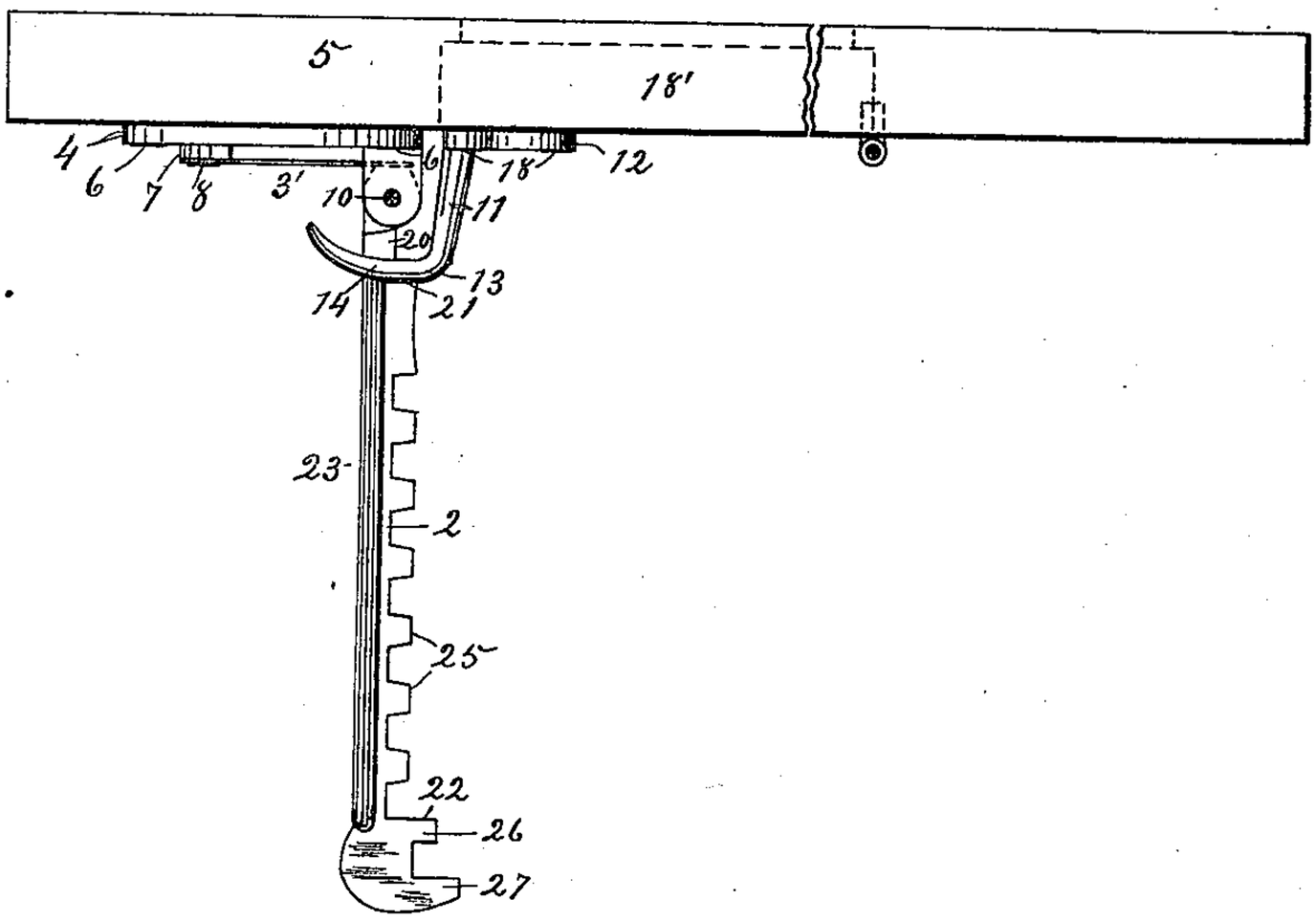


Fig. 2.



Witnesses:
Albert C. Tanner
W. N. Ruby

Inventor:
Edward. Blamey

No. 667,761. Patented Feb. 12, 1901.

E. BLAMEY.

DOOR CHECK.

