

J. W. CLEMENT.
 DOOR CHECK.
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1,069,676.

Patented Aug. 12, 1913.

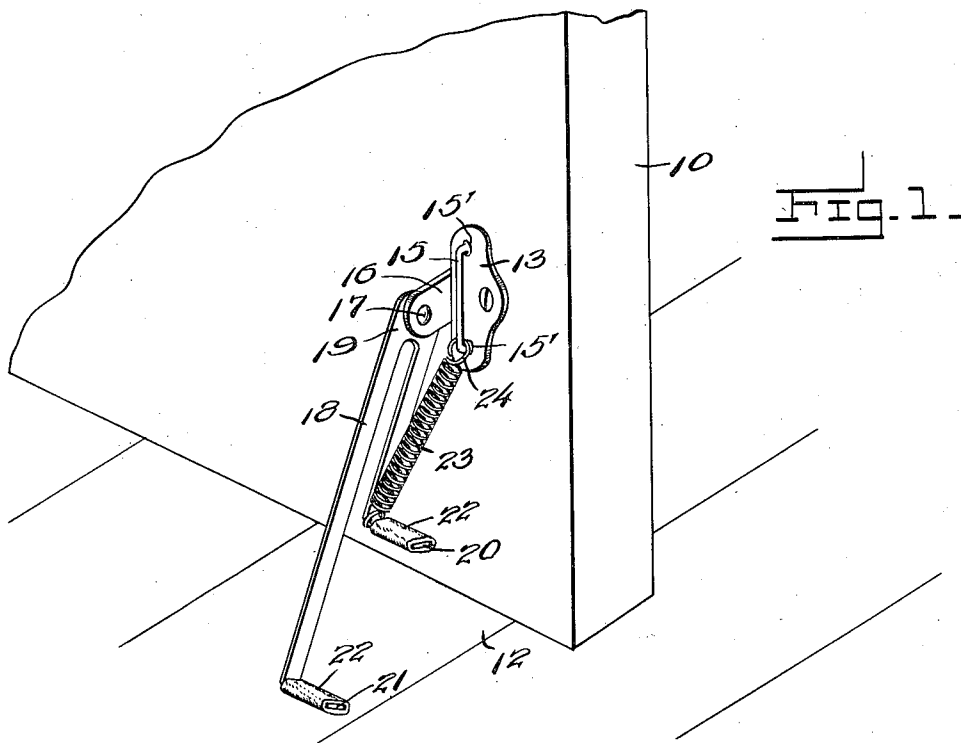


FIG. 1.

