July 20, 1926. 1,592,879

C. R. YIRAVA

DOOR HOLDING AND CLOSING DEVICE

Filed April 21, 1925

Fig. 1

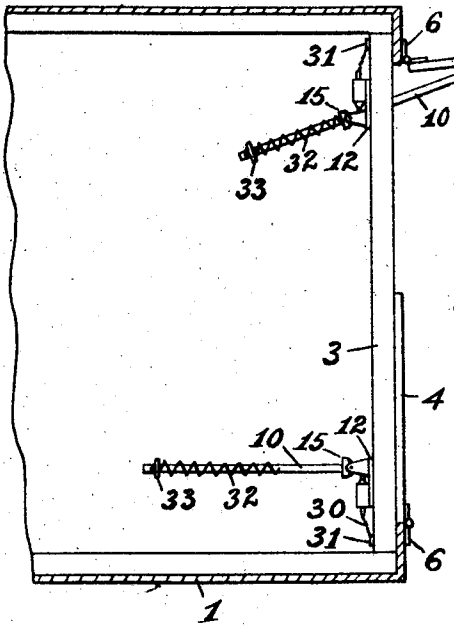


Fig. 2

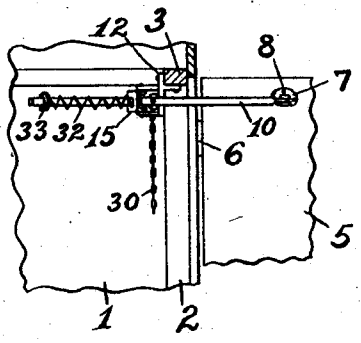


Fig. 3

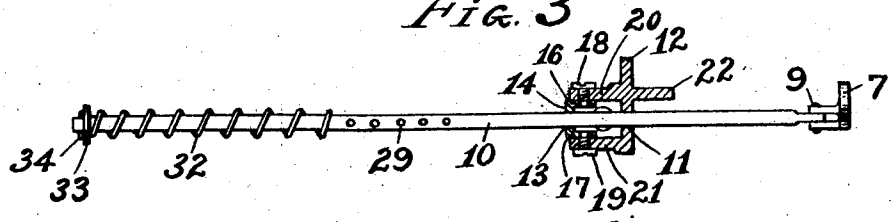


Fig 4

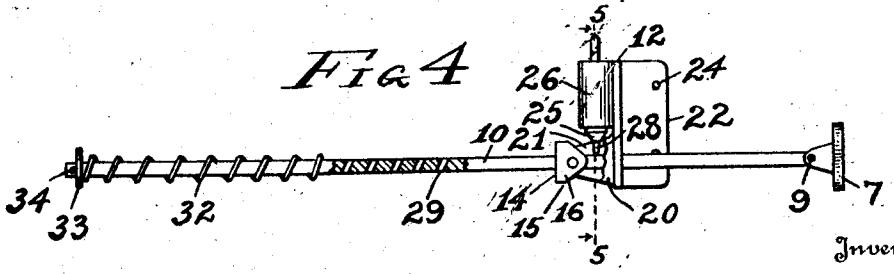
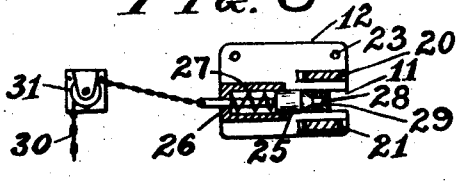


Fig. 5



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UNITED STATES PATENT OFFICE.

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DOOR HOLDING AND CLOSING DEVICE.

Application filed April 21, 1925. Serial No. 24,754.

This invention relates to door holding and closing devices, and has for its main object to provide a device for holding a garage door in open position and automatically closing the same when released.

Another object of the invention is to provide a device of said character of simple, practical and inexpensive construction which is easily installed in position.

With the above and other objects in view, the invention will be hereinafter fully described as illustrated in the accompanying drawings, and the novel features thereof will be distinctly pointed out in the appended claims.

In the drawings similar characters of reference indicate corresponding parts.

Figure 1 illustrates a plan sectional view of a garage with door holding and closing device constructed in accordance with my invention applied thereto.

Fig. 2 illustrates a fragmental sectional elevation of same looking towards the open door.

Fig. 3 is a side view of the device, the bracket being in section to better show the construction.

Fig. 4 is a plan view of the device, and

Fig. 5 is a cross-sectional view taken on line 5—5 of Fig. 4.

