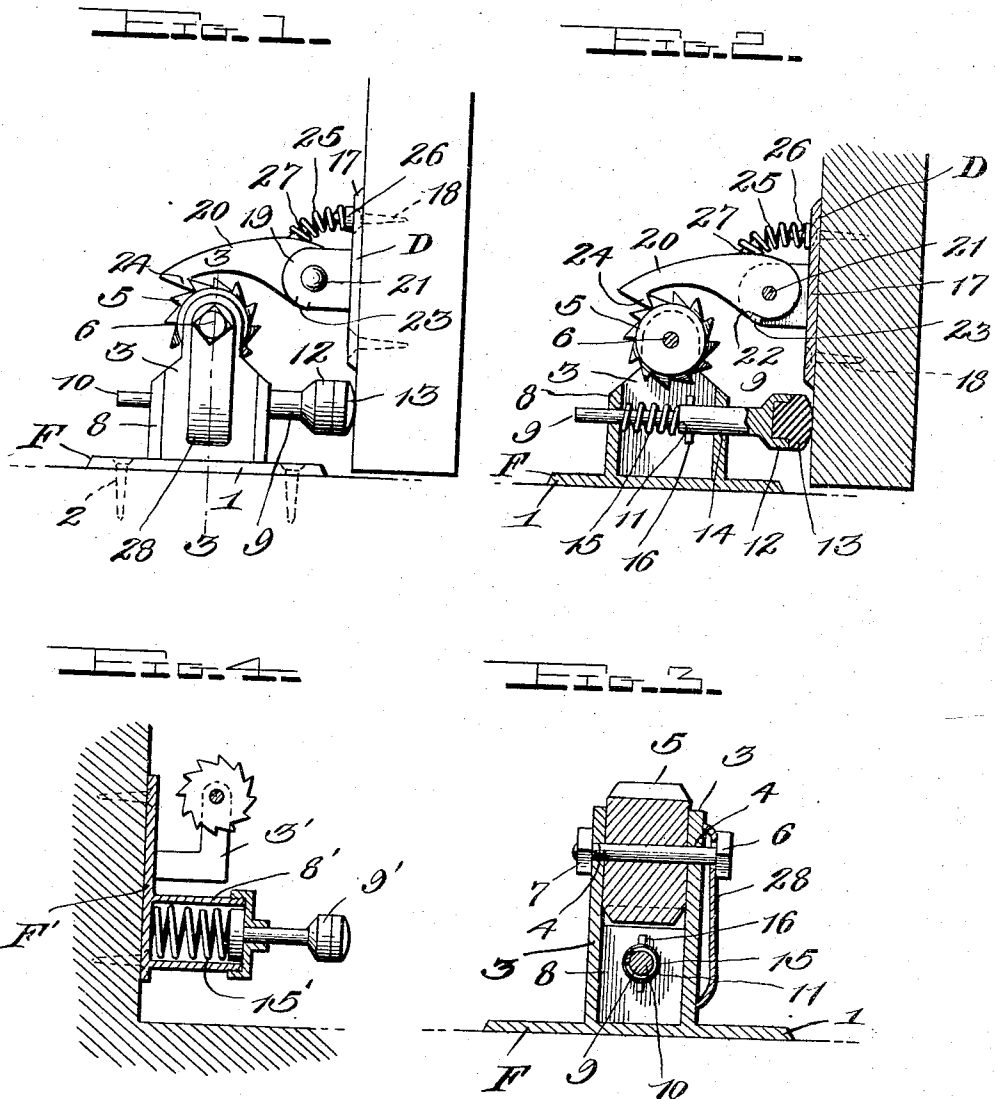


E. P. PRATOR.
DOOR CHECK.
APPLICATION FILED AUG. 3, 1912.

1,041,869.

Patented Oct. 22, 1912.



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Witnesses

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ERNEST P. PRATOR, OF LEEPER, MISSOURI.

DOOR-CHECK.

1,041,869.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed August 3, 1912. Serial No. 713,125.

To all whom it may concern:

Be it known that I, ERNEST P. PRATOR, a citizen of the United States, residing at Leeper, in the county of Wayne and State of Missouri, have invented certain new and useful Improvements in Door-Checks, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention comprehends certain new and useful improvements in door checks and relates more particularly to combined door checks and buffers which are automatically operated.

15 The primary object of the invention is to provide a device of this nature which shall be extremely simple in construction, cheap to manufacture, and one which may easily be secured in an operative position.

20 A still further object of the invention is to provide a combined door check and buffer wherein a ratchet wheel is engaged by a catch member carried by the door, said ratchet wheel being rotated to release the 25 catch member, when sufficient pressure is applied to the door.

The invention also aims to generally improve devices of this nature, to render them more useful, durable and commercially desirable.

30 With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as I shall hereinafter fully describe and claim.

For a complete understanding of my invention reference is to be had to the following description and accompanying drawing 40 in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a vertical sectional view, partly in elevation. Fig. 3 is a detail sectional view taken on the plane of line 3—3 45 in Fig. 1, and Fig. 4 is a vertical sectional view, partly in elevation, showing a modified form of the relatively fixed portion of my invention.

