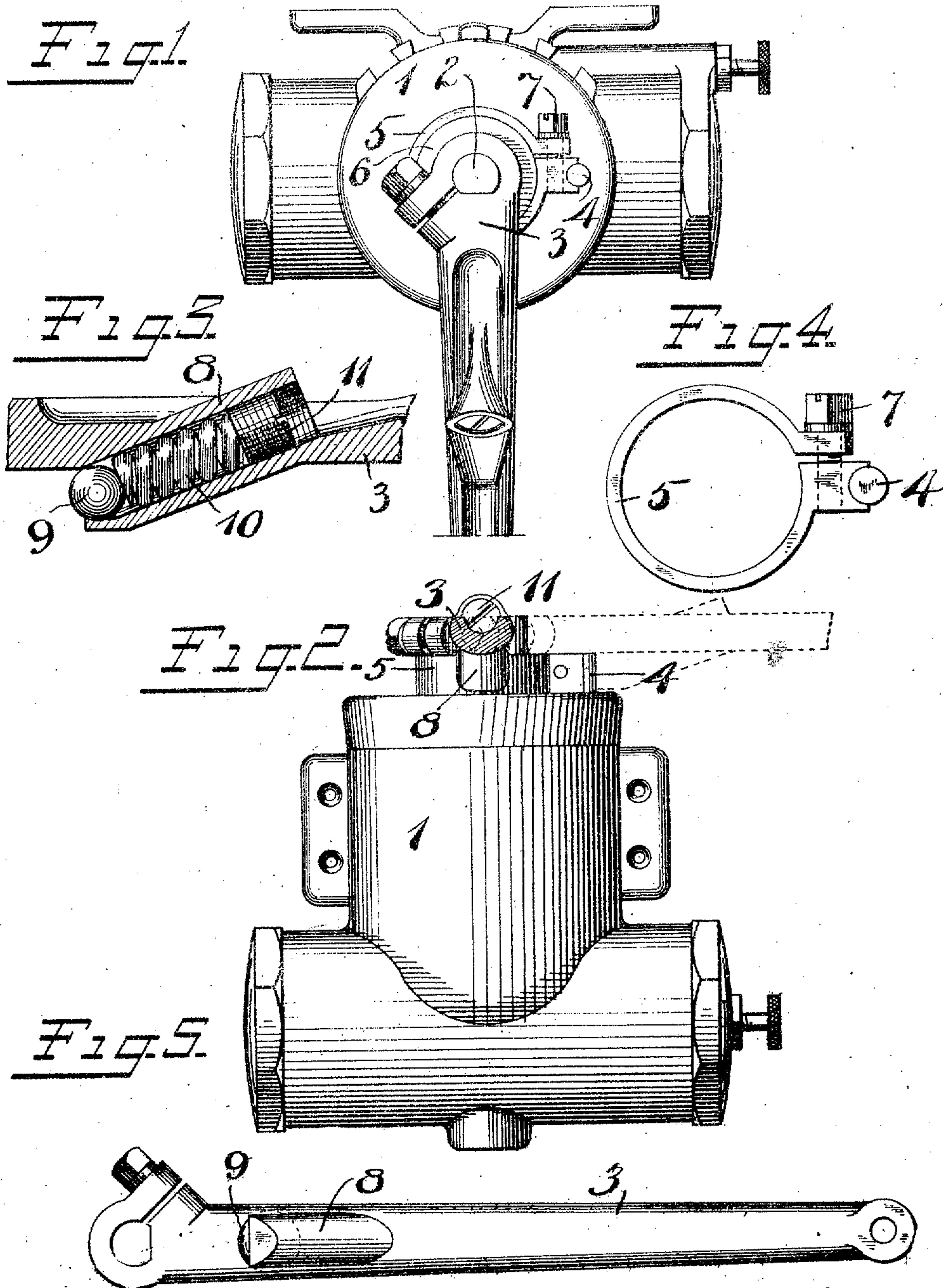


W. K. HENRY.
DOOR STOP FOR DOOR CHECKS AND CLOSERS.
APPLICATION FILED FEB. 19, 1910.

986,710.

Patented Mar. 14, 1911.



Witnesses:
Fred S. M. Dannenfels
Chas. A. Beard

Inventor
W. K. HENRY.
By his Attorneys
Ratten & Cummings

UNITED STATES PATENT OFFICE.

WILLIAM K. HENRY, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P. & F. CORBIN,
OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

DOOR-STOP FOR DOOR CHECKS AND CLOSERS.

