A. N. FANCHER.

DOOR CHECK.

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1,122,091. Patented Dec. 22, 1914.

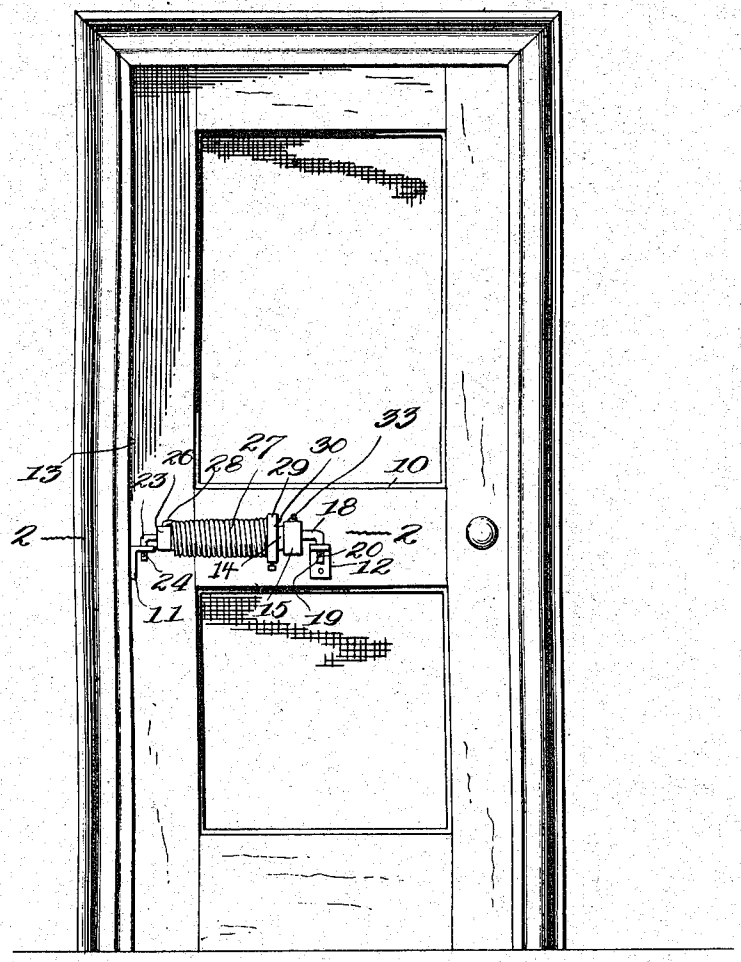


Fig. 1.

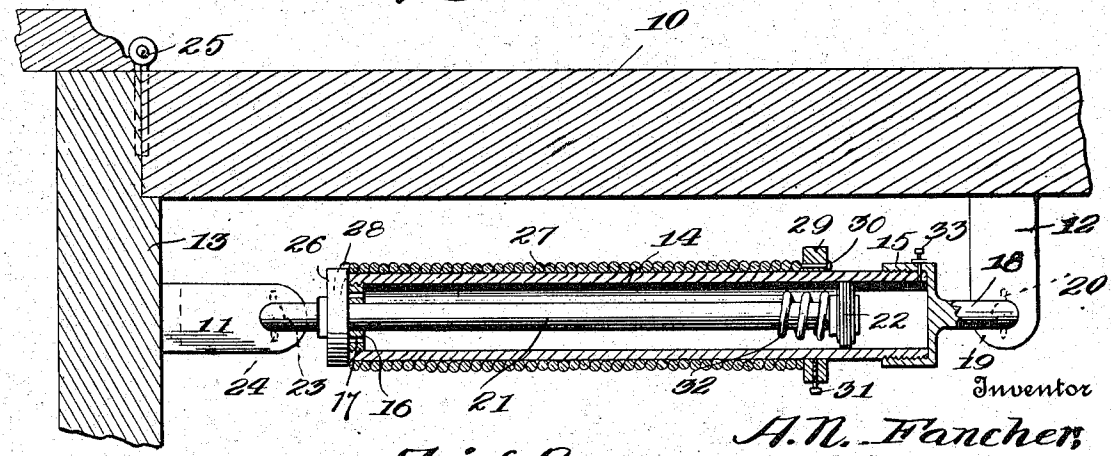


Fig 2.

Witnesses

C. M. Woodward

Jno Smirl

Inventor

A. N. Fancher.

By Howson & Howson

Attorneys.

UNITED STATES PATENT OFFICE.