Referring more particularly to the drawings F designates that portion of the device which is secured to the floor and D represents that portion of the device which is carried by the door. The floor portion F comprises an essentially square base plate 1 formed with suitable openings through 55 which the fastening members 2 project.

Spaced parallel supporting arms 3 are formed integral with the top of the base plate 1 and have their upper end reduced as shown in the drawing and formed with 60 the circular openings 4. A ratchet or toothed wheel 5 is rotatably secured between the supporting arms 3 by means of the bolt 6 and nut 7. Spaced guide plates or ears 8 are rigidly secured to the upper surface of 65 the base member 1 and contact with the lateral edges of the supporting arms 3, but are not secured thereto. These guide plates are for the purpose of supporting and guiding a buffer or shock absorber 9 comprising a 70 cylindrical rod 10 which is reduced for a portion of its length adjacent one end for the purpose of forming a shoulder 11. The other end of the buffer is enlarged as at 12 and is formed with a cylindrical chamber in 75 which is secured the rubber tip 13. The rod 10 slides through circular openings 14 formed in the guide plates 8 and an expansive spiral spring 15, which is coiled about the reduced portion of said rod, tends to 80 normally hold the buffer in its projected position. A pin 16 carried by the rod 10 limits the outward movement of the same by engaging the inner face of one of the guide plates 8.

85 The door portion D has an essentially square base plate 17 which is secured in position by means of the fasteners 18. Spaced parallel supporting members 19 are formed integral with the outer face of the base and 90 project at right angles thereto, said supporting arms being for the purpose of pivotally holding the catch member 20. This catch member is essentially circular at its inner end and is formed with a circular 95 opening through which the bolt 21 passes. Movement of the catch member in one direction is limited by the shoulder 22 abutting the inwardly projecting lugs 23 formed upon the supporting members 19. The outer end 100 of the catch member is projected downwardly and inwardly to form the hook 24 which engages the teeth on the ratchet wheel 5. An expansive spiral spring 25 is held in position by means of the lug 26 formed on 105 the base plate 17 and a lug 27 carried by the catch member 20, and serves to hold said catch member normally against the inturned lugs 23.

From the foregoing description it will be 110 readily seen that when the door is opened a sufficient distance the catch member 20 will

ride upon the ratchet wheel 5 and engage one of the teeth thereof thereby holding the door in its open position, it being of course understood that the wheel is tightly clamped between the supporting arms 3. The degree of force necessary to rotate this wheel may be regulated by tightening or loosening the nut 7 upon the bolt 6. If desired a bow spring 28 of flat metal and formed with a circular opening in one end may be secured to the bolt 6 and bear against one of the supporting arms 3 for the purpose of locking the nut 7 and also for the purpose of rendering the adjustment of the wheel 5 an easy operation.

Fig. 4 shows a modified form of that portion of the device which carries the gear wheel 5, said modification being for use when the portion F cannot be readily secured to the floor. The modified portion F' is adapted to be secured to the wall and has angular supporting arms 3' which project outwardly and upwardly. The buffer 9' slides within a cylindrical casing 8' and is normally held in its outwardly projecting position by means of the spiral spring 15'.

When opening a door equipped with my improved device, the buffer absorbs the shock caused by the door striking the fixed portion of my invention, and the catch member 20 automatically engages with the ratchet wheel. To close the door it is only necessary to pull it sufficiently hard to cause the wheel 5 to rotate, which movement will disengage said catch member from the wheel.

While I have shown and described a preferred embodiment of my invention it is to be understood that slight changes in construction and arrangement of parts may be made without departing from the scope and spirit of the invention.

What I claim is:—

1. A door check comprising a fixed portion consisting of a base plate, spaced parallel arms formed integral with and extend-

ing at right angles to said base plate the arms being reduced at their free ends and apertured, a ratchet wheel positioned between said arms and means for rotatably securing said wheel in position, said means being adjustable so as to regulate the force necessary to rotate said ratchet wheel; and a movable portion adapted to be carried by a door and consisting of a base plate having spaced parallel arms formed integral therewith, a spring pressed catch member pivotally secured between said arms and provided near its inner end with a shoulder, and inwardly projecting lugs carried by the supporting arms and adapted to engage said shoulder for the purpose of limiting the movement of the catch member in one direction.

2. A combined door check and buffer comprising a relatively fixed portion consisting of a base plate, spaced apertured guide plates carried by said base plate, a spring pressed buffer slidably mounted in said apertured guide plates, spaced parallel supporting arms formed integral with said base plates and having their side edges engaged for a portion of their length by the guide plates, a ratchet wheel rotatably mounted between said supporting arms and means for adjusting the frictional resistance between the inner faces of the supporting arms and the side faces of the ratchet wheel; and a relatively movable member adapted to be carried by a door and consisting of a base plate having spaced parallel arms formed integral therewith, a catch member pivotally secured at one end between said arms and adapted for engagement with the ratchet wheel, and means for limiting the movement of said catch member in one direction.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ERNEST P. PRATOR.

Witnesses:

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JEFF S. CONWAY.