

J. A. PETERSON.  
DOOR CHECK AND CLOSER.  
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943,160.

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Fig. 1.

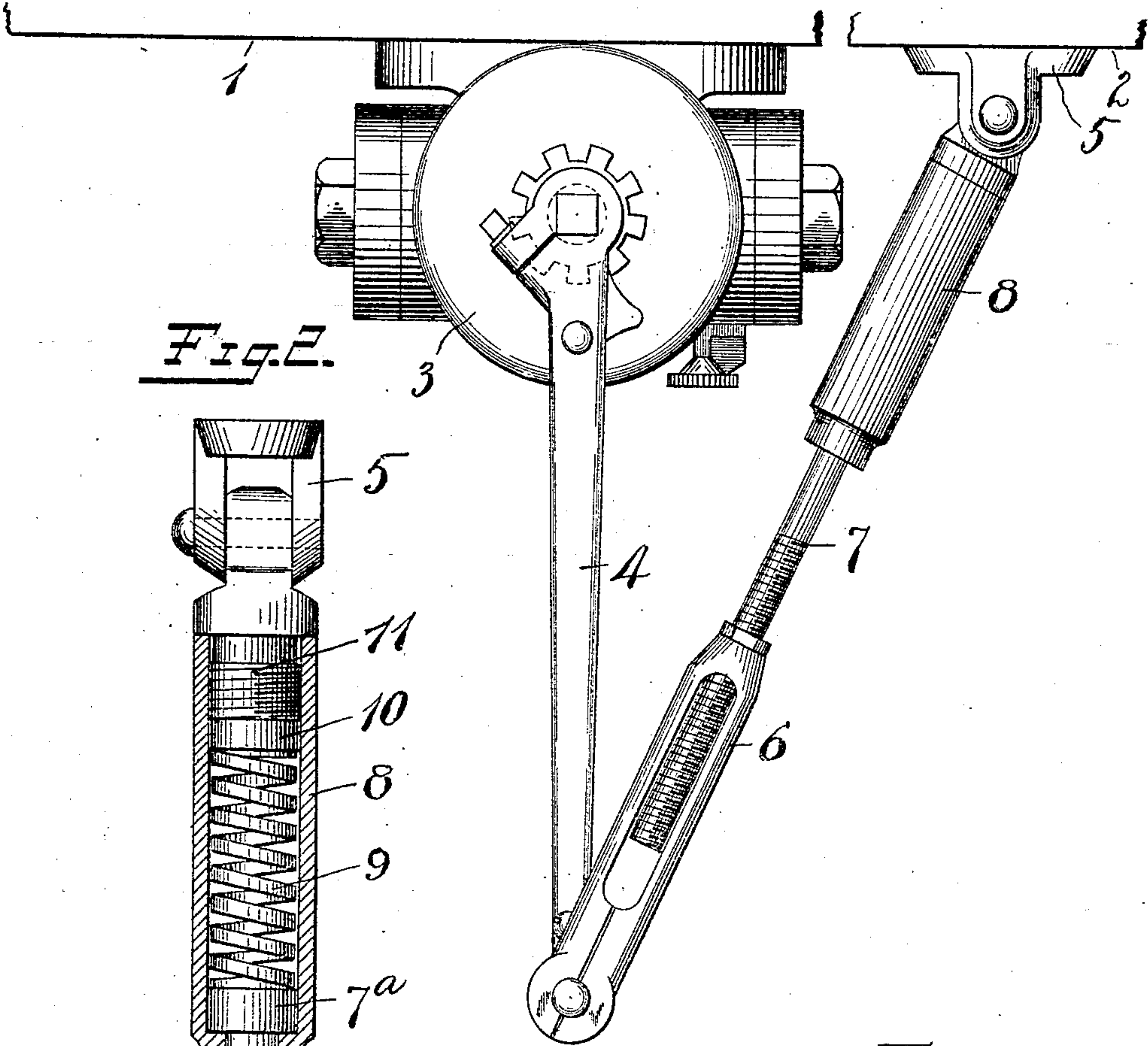


Fig. 2.