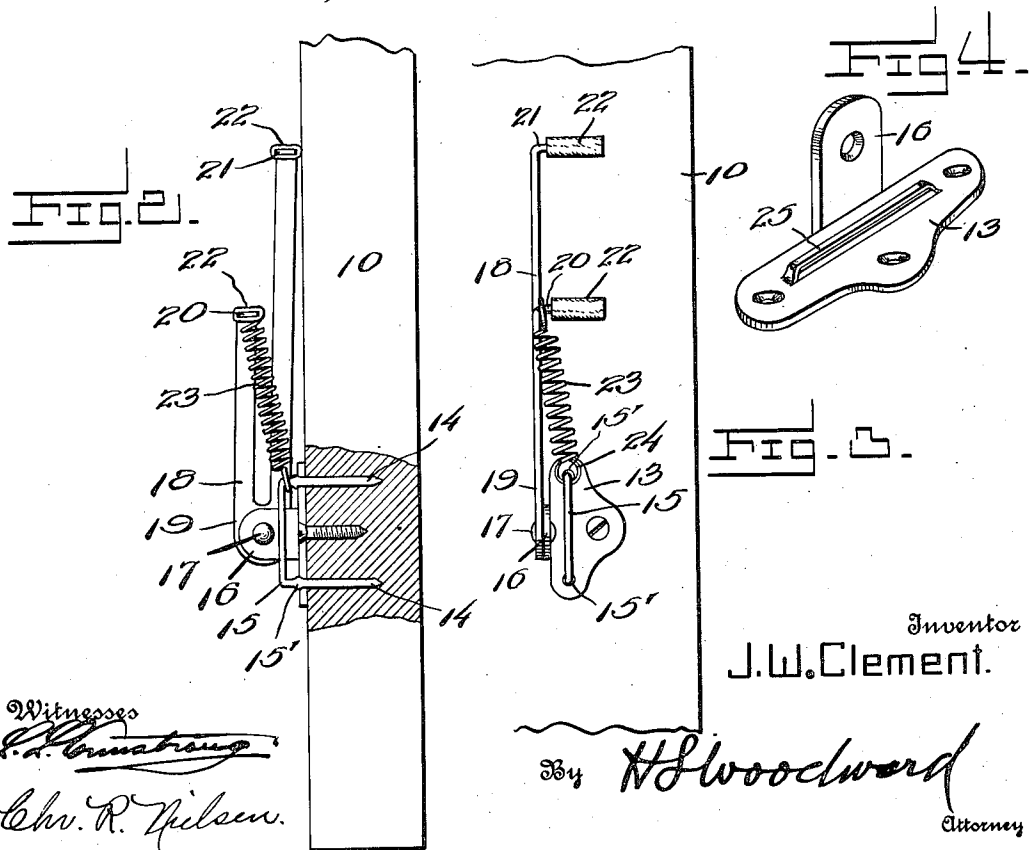


FIG. 2.

FIG. 4.

FIG. 3.

Witnesses
R. A. Gunterson
Chas. R. Nilsen

Inventor
 J. W. Clement.

By *H. Woodward*
 Attorney

UNITED STATES PATENT OFFICE.

JAMES W. CLEMENT, OF VERNON CENTER, MINNESOTA.

DOOR-CHECK.

1,069,676.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES W. CLEMENT, a citizen of the United States, residing at Vernon Center, in the county of Blue Earth and State of Minnesota, have invented new and useful Improvements in Door-Checks, of which the following is a specification.

This invention relates to door checks, and has for its objects to provide a simple and cheap check adapted to be constructed principally of sheet metal and wire, and which will be simple to install and operate.

It is a further object to utilize a helical spring in an economical manner to hold the device satisfactorily in or out of operative position.

A further object is to economize metal in its manufacture.

Additional objects and advantages will be apparent, some of them from the following specification and from the drawings, in which—

Figure 1 is a perspective view of a door having my appliance thereon, Fig. 2 is a side view of the device in disengaged position, partly in section, showing the manner of its securement to a door. Fig. 3 is a bottom view, Fig. 4 is a detail of a modification.

There is illustrated a door 10 of ordinary type, and adjacent portion of floor 12. To the inner side of the door near its free edge and near the bottom, there is secured my invention, comprising the oblong base plate 13 apertured adjacent each end and at the center, the outer openings being for the reception of staple points 14 of a guide staple 15, and the central opening receiving a screw, as shown. At one side the base plate is provided with an integral ear 16 turned outwardly at right angles thereto and centrally apertured to receive a rivet 17 holding pivotally the check arm 18, to be described. The check arm comprises a single piece of sheet metal having the enlarged inner or base portion 19 which is pivoted upon the ear 16 of the base plate as described. An intermediate operating and spring-engaging finger 20 is formed on the arm 18, being stamped integrally therefrom, from a portion of material extending longitudinally of the blank for the arm at one side. This makes the adjacent outer portion of the arm narrower than the inner portion, and it is extended some distance beyond the finger 20 with this width, and at a suitable dis-

tance outward of the finger a second floor engaging finger 21 is formed by turning laterally the end of the arm, in a direction parallel to that of the first, and either toward the same or the opposite side of the arm therewith. These fingers extend at right angles to the major plane of the arm. The device will occupy less room in packing if both fingers extend toward the same side of the arm, but it may be found preferable to extend them in opposite directions so that the floor finger will not interfere with the engagement of the operating finger by the foot, as will be explained. On each of the fingers there is preferably engaged a rubber sleeve 22, which may comprise a short section of ordinary rubber hose of suitable size to fit snugly thereon; although these may be omitted and any other well known means employed to make the hold of the outer finger upon the floor more secure and to obviate liability of soiling shoes by engagement with the operating finger. The latter finger is notched adjacent its base, and engaged thereon in the notches, there is the usual eye or hook portion of a helical spring 23, the eye 24 of which at the other end is engaged slidably on the guide portion of the staple 15. It will be noted that this staple is formed with shoulders 15' adapted to engage the plate 13 to space the guide portion a short distance inwardly of the pivot of the arm, and with the guide portion extending a distance on each side of the pivot, the spring will always tend to slip to one end or the other, under the normal use of the device as it will be explained.