Referring to the drawings 1 represents a garage having the usual frame construction consisting of uprights 2 and horizontal beams 3, and a pair of swinging doors 4 and 5 are supported by hinges at 6. Such garage doors after being opened are easily blown shut and may be bumped by an automobile backing out of the garage, and when blown back and forth in case the doors are allowed to remain open damage to the doors may result. In order to be able to open the doors without inconvenience and then hold the doors in their open position, and also provide for automatically closing the doors upon releasing them the following described mechanism was designed.

To the door 5 near its upper edge and close to its hinged edge is fixed an end anchoring bracket 7 by means of screws at 8, and to the bracket is pivotally connected at 9 a bar 10 which is preferably square in cross section. The bar 10 passes through an elongated opening 11 of a bracket 12 and is slidably mounted in a square opening 13 of a vertical plate 14 of a member 15. Said plate 14 of the member 15 has upper and lower forwardly extending horizontal lugs 16 and 17, which are pivoted at 18 and 19 between rearwardly extending horizontal lugs 20 and 21 of the bracket 12. Said bracket has a forwardly extending horizontal flange 22 and is secured to the front end horizontal beam 3 of the garage by screws at 23 and 24. The bar 10 is held locked to hold the door in various open positions by means of a plunger 25, which is slidably mounted in a barrel 26 formed integrally with the bracket 12 and actuated forwardly by means of a coiled spring 27. Said plunger has a forwardly pointed end 28 which is adapted to enter openings 29 provided in the side of the bar 10, and these openings are inclined for aligning with and receiving said end of the plunger when said bar takes the position shown in Fig. 1 and the door is opened. The plunger 25 may be conveniently retracted to release the bar 10 by means of a pull-chain 30, which passes over a suitable pulley 31 fixed to any suitable part of the garage. In order that the door may be automatically closed upon releasing the bar 10, a coiled spring 32 of suitable strength is arranged upon said bar between the vertical plate 14 of the member 15 and a washer 33 at the end of the bar held thereto by means of a cotter-pin 34.

When the door is closed the bar 10 is at a right angle thereto and the other parts as shown in Fig. 1, and upon opening the door, said bar is withdrawn, the member 15 swinging on an inclination, the coiled spring 32 is compressed between said member and the washer 33, and the forward end 28 of the plunger 25 will enter one of the openings 29 of the bar 10, thereby holding the door in its open position. When it is desired to close the door, the plunger 25 may be withdrawn from the opening 29 of the bar 10 by pulling upon the chain 30, and upon releasing the bar, the action of the coiled spring 32 will draw the bar inwardly and thereby close the door.

It is to be understood that slight changes in the details of construction may be made so long as the changes are within the scope of the claims.

Having fully described my invention, what I claim is:

1. In a door holding and closing device, the combination with a door of a bar having one end pivoted thereto, a spring pressed plunger, and the bar being provided with

openings in its side and on an angle with relation to its longitudinal axis for receiving the plunger, substantially as described.

2. In a door holding and closing device, the combination with a door of a bar having one end pivoted thereto to swing horizontally, a bracket fixed to the garage, a member pivotally supported by the bracket and adapted to swing horizontally, the bar being slidably supported by the member, a plunger, the plunger being slidably supported by said bracket, and the bar having openings adapted to receive said plunger for holding the bar, substantially as described.

3. In a door holding and closing device, the combination with a door of a bar having one end pivoted thereto, a pivotally supported member, the bar being slidably supported by the member, a plunger, the bar being provided with openings for receiving the plunger, and means adapted to cause inward longitudinal movement of the bar upon withdrawing the plunger for closing the door, substantially as described.

4. In a door holding and closing device, the combination with a door of a bar having one end pivoted thereto, a pivotally supported member, the bar being slidably supported by the member, a plunger, the bar being provided with openings for receiving the plunger, a washer at the end of the bar, and a coiled spring upon the bar between the washer and said member, substantially as described.

5. In a door holding and closing device, the combination with a door of a bar having one end pivoted thereto to swing horizontally, a bracket fixed to the garage, a member pivotally supported by the bracket and adapted to swing horizontally, the bar being slidably supported by the member, a plunger, the plunger being slidably supported by said bracket, the bar having openings adapted to receive said plunger for holding the bar, a washer at the end of the bar, and a coiled spring arranged upon the bar between the washer and said member, substantially as described.

In testimony whereof I affix my signature.

CHARLES R. YIRAVA.