

Oct. 6, 1936.

J. WILLIAMS

2,056,876

DOOR CHECK

Filed June 26, 1935

2 Sheets-Sheet 1

Fig. 1.

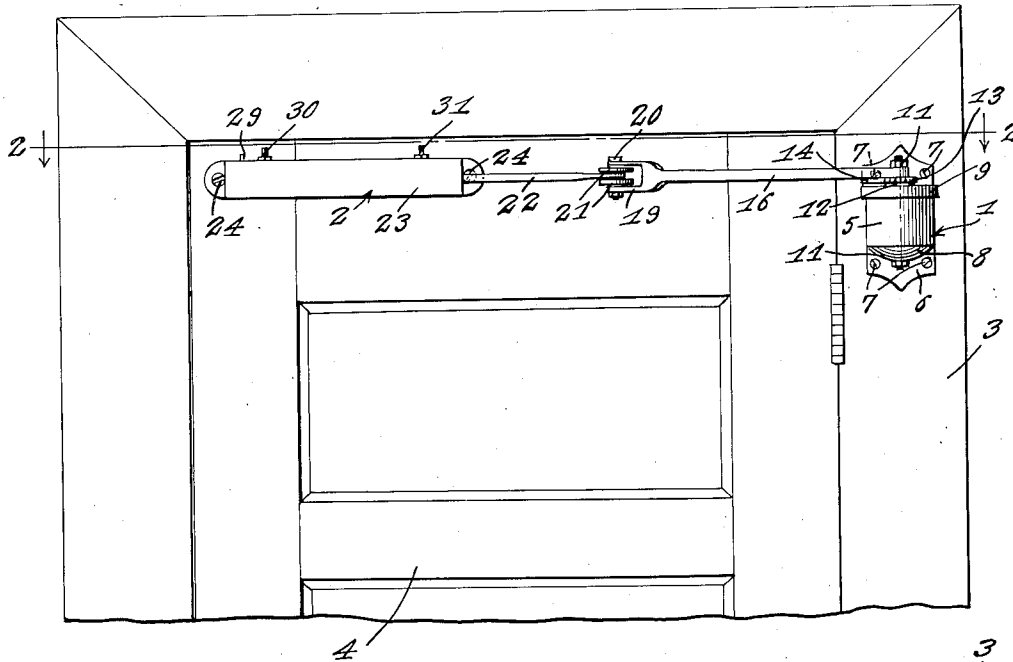


Fig. 2.

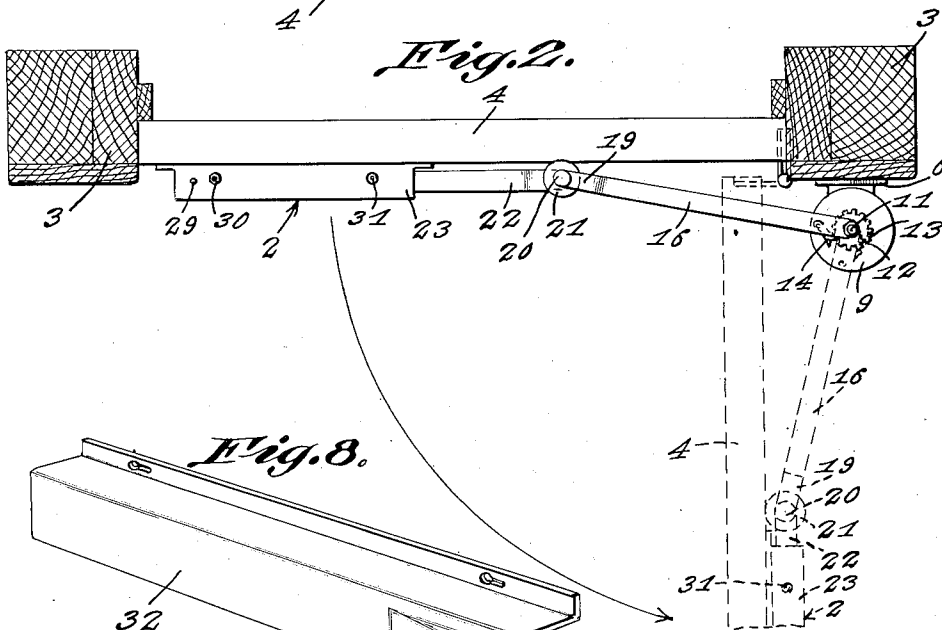
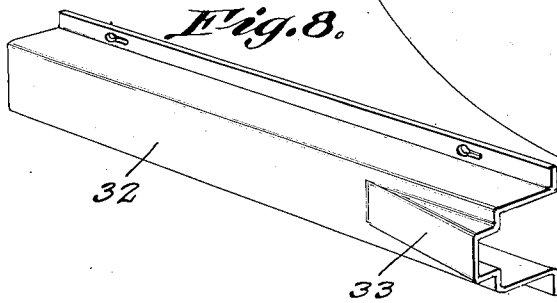


Fig. 8.