986,710.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed February 18, 1910. Serial No. 544,586.

To all whom it may concern:

Be it known that I, WILLIAM K. HENRY, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Door-Stops for Door Checks and Closers, of which the following is a full, clear, and exact description.

My invention relates to an improved door stop for use in connection with a door closer apparatus, said stop being readily adjustable both as to operative tension and as to position, the construction also being such that the stop action may be readily released whenever desired.

In the accompanying drawings Figure 1 is a plan view of a door closer of conventional form provided with my improved stop; Fig. 2 is a front elevation thereof; Fig. 3 is a longitudinal section of certain parts; Fig. 4 is a plan view of another part detached; Fig. 5 is a view of the under side of the lever arm carrying part of the stop mechanism.

1 represents the case of a suitable door closer apparatus in which means is provided for mechanically turning a spindle 2.

3 is a lever arm carried by the spindle 2 and by which the closing mechanism is connected to the door casing, the closer mechanism itself being ordinarily connected to the door proper. The upper end of the case carries an adjustable stop shoulder 4, the same having rounded outer bearing face and in the particular form shown being mounted upon a split collar 5, which may be adjustably clamped upon a central hub 6 on top of the cap of the case 1, said split collar being secured in any suitable way as by a screw bolt 7. By releasing the screw bolt 7 the stop shoulder 4 may be adjusted angularly relatively to the axis of shaft 2.

In the lever arm 3 is a guide 8 preferably arranged obliquely as shown in Fig. 3. This guide is open at both ends but is contracted at its forward end so as to permit a spring-pressed member, preferably a hardened steel ball, 9 to project partly through. Behind the member 9 is a spring 10 and behind the spring is an adjustable member 11, screwthreaded in the rear end of the guide 8, whereby by advancing or retracting the member 11 the pressure of the

spring 10 against the member 9 may be varied at will. The projecting end of the spring-pressed member 9 moves in a path which will cause it to encounter the stop 4 laterally and the tension of the spring 10 should be sufficient (when the stop is in action) to hold the arm 3 in the position in which said arm would stand when the member 9 is back of the stop shoulder 4; that is to say, sufficient to prevent the closer spring (not shown) from restoring the arm 3 to its normal position in which the door is closed. When it is desired to close the door, the tension of the spring is supplemented, viz., by a pressure against the door, thus causing the spring member 9 to be pressed back until it clears the stop 4, whereupon the closer mechanism restores the arm 3 to its normal door closing position. Obviously, by this arrangement the stop 4 may be adapted to either a right or left hand door, and may be so set as to hold the door ajar at any desired position.

It is obvious that this stop mechanism may be readily applied at minimum cost to almost any form of door closer and may be put into action or out of action at a moment's notice either by releasing the tension against the member 9 or by shifting the stop shoulder 4 to such a position that it will not be encountered by the member 9 at any angle to which the door is opened.

What I claim is:

1. In a combined door closer and stop, a closer case, a rotatable shaft, an arm mounted thereon, a stop carried by said case, and a spring-pressed member carried by said arm arranged to encounter the side of said stop.

2. In a combined door closer and stop, a closer case, a rotatable shaft, an arm carried thereby, said arm having an obliquely inclined guide passage opening above and below said arm and a spring-pressed stop engaging member projecting partially through the lower open end of said guide passage, and a spring within said guide passage operating on said member and a stop shoulder on the case arranged to co-act with said member.

3. In a combined door closer and stop, a closer case, a rotatable shaft, an arm mounted thereon, a stop carried by said case, and a spring-pressed member carried by said

arm arranged to encounter the side of said stop, and means for adjusting the tension on said spring-pressed member.

4. In a combined door closer and stop, a closer case, a rotatable shaft, an arm mounted thereon, a stop carried by said case, and a spring-pressed member carried by said arm arranged to encounter the side of said stop, and means for adjusting the tension on said spring-pressed member including a spring 10 arranged to the rear of said member and an adjusting device to the rear of said spring.

5. In a combined door closer and stop, a closer case, a rotatable shaft, an arm mount-

ed thereon, a stop carried by said case, a spring-pressed member carried by said arm arranged to encounter the side of said stop, means for adjusting the tension on said spring-pressed member including a spring 20 arranged to the rear of said member and an adjusting device to the rear of said spring, a screw threaded connection between said adjusting device and said arm whereby said adjusting device may be advanced or 25. retracted.

WILLIAM K. HENRY.

Witnesses:

R. C. MITCHELL,
CHAS. W. PEARD.