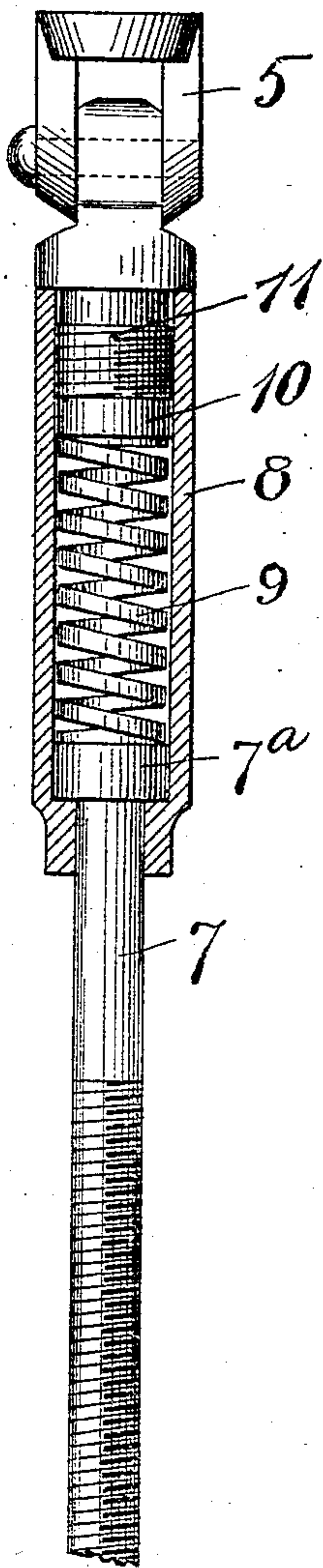


Fig. 4.

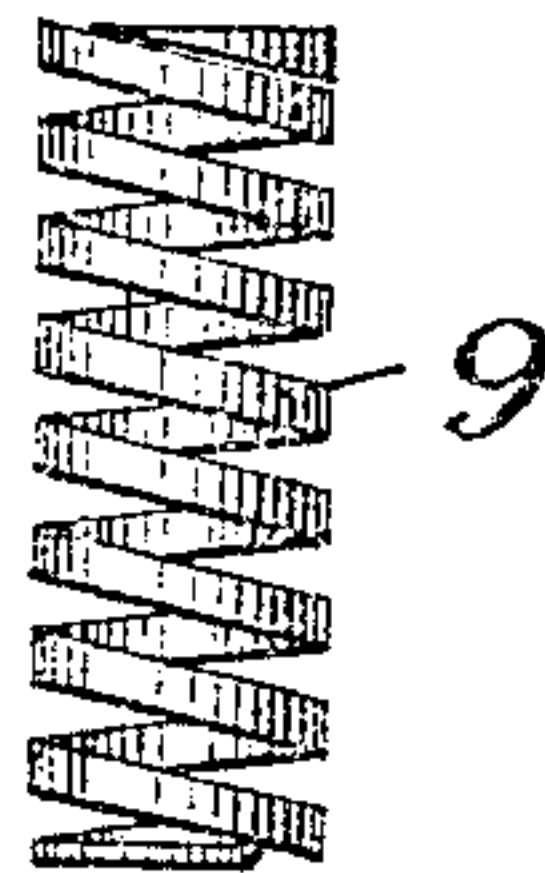
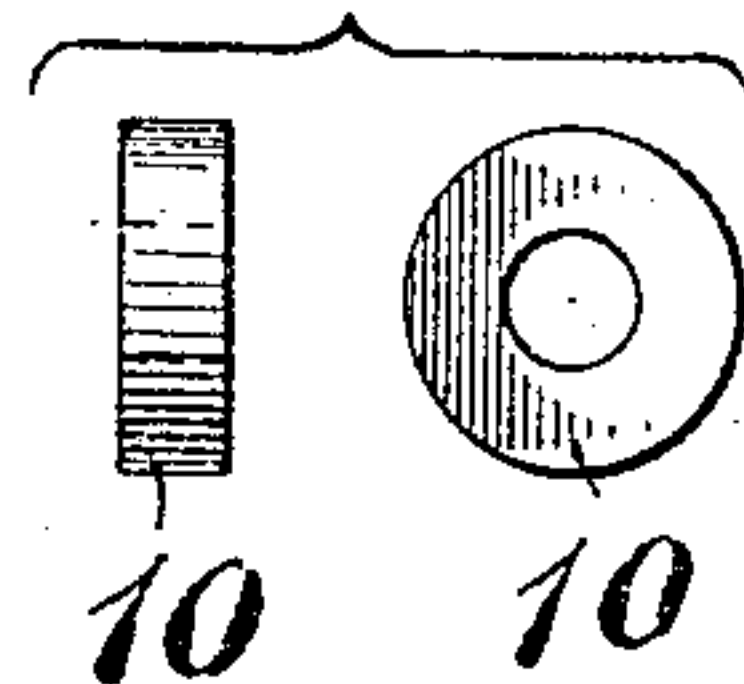


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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DOOR CHECK AND CLOSER.