(Application filed June 7, 1900.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

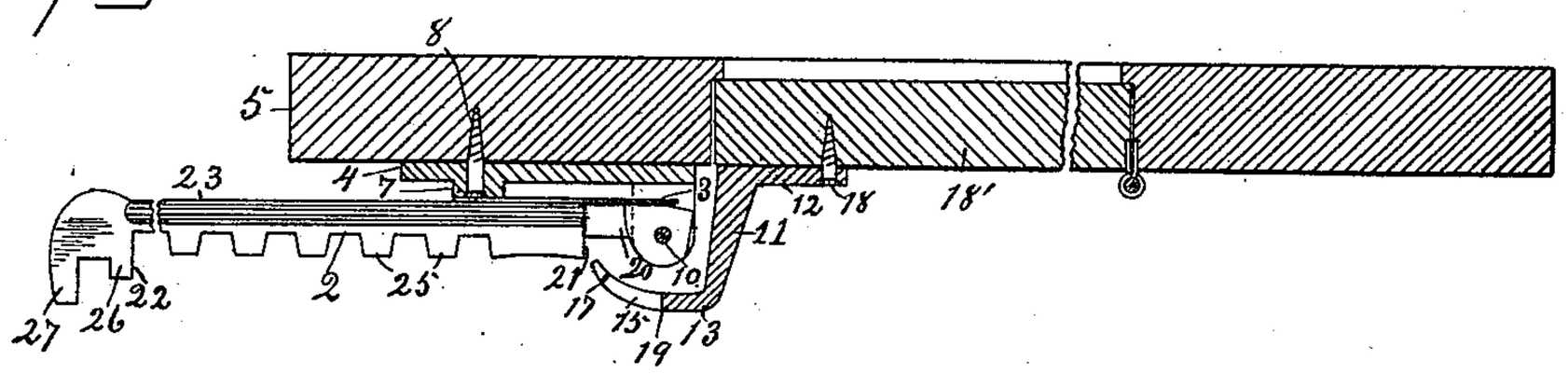


Fig. 4.

