

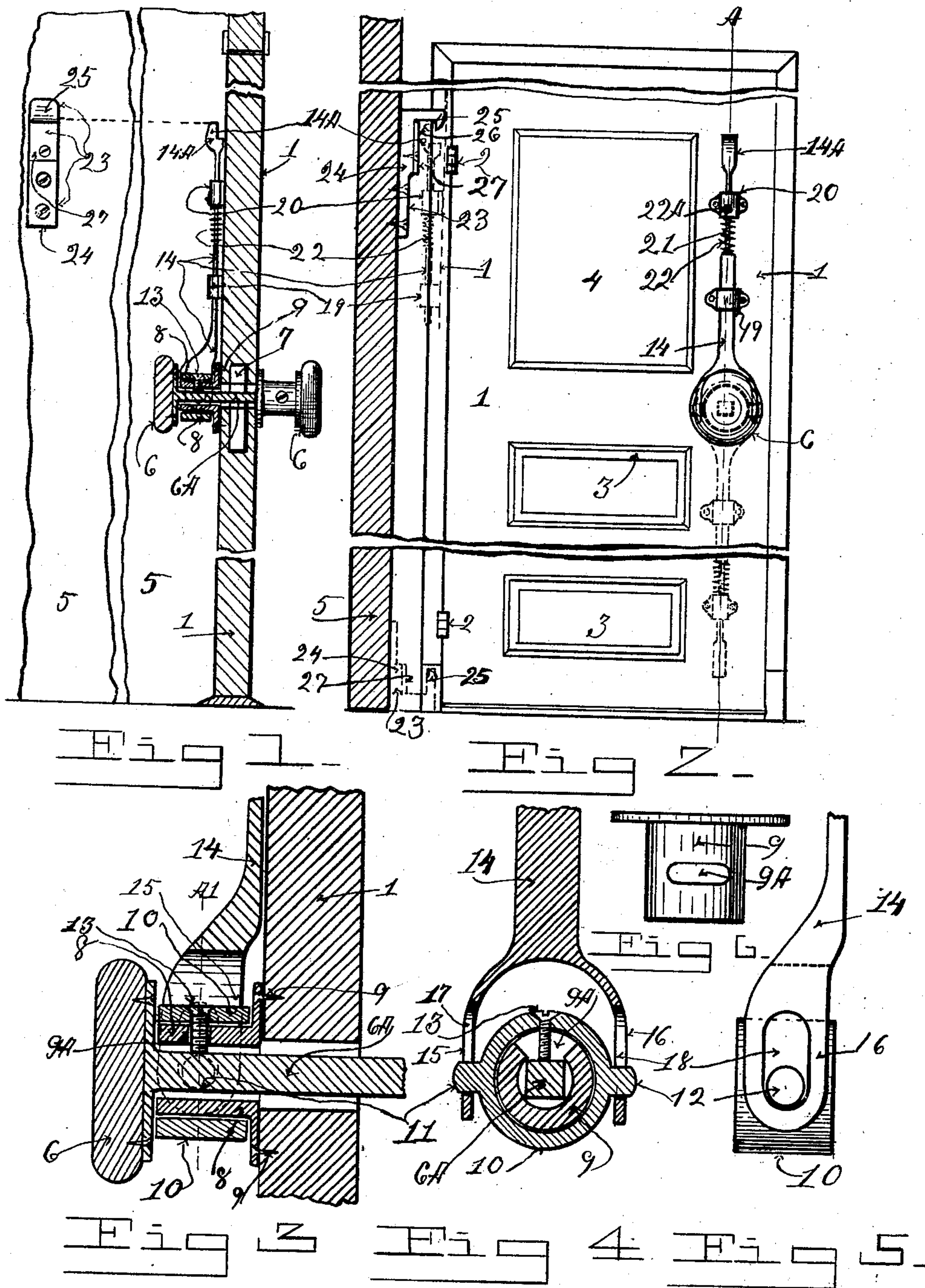
No. 682,754.

Patented Sept. 17, 1901.

W. M. TEETER.  
DOOR CATCH.

(Application filed Dec. 15, 1900.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM M. TEETER, OF CRIPPLECREEK, COLORADO.

## DOOR-CATCH.

SPECIFICATION forming part of Letters Patent No. 682,754, dated September 17, 1901.

Application filed December 15, 1900. Serial No. 40,019. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. TEETER, a citizen of the United States of America, residing at Cripplecreek, in the county of Teller and State of Colorado, have invented certain new and useful Improvements in Door-Catches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in catches for doors, and particularly for the doors of railway cars and coaches; and the objects of my invention are, first, to provide a door catch and keeper that will lock or catch and that will secure the door when it is swung open against a partition or a support for the keeper; second, to provide a catch and keeper the catch of which is arranged to be operated by the knob and is arranged to be preferably attached vertically on the door and that is arranged to be released from its keeper by turning the knob in either direction, and, third, to provide a catch and keeper that can be applied to secure the top or bottom of the door, thus providing a more positive combined catch and lock than those commonly in use. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of the edge of a door on line A of Fig. 2, showing my catch secured to the knob, and a fragmentary portion of the side of a car, showing the keeper secured thereto. Fig. 2 is a fragmentary side elevation of a door and a section of the side of a car. Fig. 3 is an enlarged view of the knob and a fragment of the cooperating end of the catch-rod and the edge of the door. Fig. 4 is a section of Fig. 3 on line A'. Fig. 5 is a side elevation of the trunnion-collar and the cooperating adjacent end of the catch-rod. Fig. 6 is an elevation of the knob-thimble.