943,160.

Specification of Letters Patent.

Patented Dec. 14, 1909.

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*To all whom it may concern:*

Be it known that I, JOHN A. PETERSON, 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 Checks and Closers, of which the following is a full, clear, and exact description.

My invention relates to improvements in door closers, the object being to provide means whereby any abnormal strain put upon the door will not tend to fracture or loosen any of the parts of the apparatus or produce undue wear.

In the accompanying drawings, Figure 1 is a plan view of a door check and closer of well known design and illustrating the same as applied to a door, at the same time illustrating in plan my improvement as applied thereto. Fig. 2 is a relatively enlarged view of that particular feature of the apparatus to which my invention particularly relates, said view being partly in section. Fig. 3 is an illustration of a detail, the same being shown in side and end elevation. Fig. 4 is a side elevation of another detail.

1 represents a portion of a door; 2 a portion of the door casing; 3 conventionally represents a door closer; 4 represents the arm or lever of the door closer and 5 a bracket on the casing 2. The end of the arm 4 is connected with the bracket 5 by an adjustable arm or link, in this particular form, comprising the part 6, which is pivotally connected with the end of the arm 4, and the part 7, which is screw threaded into the part 6 and which has a head 7<sup>a</sup> arranged within the buffer cylinder 8, connected to the bracket 5 by means of the screw plug 11 threaded into the end of the cylinder.

9 is a buffer spring arranged within the cylinder 8.

10 is a washer preferably arranged between the end of the spring and the head 11. Similar washers of different thickness may be readily inserted to put the spring 9 under more or less compression as the particular necessities demand.

In operation, the closing action of the closer 3 moves the arm 4 in a direction to apply force to the bracket 5 through the adjustable buffer connection described. In the event of any unusual strain, the spring 9

operates as a cushion to relieve said abnormal strain and eliminate the danger of breakage.

It should be understood that I have shown my invention only in the preferred form and that various modifications may be resorted to without departure from the spirit and scope of the same.

What I claim is:

1. A connecting arm for a door closer, comprising a link and including means for pivotally connecting said link at opposite ends to a movable and a fixed object and a yielding buffer arranged between said opposite ends.

2. A connecting arm for a door closer, comprising a link, means for pivotally connecting said link at its opposite ends to a movable and a fixed object, and means between the ends of said link to permit said link to yield endwise, said means including a cushioning device.

3. A connecting arm for a door closer, comprising an arm having connecting means at each end, said arm being formed of two members movable longitudinally relatively to each other and operably associated with each other and a buffer between said two members.

4. In a device of the character described, a door closer mechanism including a swinging arm, a second arm or link pivotally connected to the end of said swinging arm and arranged in turn to be pivotally connected with a fixed abutment, said second arm being telescopic and buffer means carried by the telescopic parts of said arm.

5. A connecting arm for door checks, comprising two telescopic members, one of said members slidably fitting within the other of said members and a buffer spring arranged inside the latter to project the former and to operate as a cushion therefor.

6. A connecting arm for door checks, comprising two telescopic members, one of said members slidably fitting within the other of said members and a buffer spring arranged inside the latter to project the former and to operate as a cushion therefor and a removable spacing washer arranged adjacent to one end of said buffer spring.

7. A connecting arm for a door closer, including a cylinder, a piston entering one

end of said cylinder and having a head slidable therein, a removable head for the other end of said cylinder, a buffer spring between said heads and connecting means at  
5 each end of said arm.

8. A connecting arm for a door closer, including a cylinder, a piston entering one end of said cylinder and having a head slidable therein, a removable head for the  
10 other end of said cylinder, a buffer spring between said heads, and connecting means at each end of said arm, said arm also in-

cluding adjustable means for varying the normal length of the same.

9. In a device of the character described, 15 a door closer, an arm movable thereby, means for connecting the free end of said arm to a fixed abutment, said means including a cushion.

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Witnesses:

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