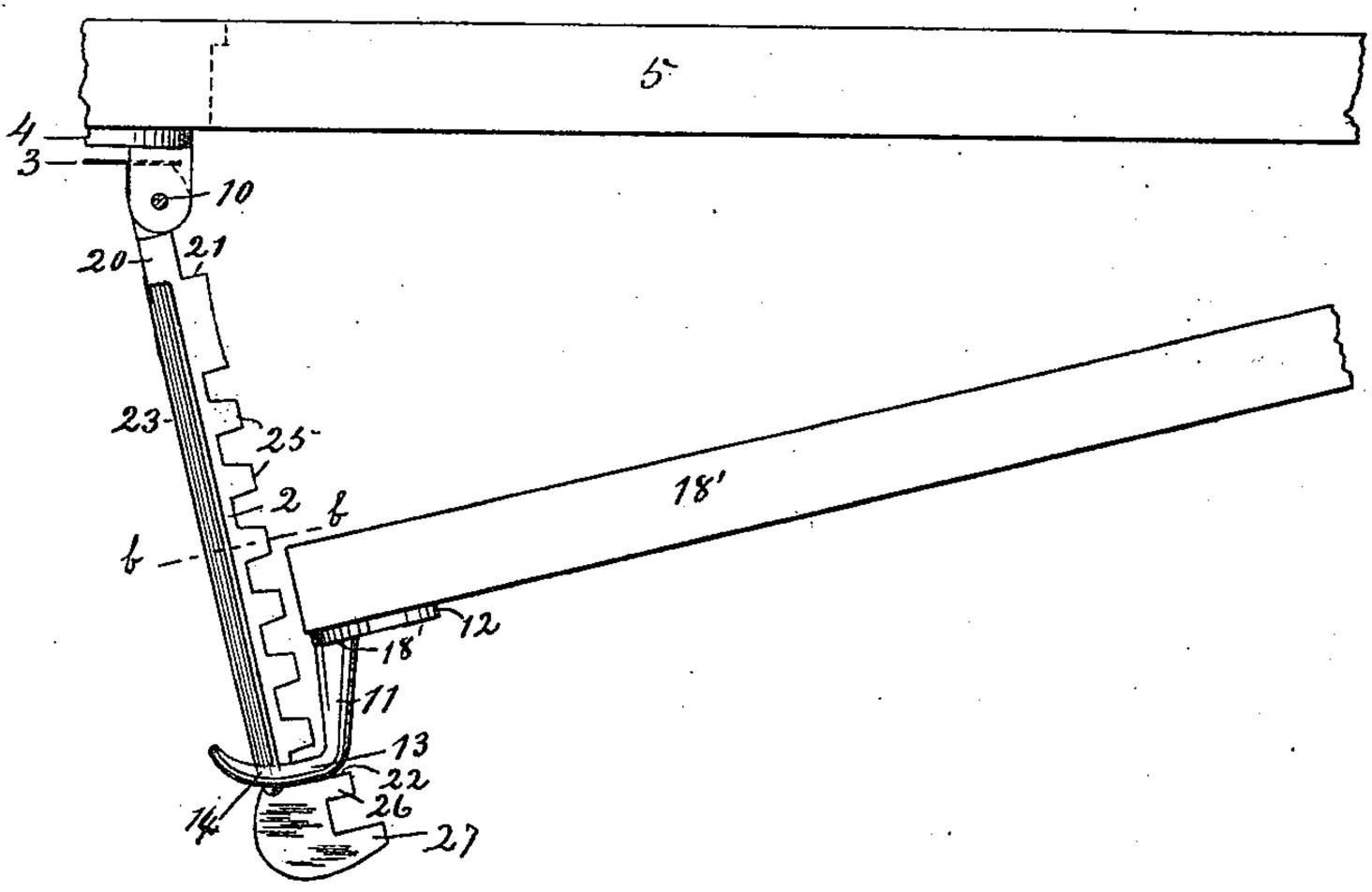


Fig. 5.

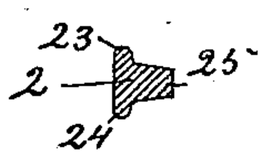
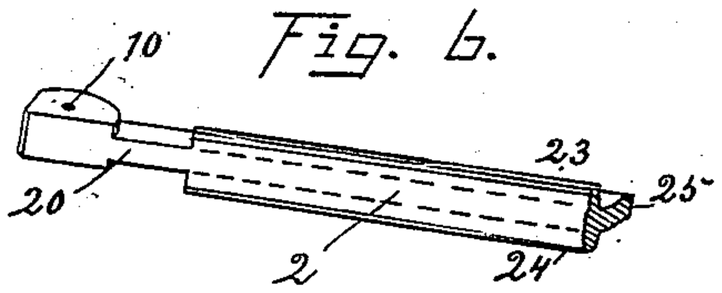


Fig. 6.



Witnesses:
Albert C. Tanner
W. H. Ruby

Inventor:
Edward Blamey

UNITED STATES PATENT OFFICE.

EDWARD BLAMEY, OF JERSEY CITY, NEW JERSEY.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 667,761, dated February 12, 1901.

Application filed June 7, 1900. Serial No. 19,426. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BLAMEY, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Door-Checks, which improvements are fully set forth in the following specification and accompanying drawings, and in the latter—

Figure 1 is a view in elevation illustrating my improved door-check as the same appears when applied for service to the inner side of a door-casing and door or analogous objects, the door being closed. Fig. 2 is an upper edge view of the parts shown in Fig. 1. Fig. 3 is a central sectional view, the section being taken as along the line *a a* of Fig. 1 and the retaining-arm of said door-check being moved to its normal position of rest or its position of rest when out of engagement with its cooperative keeper. Fig. 4 is a plan view showing the door fastened partly open. Fig. 5 is a cross-section of the retaining-arm as on the line *b b* of Fig. 4. Fig. 6 is a detail fragmentary view designed to illustrate more clearly the form of the retaining-arm which I make use of.

Similar reference-numerals denote like parts throughout the several views of the drawings.

This invention relates to improvements in devices of that class commonly known as "door-checks," the same being utilized one or more in connection with a door for the purpose of controlling and regulating the movement thereof and for a like purpose in connection with other analogous objects movable within prescribed limits.

The object of this invention is to provide a door-check of the character above indicated which shall be simple, inexpensive, and novel as regards construction, which shall be capable of serving as an effective medium for the control and regulation of the movement of a door or of an analogous object movable within prescribed limits, which shall ordinarily embody in its construction means whereby may be obviated all tendency to objectionable noise, such as not rarely traceable in known door-checks to inaccurately-mounted movable parts, and which shall possess certain well-defined advantages over prior analogous structures.

The invention consists in the employment of certain novelly-formed parts, in the disposition and arrangement of the various parts whereby novel coöperation thereof is insured, in certain combinations, and in certain details of construction, all of which will be specifically referred to hereinafter and claimed.