Similar numerals of reference refer to similar parts throughout the several views.

Referring to the drawings, the numeral 1

designates the door; 2, its hinges; 3, its panels, and 4 a glass window.

5 designates one of the sides of the car or a vertical strip or post arranged in the car to secure the catch to and to which the door locks when it is swung open. To the door, near its opening edge, a common form of knob 6 and shaft 6<sup>A</sup> and spring door-catch 7 are secured in the usual manner, and a thimble 8 is placed on the knob-shaft and is attached by screws 9 to the door and forms a bearing for the shaft of the knob. Through the shell of this thimble I form a slot 9<sup>A</sup> transversely of its axis. Upon this thimble I mount loosely a collar 10, which is provided with trunnions 11 and 12 at diametrically opposite points in its diameter. This collar I call a "trunnion-collar." It is positioned to stand normally with its trunnions in a horizontal plane, and through its shell I thread a screw 13, which extends loosely through the slot 9<sup>A</sup> in the thimble and is screwed tight against the shaft of the knob. A catch-rod 14 extends vertically from the knob. At its knob-connecting end it is bifurcated into two arms 15 and 16, that straddle the trunnion-collar. Each one of the arms is provided with slots 17 and 18, that fit over the trunnions. These slots are arranged opposite one another and are made enough longer than the diameter of the trunnions to allow them to be turned with the knob a short distance without cramping the trunnions in the slots. The catch-rod extends vertically from the knob and is shown extending toward its top, but can be extended toward the bottom, as shown in dotted lines in Fig. 2. It may be only a few inches in length, or it may extend to either the top or bottom of the door, as desired. The catch-rod is supported slidably in guides 19 and 20, that are secured to the door. A reduced portion 21 extends through the top box, around which a contracting-spring 22 is placed, one end of which is secured to the rod and the opposite end is secured to the guide by a screw 22<sup>A</sup>. This spring operates to resiliently hold the catch-rod up in its normal position of the keeper. The free end of the catch-rod extends beyond the top guide and is shaped and rounded off into a catch end 14<sup>A</sup>. A keeper 23, which comprises a block 24, having an overhanging lip 25 ar-



ranged to form a recess 26, in which the catch end of the catch-rod lodges when the door is swung against it, is secured to the side of the car the door swings against. A strip of rubber 27 is secured against the side of the recess the catch strikes against to cushion it.

The operation is as follows: When the door is swung against the partition, the end of the catch-rod strikes the edge of the keeper and springs down, sliding down on its trunnions and in its guides enough to allow its end to pass underneath and by the lip on the keeper into its recess. When it is desired to close the door, the knob is turned on the opposite side of the door from the catch-rod and may be turned in either direction, which through the medium of the screw that turns the trunnion-collar and moves freely through the slot in the thimble, and whichever one of its trunnions that is moved down by the turning movement of the knob by bearing in the bottom of its slot in the arm of the catch-lever that is attached to it, the opposite trunnion moving up in its slot as its arm also moves down. At the same time that the knob is turned and the catch-rod is drawn down the door is pulled away from the keeper and closed. The instant, however, the knob is released the spring 22 will draw the catch-rod up into its normal position.

While I have shown a trunnion-collar made in the form of a solid ring, which I preferably use on knobs on which it can be readily applied, my invention contemplates a divided and clampable trunnion-ring which can be adjusted to knobs having thimbles of different types, forms, and diameters. I do not show the divided and adjustable collars and the different kinds of thimbles, as they differ so much in form and construction that it would be impossible to make any one collar fit all of them. When, however, the catch and knobs and the closing door-catch are

made and fitted together by a manufacturer, a solid collar, such as is shown, is preferable and the least expensive and is the least liable to get out of order. My invention also contemplates any kind of a spring for controlling the catch-rod in one direction of its movement and may be arranged, if desired, inside of one of the guides.

My invention, while particularly adapted for the doors of railway-cars, can be applied to all doors. It is simple and positive in its action, inexpensive, and durable.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a door-catch, the combination with the knob and its shaft, of the shaft's supporting-thimble containing a slot, a trunnion-collar loosely surrounding said thimble, a screw threaded to said trunnion-collar and extending through the slot in said thimble and bearing against said shaft, trunnions on the opposite horizontal sides of said trunnion-collar, a reciprocating catch-rod, spring-controlled in one direction of its movement supported in suitable guides, a bifurcated end at one end of said rod arranged to straddle said trunnion-collar and having in its two arms oblong slots arranged to fit loosely over said trunnions, a rounded catch end on the opposite end of said catch-rod and a suitable keeper comprising a block containing an overhanging lip, a recess between said lip and the body of the block and a rubber strip secured to the body of said block to cushion said catch, substantially as described.

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

WILLIAM M. TEETER.

Witnesses:

W. G. LAWSON,  
J. W. ONEY.