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Fig. 3.

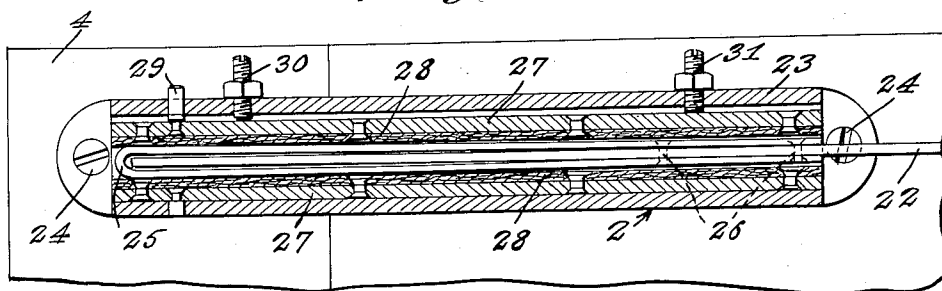


Fig. 5.

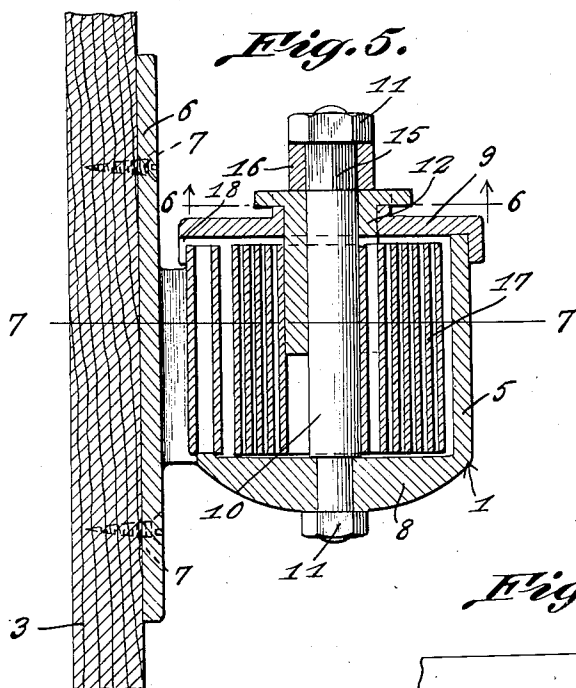


Fig. 4.

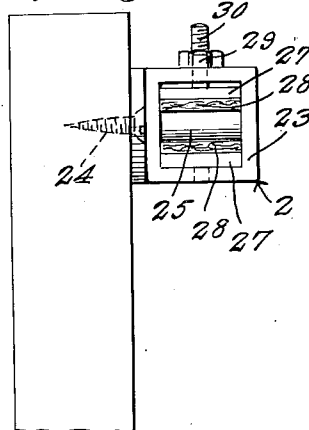


Fig. 6.

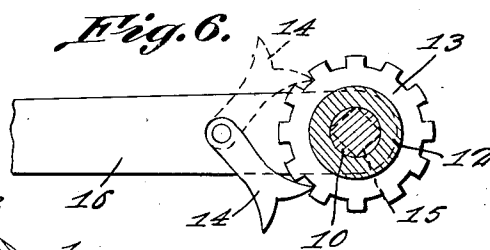
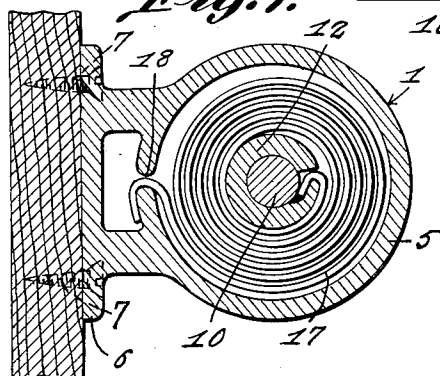


Fig. 7.



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UNITED STATES PATENT OFFICE

2,056,876.