Having reference to the accompanying drawings, as essential elements of my improved door-check I make use of a retaining-arm, as 2, and a keeper of novel construction for coöperation with said retaining-arm. Ordinarily I shall further make use of an elastic element, as 3, for cushioning or yieldingly controlling the action or movement of the retaining-arm 2.

The bracket 4 is fastened to the casing 5 in any approved manner, as by means of the screws 6. The bracket 4 is provided with an offset or raised portion 7 for the reception of the elastic element 3, the latter being by preference in the form a leaf-spring. One end of the element 3 is fastened, as by means of the screw 8, to the offset 7 and in a manner that said element may occupy a position substantially parallel with the bracket 4. The offset 7 further serves to distance the element 3 from the bracket 4, so that suitable space may be provided for the play or movement of the free end of the element 3, which terminates at and engages the many-sided (see Fig. 3) end of the retaining-arm 2, which disposition of the parts now under consideration insures the service of the element 3 as a medium for yieldingly controlling the movement of the retaining-arm 2, the latter being supported by and having a swinging movement with respect to the bracket 4, as on the fulcrum 10.

The novelly-formed keeper which I employ has as an essential feature a member capable of taking around and loosely engaging the retaining-arm 2 under certain conditions. The said keeper is here shown as comprising a standard 11, a foot or plate 12 at one end of said standard and projecting laterally therefrom in one direction, a head 13 at the other end of said standard turned at a sharp angle thereto and projecting laterally therefrom in

a direction reverse to that of the plate 12, and engaging members 14 and 15, suitably spaced and provided at the ends thereof, one with a stop 16 and the other with a stop 17, all formed integral by preference. It will be seen that the stops 16 17 occupy diametrically opposite positions, project one toward the other, and terminate one short of the other, thus leaving a way or passage between said stops.

The foot 12 serves as a medium where the keeper as a whole may be fastened in position for service, as by means of the screws 18 and as to a door 18′ or the like, and I prefer that the adjustment of the same with respect to the bracket 4 be such that the edge 19 of the head 13 shall have substantial perpendicular alinement with the fulcrum of the retaining-arm 2.

Attention is here called to the fact that the inner face of each of the members 14 and 15, between the lateral stop at the free end thereof and the engaging edge 19 of the keeper, is uniform or made up of continuous non-angular longitudinal lines.

The retaining-arm 2 has a shank 20, and thereat the face of the retaining-arm is suitably recessed or depressed to form a primary shoulder 21, adapted to take over and engage the outer face of the head 13 upon the retaining-arm being moved to the position shown in Fig. 2, the shank 20 being of suitable width to admit of the passage thereof between the stops 16 17 and the door 18′ being closed. Under these conditions the elastic element 3 engages one of the plane faces of the many-sided end of the retaining-arm 2 and yieldingly holds the latter to its above-mentioned engagement with the keeper-head, and also under these conditions my improved door-check serves to securely lock the door against being opened from the opposite side thereof. The retaining-arm is provided near its free end with a secondary shoulder 22, which in function corresponds with the shoulder 21, save that it serves to limit the extent to which the door 18′ may be opened, as when the parts assume the positions shown in Fig. 4.

Attention is here called to the fact that the shoulder 22 and the shoulder 21 vary in height from the arm 2, the latter being of less height than the former. This is essential, for the reason that I provide the retaining-arm 2 with the lateral flanges 23 24, each of which begins at the shank 20, extends continuously along the back of said retaining-arm, one at each side thereof, and terminates at a point adjacent to the shoulder 22, thus giving to the retaining-arm a flanged portion somewhat wider than the shank 20 and wider than the passage between the stops 16 17. It will thus be seen that, taking the parts as they appear in Fig. 2, by a backward swinging movement of the retaining-arm 2 on its fulcrum the shoulder 21 may be eased out of engagement with the keeper-head, so that an opening movement may be imparted to the door 18′, whereupon the retaining-arm will be held against further backward movement on its fulcrum by reason of the stops 16 17 engaging, respectively, the flanges 23 24, and the opening movement of the door will be checked at the point where the shoulder 22, which is longer than the shoulder 21, is caused to engage the keeper-head 13, as seen in Fig. 4. It will here be noted that the retaining-arm 2 may not be fully disengaged from the keeper-head until the door 18′ shall have been closed and the passage between the stops 16 17 brought opposite the shank 20.

