No. 721,989. PATENTED MAR. 3, 1903.

C. A. WISSEL.

DOOR CHECK.

APPLICATION FILED SEPT. 5, 1902.

NO MODEL.

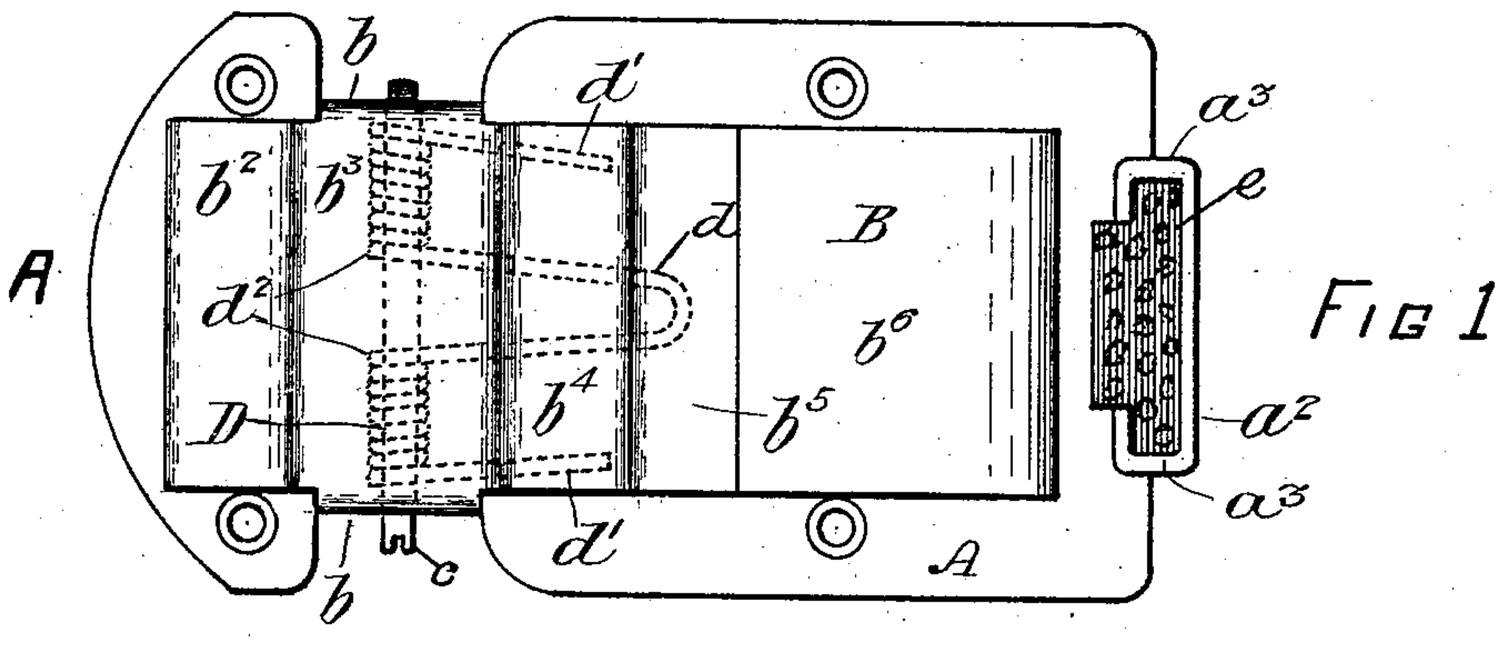

FIG 1

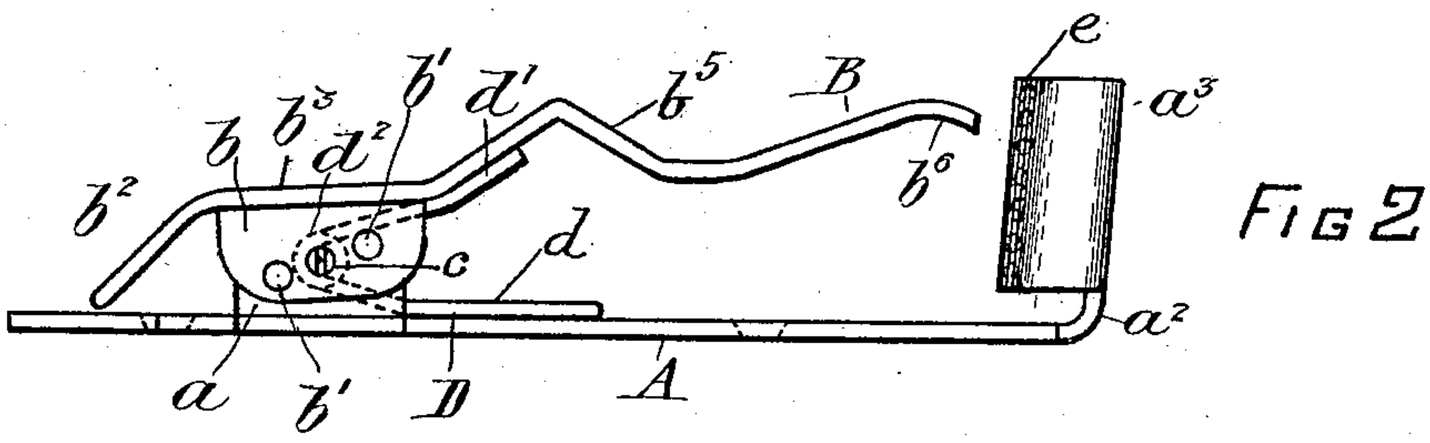

FIG 2

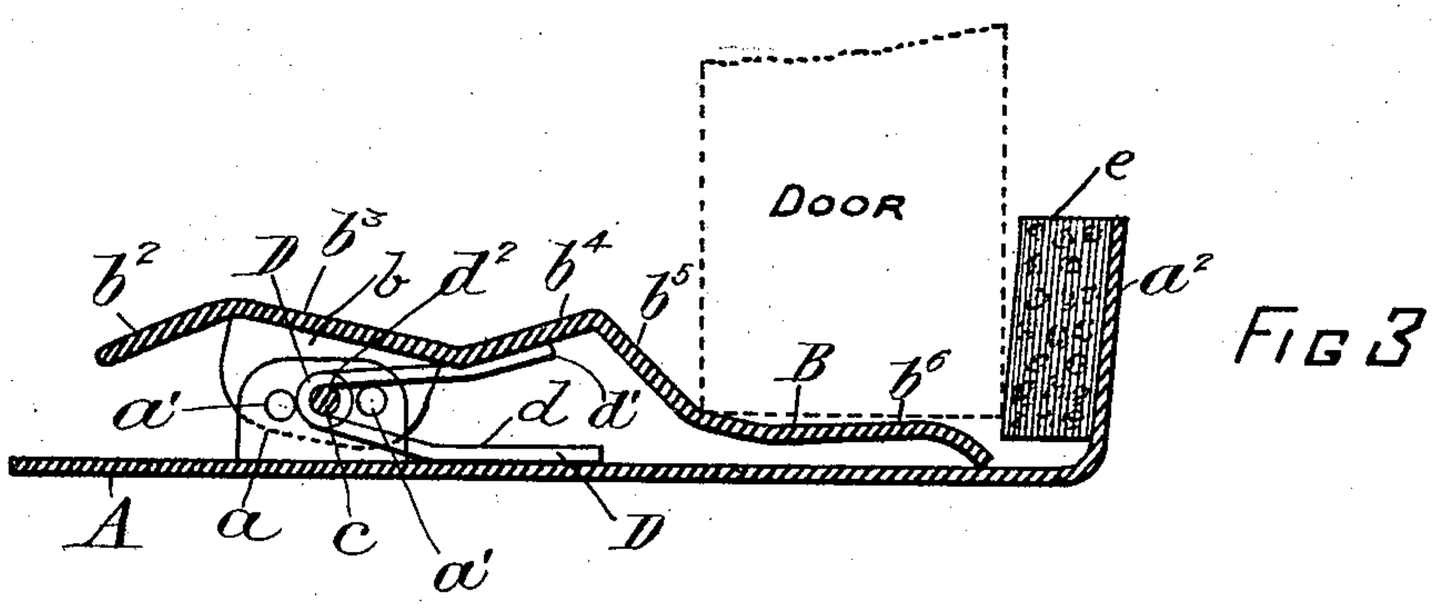

FIG 3

WITNESSES:

John C. Rambey

INVENTOR:

C. A. Wissel

UNITED STATES PATENT OFFICE.

CONRAD A. WISSEL, OF DAYTON, KENTUCKY.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 721,989, dated March 3, 1903.

Application filed September 5, 1902. Serial No. 122,259. (No model.)

To all whom it may concern:

Be it known that I, CONRAD A. WISSEL, a citizen of the United States, residing in Dayton, in the county of Campbell, State of Kentucky, have invented a new and useful Improvement in Door-Checks, of which the following is a specification, reference being made to the accompanying drawings.

This invention relates to certain improvements in that class of devices commonly known as "door-checks," which are employed for holding doors in open position to prevent them from slamming or from being accidentally closed; and the object of the invention is to provide a device of this kind of a simple and inexpensive nature and of a light, strong, and durable construction by means of which the door may be securely held in opened position, the device being capable of ready actuation to release the door, so that it may be closed without trouble when desired.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved door-check whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a plan view of the improved door-check embodying my improvements, and Fig. 2 is a side elevation of the same. Fig. 3 is a sectional view taken lengthwise through the improved door-check.