DOOR CHECK

John Williams, Brandon, Manitoba, Canada

Application June 26, 1935, Serial No. 28,562

1 Claim. (Cl. 16—82)

This invention relates to combined door checks and closers and has for the primary object the provision of a device of this character which may be readily installed on a door and its mounting or frame and which will close the door gradually or smoothly without sudden jerks or slowing down of the door movement towards door closing position and will not be affected by varying temperatures and may be readily adjusted to regulate the speed of movement of the door towards closed position.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

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

Figure 1 is a side elevation illustrating a combined door check and closer applied to a door and its mounting or frame and constructed in accordance with my invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a vertical sectional view showing the brake of the device.

Figure 4 is an end view illustrating the same.

Figure 5 is a vertical sectional view showing the spring means for moving the door towards closed position.

Figure 6 is a sectional view taken on the line 6—6 of Figure 5.

Figure 7 is a sectional view taken on the line 7—7 of Figure 5.

Figure 8 is a perspective view illustrating a cover for the brake mechanism.

My invention primarily consists of a door closing mechanism 1 and a check mechanism 2, said mechanisms being connected. The door closing mechanism 1 is mounted on the door frame 3 while the check mechanism is mounted on the door 4.

The door closing mechanism consists of a housing 5 mounted on an attaching plate 6 apertured to receive screws or like fasteners 7 for securing the mechanism 1 on the frame 3. The housing 5 is closed at its lower end by a bottom wall 8 and its upper end is fully open and normally closed by a cap 9. The bottom wall 8 and the cap 9 are provided with aligned openings to receive a shaft 10, the ends of which have nuts 11 threaded thereon and arranged exteriorly of the housing. The opening in the cap 9 is considerably larger than the shaft 10 to receive a

driving sleeve 12 which depends a short distance downwardly in the housing 5 and has integral with its upper or outer end a notched flange 13 to be engaged by a pivotally mounted dog 14. The upper end of the shaft 10 is square, as shown at 15, to fit within a squared opening of an arm 16 to which the dog 14 is pivoted. A clock type spring 17 is located in the housing 5 and one end thereof anchored to said housing by extending through a slot 18 formed in the housing. The other end of the spring is anchored to the drive sleeve 12 so that the driving action of the spring will be imparted to the arm 16 through the drive sleeve and dog 14. The arm 16 is retained on the shaft 10 by one of the nuts 11. The arm 16 is provided with a forked portion 19 carrying a journal 20 on which are mounted rollers 21 adapted to ride upon a door 4. The journal also has pivoted thereto one end of a check rod 22. The check rod 22 forms a part of the check mechanism and the latter includes a mounting or housing 23 secured on the door by screws or like fasteners 24. The check rod has secured thereto a facing strip 25 consisting of a metallic member bent upon itself and disposed over opposite faces of the check rod and riveted or otherwise secured to the latter, as shown at 26. Oppositely arranged brake shoes 27 are movably and adjustably mounted in the housing 23 and have secured to their opposing faces brake linings 28 engaged by the facing strip 25 of the check rod 22. Pins 29 are secured to the brake shoes 27 and slide in openings formed in the housing 23 and threaded in the housing are adjusting bolts 30 and 31 contacting with one of the brake shoes 27. The adjusting bolts 30 and 31 provide means whereby one of the brake shoes may have its angle or inclination vary with respect to one face of the facing strip 25. This arrangement permits the frictional contact of the facing strip 25 with the brake shoes or linings thereof to be varied to resist the movement of the check rod 22 inward of the housing 23 by the action of the door closing mechanism 1.

In operation, when the door 4 is released from an open position, the spring 17 acts to swing said door towards a closed position. The movement of the door in the stated direction is smooth and as slow as desired through the action of the check mechanism. It is to be understood that as the door moves towards an open position the check rod 22 and its facing strip 25 moves to the left in Figure 3, and as the door moves towards a closed position the check rod and its

facing strip moves towards the right in Figure 3. The latter-named movement of the check rod and facing strip is gradually retarded by the facing strip frictionally contacting the brake
5 linings of the brake shoes 27.

A device of the character described may be manufactured at a nominal cost and is simple and durable in construction and may be adapted to a door mounted to swing either to the right
10 or left.

A cover 32 is removably mounted on the mounting 23 to aid in excluding foreign matter to the brake mechanism and a portion of said cover is offset, as shown at 33, to permit the check rod
15 to have a limited movement away from the

door during the latter moving into open position.

Having described the invention, I claim:

A door check comprising a check rod adapted to be connected to a door closer, a mounting 5 slidably receiving said rod and secured on a door, a facing strip secured to said rod and bent to extend over opposite faces of said rod, brake shoes slidably connected to the mounting, brake linings secured to the brake shoes to engage with
10 the facing strip, adjusting bolts carried by said mounting and engaging one of the shoes whereby the inclination of the latter with respect to the facing strip may be varied.

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