To the end that the travel of the keeper along the arm 2 may be variably limited I provide said arm along its face with a series of projections 25, each of which is of less height than the shoulder 22 and each of which in function corresponds with the shoulder 21.

I provide the free end of the retaining-arm 2 with forwardly-projecting members, as shown, of which the one denoted by the numeral 26 is of less length than the one denoted by the numeral 27, the latter being of sufficient length to insure engagement therewith of the keeper-head 13, when the ends of the members 14 15 are caused to engage and slide along, respectively, the inner faces of the flanges 23 24, whereupon the edge 19 of the keeper-head 13 may be caused to seat within the recess or space between the members 26 27, and thus when desired temporarily hold the door 18′ against movement in either direction on its hinges. Further, in connection with the construction described in the preceding paragraph it will be observed that the distance from the flanges 23 24 to the end of the member 26 is less than the distance from the ends of the members 14 15 to the engaging edge 19 of the keeper, and for this reason when the retaining-arm 2 is properly moved on the fulcrum 10, so that the ends of the members 14 15 are caused to respectively engage and slide along the inner faces of the flanges 23 24, and to which adjustment on the fulcrum 10 the arm 2 is yieldingly held through the action of the elastic element 3, which engages the many-sided end of said arm, the edge 19 escapes the member 26 and is checked by the longer member 27 at the recess between the members 26 and 27, whereupon the engaging ends of the members 14 15 will have reached the ends of the respective flanges 23 24 and become disengaged therefrom, thus permitting a further due movement of arm 2 on its fulcrum, as through the action of the element 3, which results in the engagement of the keeper edge 19 with the said recess between the members 26 and 27. It will be understood that the flanges 23 24 terminate along the arm 2 at a suitable point to permit this novel action of the parts.

While I have shown and described the keeper as having a plurality of members, as 14 15, this is not essential where the arm 2 is so mounted at the fulcrum 10 as to obviate any substantial lateral tilting movement of said arm at its free end, as will be readily

understood; but for the purpose of securing uniformity in appearance I prefer that said keeper be provided with the members 14 15.

The operation of my improved door-check will be apparent from the foregoing description thereof. Further, it will be observed that the same is particularly well adapted for the purposes for which it is designed, and as it may be modified to some extent without material departure from the spirit and principle of my invention I do not wish to be understood as limiting myself to the precise details of construction herein set forth.

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

1. A device of the class herein described comprising a suitably-fulcrumed, spring-controlled retaining-arm provided at its free end with members, as 26 and 27, the outer one of which being of greater length than the inner one, with a recess between said members, and with a uniform, lateral flange along one side thereof and terminating at the shorter of said members, and a keeper, the latter having an engaging edge and a member adapted to engage and slide along said flange in a manner to insure engagement of said longer member with said keeper and the engaging edge of the latter with said recess, substantially as herein specified.

2. A device of the class herein described comprising a suitably-fulcrumed, spring-controlled retaining-arm having a shank, as 20, a primary shoulder at its shank, a secondary shoulder near its free end, a series of projections along the face thereof, and a uniform lateral flange along one side thereof, and a keeper, the latter having an engaging edge, as 19, and a member adapted to take around and loosely engage the flanged portion of said arm, the said member being provided with a stop, as 16, and having a uniform inner face between said stop and said engaging edge, and the said shank of the retaining-arm being of less width than the flanged portion thereof to permit of the above-named engagement of said arm with said keeper, substantially as herein specified.

3. A device of the class herein described comprising a suitably-fulcrumed, spring-controlled retaining-arm having a shank, as 20, a primary shoulder at its shank, a secondary shoulder near its free end, a series of projections along the face thereof, and a uniform lateral flange along one side thereof, and a keeper, the latter having an engaging edge, as 19, and a member adapted to take around and loosely engage the flanged portion of said arm, the said member being provided with a stop, as 16, and having a uniform inner face between said stop and said engaging edge, the distance between which stop and said engaging edge being greater than the distance from said arm-flange to the end of any one of the projections of said series, the said secondary shoulder being of greater length than the distance between said stop and said engaging edge, and the said shank being of less width than the flanged portion of said retaining-arm to permit of the above-named engagement of said arm with said keeper, substantially as herein specified and for the purpose set forth.

EDWARD BLAMEY.

Witnesses:
W. H. RUBY,
ALBERT C. TANNER.