In the views, A indicates as a whole the base plate or frame of the improved door-check, herein shown as formed from strong sheet or plate metal in elongated form and provided with openings for the passage of screws by means of which the device is to be held to the floor in convenient position for engagement with the lower edge of the door in connection with which the improved check is to be used. Adjacent to one end of the elongated base plate or frame A the opposite side portions thereof are slitted inwardly and the metal between the slits of said side portions is bent upward at right angles to the plane in which said base plate or frame is extended, so as to produce upturned oppositely-arranged lugs or bearing-pieces *a a*, in which are formed corresponding series of openings *a' a'*, adapted for the passage of a pivot pin or screw *c*, which when passed through said openings is extended transversely across the upper surface of the base plate or frame A of the device. As herein shown, the openings *a'* are of circular form and of diameters to snugly fit and receive the pivot pin or screw *c*, and there are three of the openings *a'* in each lug or bearing-piece *a* of the base plate or frame A, the openings in the series in each of said lugs or bearing-pieces *a* being arranged at graduated elevations above the upper surface of the base plate or frame, so that the height of the pivot pin or screw *c* above the base plate or frame may be varied by removing said pin or screw from one opening and inserting it in another of said openings *a'* in each lug or bearing-piece.

B indicates a door-holding member or lever, also formed, as herein shown, from sheet or plate metal of suitable strength in elongated form and provided at opposite sides with projecting portions or ears, which are bent down at right angles beneath the under side of said member or lever B to form lugs or ears *b b*, which are adapted to take outside of the lugs or bearing-pieces *a a* of the base plate or frame A of the device and which are also provided each with a series of three openings *b'*, adapted for the passage of the ends of the pivot pin or screw *c* outside of said lugs or bearing-pieces *a*, the openings *b'* in one of the ears or lugs *b* being interiorly screw-threaded for engagement with corresponding screw-threads produced upon one end of the pin or screw *c*, so that when the said pin or screw is passed through the openings in the lugs or bearing-pieces *a* of the base plate or frame and through the opening in one of the lugs or ears *b* of the door-holding member B the said pin or screw must be turned to cause it to pass through the threaded opening in the other ear or lug *b* of said member, the screw-threads serving to prevent accidental displacement of the parts, except said pin or screw is turned to disengage its threaded end from the threaded opening *b'*.

D indicates a spring formed from a piece of wire of suitable length and tension, which is

bent at its central portion to produce a central arm d, adapted to rest upon the upper surface of the base plate or frame A at the rear of the pivot pin or screw c, the portions of said spring at the opposite sides of said arm d being coiled upon the pivot-pin, as shown at d^2 d^2, and the extremities d' d' of said spring being directed rearwardly and upwardly, as shown in Figs. 2 and 3, and being arranged to press against the under side of the door-holding member B at the rear of said pivot pin or screw c in such a way that the forward extremity of said member B in front of the pivot pin or screw c is caused to be pressed down elastically into contact with the top surface of the base plate or frame A of the device, the rear portion of the member B being elastically supported or elevated above the said base plate or frame, as seen in the drawings. The forward end of the door-holding member B or that portion thereof which is in front of the pivot pin or screw c is bent downward, so that when its extreme front edge is engaged upon the base plate or frame A said forward end will extend at an upward inclination from said base plate or frame, as shown at b^2, so that the door in swinging to an opened position may not bind thereon, and for a similar reason the said member B and its parts are so proportioned that that portion b^3 thereof which overlies the lugs or ears b b is also slightly inclined upwardly and rearwardly, as shown in the drawings. The rear portion of the member B at the rear of the ears or lugs b b is also provided with an upwardly-inclined cam-surface b^4, which is extended up from said member at a sharp inclination, as shown in Figs. 2 and 3, and is adapted to be engaged by the lower edge of the door when swung into opened position in such a way that the said rear portion of the door-holding member B is pressed downward from the position shown in Fig. 2 to that seen in Fig. 3.

Beyond and to the rear of the upwardly-inclined cam-surface b^4 of the door-holding member B said member is bent downward at a sharp inclination, as seen at b^5, and after the door in swinging into its opened position shall have passed over and to the rear of said cam-surface b^4 the spring D will act to uplift the rear end of the member B, so that the said inclined portion b^5 will be raised in front of the door and will form a shoulder for engagement in front of the lower edge portion of the door, as shown in Fig. 3, to hold said door against being accidentally closed.