In use, if the fingers extend in a common direction, the plate 13 is secured to the door with the arm 18 extending upwardly and the operating finger next the door, a screw being engaged through the central aperture of the plate. In this way the floor engaging finger is held spaced from the door conveniently for engagement by the sole of a boot for outward and downward pressure to move the device into engaged position. The staple 15 being engaged with the spring's inner end, is then positioned with its points directed through respective apertures of the plate at each end, and driven into place by a hammer or the like. The arm will then be held resiliently in elevated position. When the arm is borne downwardly the inner end of the spring tends to resist the

movement, but yields, and its inner end slips along the staple, opposing the movement of the arm with decreasing force as it approaches the pivot. The frictional resistance to the movement of the spring on the staple, requires the arm to be inclined somewhat on the opposite side of the pivot from the spring, so that when the spring finally slips to the same side the arm is so inclined that it is suddenly drawn downwardly, the spring at the same time snapping to the adjacent end of the guide portion and thus increasing its efficiency in impelling the arm. The finger 21 thus strikes and is held firmly against the floor.

Disengagement of the device is accomplished by presenting the toe under the finger 20 and pressing upwardly thereon, whereby a reverse operation of the device takes place, and it snaps quickly into raised position. If the fingers are extended in opposite directions, it will be seen that there would be less likelihood of the outer one striking the shoe as it rises, than where both are on the same side of the arm 18.

The efficiency of the device in holding a door against movement toward that side on which it is secured is greatest when it is nearly or quite vertical when bearing upon the floor properly. In order to attain a medium of efficiency in holding the door against movement in either direction on its pivot, the arm should be at an angle of about 30 degrees to the vertical when in engaged position.

The staple may of course be dispensed with, and a guide equivalent formed integrally with the plate 13 by stamping outwardly therefrom the loop 25 as in Fig. 4. This loop extends centrally across and parallel to the body of the plate, suitable screw receiving apertures being formed at each end of the plate for its attachment to the door. The loop thus formed is taken from the central part of the plate, and involves a slight stretching of the metal, a familiar process in metal stamping.

What is claimed is:

1. A device of the character described comprising a base member constructed and adapted to be secured to the side of a door, a check arm pivoted thereon for movement toward and away from the bottom of a door, a guide member adjacent and spaced from the pivot of the arm and extending below the pivot a distance, a floor-engaging cushion element at the outer end of the arm, an operating projection intermediately of the arm, and a spring having one end slidably connected with the guide, and the other en-

gaged intermediately with the arm under tension.

2. A device of the class described comprising a base member constructed and adapted to be secured upon the side of a door, and having an ear projecting outwardly therefrom, a check arm pivoted upon the ear a spaced distance outwardly of the base for vertical oscillation, said arm being stamped from sheet metal and having an integral finger extended laterally therefrom intermediately of its length, the outer end of the arm being turned laterally a spaced distance outwardly of the finger for engagement with a floor, a guide member adjacent and spaced inwardly of the pivot of the arm and extending therebelow, and a helical spring having one end engaged slidably with the guide, and the other fixed to the arm intermediately of the length of the latter.

3. In a device of the class described, the combination of a base plate having a screw receiving opening, and staple openings spaced adjacent respective ends, an ear projected outwardly from the plate parallel to a line between the last named openings, a check arm pivoted thereon adapted to engage a floor at its outer end, a staple member having an enlarged rectilinear guide bight and adapted to be engaged through the staple openings with the bight spaced inwardly of the pivot of the arm, to hold the plate upon a door, and a spring having one end slidably engaged upon the staple, and the other secured intermediately of the length of the arm, for the purposes described.

4. A base member, constructed and adapted to be secured to the side of a door, an arm pivoted thereon for vertical oscillation a spring connected thereto intermediately of the length of the arm, and a member inwardly of the pivot of the arm engaged with the spring; said arm being stamped integrally from sheet material, being bifurcated, one of the furcations being longer than the other the end portions of the arm being turned laterally to form longitudinally spaced fingers, the inner one adapted to be operated by the foot for raising and lowering of the arm, the outer one being shaped for efficient engagement with a floor.

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

JAMES W. CLEMENT.

Witnesses:

W. H. CLEMENT,
F. F. FLACHSENHAR.