ALBERT N. FANCHER, OF FARIBAULT, MINNESOTA.

DOOR-CHECK.

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To all whom it may concern:

Be it known that I, ALBERT N. FANCHER, citizen of the United States, residing at Faribault, in the county of Rice and State of Minnesota, have invented certain new and useful Improvements in Door-Checks, of which the following is a specification.

This invention relates to check devices for controlling the movement of a door, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a simply constructed device adapted to automatically close a door and to check the motion so that the door closes without slamming or jarring.

Another object of the invention is to provide a simply constructed device of this character which may be applied without structural change to doors of various sizes and forms.

With these and other objects in view the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claim.

The improved device is shown applied to a conventional screen door; and in the drawings thus employed—Figure 1 is a side view of a conventional screen door with the improvement applied. Fig. 2 is an enlarged section on the line 2—2 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device is movably coupled at one end to the door and at the other end to the frame of the door, and may be applied at any convenient point on the door, but will preferably be applied to the intermediate transverse member 10 of the door.

The improved device includes a pair of brackets 11—12 adapted to be attached respectively to the member 10 of the door and to the door frame, a portion of which is represented conventionally at 13. The improved device likewise includes a cylindrical member 14 supplied with a closure cap 15 at one end and with a guide plug 16 at the other end, the guide plug having a plurality of air escape passages 17 leading to the open air. Directed outwardly from the cap 15 is a pin 18 extended laterally at its outer end as shown at 19, and engaged by the lateral portion in one of the brackets, for instance the bracket 12. The extension 19 of the pin 18 is held from movement in one direction by a suitable fastening device, such as a pin 20. Movably disposed within the cylinder 14 and slidable through the guide 16 is a rod 21 having a plunger 22 of suitable construction attached to its inner end and movable within the cylinder. At its outer end the rod 21 is directed laterally, as shown at 23, and engaged by the laterally directed portion with the bracket 11 and held from displacement by a suitable fastening device, such as a pin 24. The laterally directed portions 19 and 23 extend in the same longitudinal plane as the pintles of the hinges of the door, one of the hinges being indicated at 25.

Connected rigidly to the rod 21 and movable therewith and bearing normally against the perforated closure 16 of the cylindrical member 14, is a head 26. A spring 27 surrounds the cylindrical member 14 and is connected at one end, as shown at 28, to the head 26. Adjustably connected to the cylindrical member 14 adjacent to the cap 15 is a ring or collar 29 to which the opposite end of the spring 27 is connected, as shown at 30. The ring 29 is provided with set screws 31 to enable the ring to be rigidly coupled to the cylindrical member and also adjustable thereon to regulate the tension of the spring.

A cushion spring 32 surrounds the rod 21 next to the plunger 22 to engage against the plug 16. A small vent valve 33 is arranged through the cap 15 and the portion of the tube inclosed by the cap, to permit a slight discharge and inlet of air and prevent the formation of a complete vacuum, while at the same time being so minute that it will not interfere with the proper coaction of the cylinder, springs, and plunger.

With a device thus constructed and applied, it will be obvious that when the door is opened the cylindrical member 14 will be carried around with the door and likewise moved longitudinally of the rod 21, while the latter is held from movement by its connection to the bracket 11 which is attached to the frame 13. This movement causes the cylindrical member 14 to move outwardly away from the casing 13 and likewise over the plunger 22 and likewise applying tension to the spring 27. The outward movement of the plunger draws in a minute

quantity of air through the vent 33 and at the return stroke this air is compressed by the movement of the relative large plunger and only a very small quantity escapes through the vent, thus insuring the slow closing of the door, especially at the last portion of its movement. As before stated, if the door is quickly opened to its full capacity, the concussion spring 32 will engage against the inner face of the plug 16 and thus prevent jarring or undue pressure at the outer end of the cylinder.

The improved device is simple in construction, can be inexpensively manufactured and applied and of any required size and any suitable material.

Having thus described the invention, what is claimed as new is:

A device of the class described comprising a cylindrical member, a plunger movable in said cylindrical member, means for coupling said cylindrical member and plunger respectively to a movable member and to a stationary support, a collar upon said cylindrical member, means for adjustably connecting said collar to said cylindrical member, and a spring connected to said collar and to said plunger and operating to yieldably hold said plunger in the cylindrical member and adjustable relative to the cylindrical member to control the tension of the spring.

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

ALBERT N. FANCHER. [L. S.]

Witnesses:

GEO. A. WESTON,

STEPHEN JEWETT.