At the rear of the downwardly-inclined portion b^5 of the member B said member has a substantially straight portion adapted to extend beneath the door when the same is engaged by the shoulder formed of the downwardly-inclined portion b^5 of the member, and to prevent the door from being swung when moved into opened position sufficiently far to altogether disengage its lower edge portion from the member B, I provide a buffer e, formed from elastic material—as india-rubber, for example—which buffer is held by a support formed from an integral upbent rear portion a^2 of the base plate or frame A of the device, the opposite side portions a^3 a^3 of said upbent part being bent into grooved form, as seen in Figs. 1 and 2. When the door is swung into opened position, its lower portion will contact with the elastic buffer in such a way as to limit the opening movement of the door, so that it cannot be swung out of engagement with the member B, the elastic nature of the buffer at the same time preventing any damage or marring of the door. The tension of the spring D exerted beneath the rear end of the member B will serve, when the door has been swung open, as above described, to keep the shoulder b^5 of the member B engaged in front of the door, so as to hold said door securely in opened position and prevent accidental closing or slamming of the door; but when it is desired to close the door a slight pressure exerted thereon by the hand will suffice to cause the lower edge of the door to ride up the inclined portion b^5, so as to pass over the same, whereupon being disengaged from the shoulder formed thereby it may readily be swung into closed position, the rear end of the member B being at the same time elevated by the spring D into position to be again engaged by the door in case the same should afterward be opened.

The openings b' in the lugs or ears b of the member B are, like the openings a' in lugs a, arranged at graduated heights and for a similar reason, and by this arrangement it will be seen that by adjusting the pivot pin or screw c from one set of openings to another a certain degree of variation can be effected in the elevation of the member B above the base plate or frame A, so that the device may be readily adjusted to accommodate doors which swing at different heights above the floor without any alteration in the proportions of the parts of the improved door-check.

From the above description it will be seen that the improved door-check constructed according to my invention is of an extremely simple and inexpensive nature and is especially well adapted for use both by reason of its adjustability, which permits of its use in connection with doors at different elevations above the floor, and owing to the fact that it affords not only a convenient means for automatically holding the door in opened position, but is also capable of ready operation to release the door merely by the application of sufficient force to the door itself, and it will also be obvious from the above description that the device is capable of considerable modification without material departure from the principles of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts of the device as herein set forth.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. A door-check comprising a base-plate adapted for attachment to a floor or the like, a door-holding member held for movement over the base-plate and formed with a raised portion against which a door is adapted to engage to depress said member, a pivot-pin for holding the said member to the base-plate and a spring coiled on the pivot-pin and having extended portions adapted for engagement under the door-holding member and upon the base-plate and arranged to hold one portion of said member in raised position, substantially as set forth.

2. A door-check comprising a base-plate and a door-holding member having a portion elastically held above the base-plate and having end portions adapted for engagement beneath a door and also provided, between said end portions with an elevated part adapted to be engaged by the door to depress said member, the rear side of said elevated part forming a shoulder adapted for engagement on the front face of the door when the door has passed over the elevated portion of the member, substantially as set forth.

3. A door-check comprising a base-plate and a door-holding member having a portion elastically supported above the base-plate and having, adjacent to its front end, pivotal connection with said base-plate, said member having, behind its pivotal portion, a raised part against which a door is adapted to engage to depress the member and being provided, at the rear of said raised part, with a shoulder to engage in front of the door after said door has passed the raised portion and, beyond said shoulder, with a rear end portion adapted to engage beneath the door when the same is in contact with said shoulder, substantially as set forth.

4. A door-check comprising a base-plate and a door-holding member having a portion elastically supported above the base-plate and having, adjacent to its front end, pivotal connection with the base-plate, said member having, behind its pivotal portion, a raised part against which a door is adapted to engage to depress the member and being provided, at the rear of the raised part, with a shoulder to engage in front of the door after said door has passed, the raised part and said shoulder being each inclined downward to form a cam-surface over which the door is adapted to ride when moved into closed position, and the rear end of the base-plate beyond said shoulder of the door-holding member being upturned and provided with an elastic buffer adapted to be engaged by the door, substantially as set forth.

5. A door-check comprising two parts, viz: a base-plate and a door-holding member, one of said parts having projecting portions oppositely arranged and formed with openings at graduated elevations and the other part having means to hold a pivot-pin, a pivot-pin held to said last-named part and adapted for engagement with the graduated openings of the first-named part and a spring for supporting one portion of the door-holding member elastically above the base-plate, substantially as set forth.

6. A door-check comprising a base-plate, a door-holding member having a portion elastically supported above the base-plate, a pivot-pin for connecting the door-holding member to the base-plate and means for holding said pivot-pin at different elevations above the base-plate, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CONRAD A. WISSEL.

Witnesses:

CHAS. A. BIRD,

EDWARD WALTER.