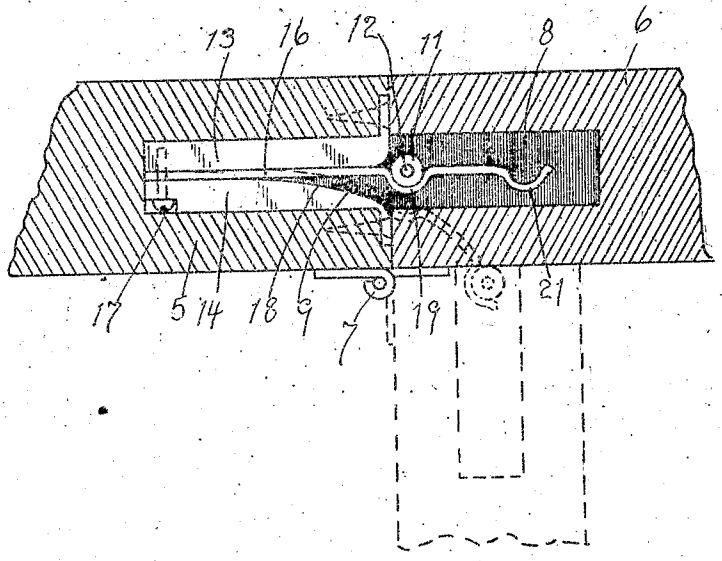
May 19, 1925. 1,538,726

E. A. MORAN

DOOR RETAINING SPRING

Filed March 7, 1924



INVENTOR.

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ATTORNEYS.

Patented May 19, 1925. 1,538,726

UNITED STATES PATENT OFFICE.

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DOOR-RETAINING SPRING.

Application filed March 7, 1924. Serial No. 697,661.

To all whom it may concern:

Be it known that I, EDWARD A. MORAN, a citizen of the United States, residing at Everett, in the county of Snohomish and State of Washington, have invented new and useful Improvements in Door-Retaining Springs, of which the following is a specification.

This invention relates to improvements in door retaining springs and has particular reference to means for maintaining a door in open or closed position.

The principal object of this invention is to produce a device which may be applied to the ordinary door and one which is extremely simple in construction.

Another object is to produce a device of this character which will effectively hold the door in open position and with a slight pressure upon the door, release the door, move the same to the closed position, and effectively hold it closed.

A still further object is to provide means which are concealed within the door thus obviating the necessity of unsightly springs which are now in common use.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

The figure shows a partial cross-section of a door and casing with my improved device positioned therein.

There are many springs upon the market at the present time which function so as to close the door as soon as the door is released by the person passing therethrough. If it is desired, however, to maintain the door in an open position the same must be blocked or fastened as by hooks.

I have sought to improve a spring which will hold the door in either an open or closed position and will cause the door to close when properly released.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates a door casing and the numeral 6 a door hinged to the casing as by a hinge 7.

A recess 8 is formed within the door while a corresponding recess 9 is formed within the casing. These recesses are in axial alignment one with the other. Within the recess 8 is positioned a roller 11 adapted to rotate upon a pintle 12. It is not essential, however, that this roller rotate.

At 13 and 14 I have shown two castings adapted to substantially fill the recess 9 formed in the casing 5. Positioned between these castings is one end of a spring 16. These castings and spring are held in their proper position by a screw 17. It will be noted that the casting 14 is formed upon a curve as shown at 18.

At 19 and 21 I have formed substantially semi-circular curved portions in the spring 16.

The operation of my device is as follows:—

When the door is in a closed position as shown in the figure, the curved portion 19 of the spring 16 will contact the roller 11. The tension upon the spring being sufficient to prevent the door from swinging. When pressure is brought to bear upon the door so as to cause it to swing upon its hinge 7, the roller 11 will move out of the semi-circular portion 19, move along the spring 16 and enter the recess 21. At the same time the spring will move from its full line position to its dotted line position.

As soon as the roller 11 has entered the curved portion 21 it will be retained therein, thus preventing the door from again closing until sufficient pressure is brought to bear upon the door to release the roller from its engagement with the curved portion of the spring, after which time the tendency of the spring to straighten out will turn the door to its closed position.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. In a device of the character described a plurality of castings, a spring having one end interposed between said castings, one of said castings being curved, semi-circular portions formed in said spring at a point

beyond the outer margin of said castings said semi-circular portions being spaced one from the other, substantially as and for the purpose specified.

2. In a door retaining spring, a plurality of castings adapted to be secured together, a spring adapted to have one end interposed between said castings and secured thereto, said spring extending beyond said castings, semi-circular portions formed in said spring and in the portion extending beyond said castings and adapted to engage a roller, for the purpose specified.

3. In a device of the character described a plurality of castings adapted to be secured in a door casing, a roller adapted to be secured in a recess formed in the door, a spring secured to said castings and extending into the recess in said door, a semi-circular portion formed in said spring and adapted to engage said roller when said door is in a closed position, a second semi-circular portion formed in said spring and adapted to engage said roller when said door is in open position.

4. In a device of the character described, a plurality of castings adapted to be secured in a door casing, a spring secured between said castings, one of said castings having a flat face adapted to contact said spring when said spring is in its normal position, the other of said castings having a curved surface adapted to be contacted by said spring when said spring is moved out of its normal position, a roller adapted to be secured in a recess formed in the door, said spring extending into the recess in said door, a semi-circular portion formed in said spring and adapted to engage said roller when said door is in closed position, a second semi-circular portion formed in said spring and adapted to engage said roller when said door is in open position.

In testimony whereof I affix my signature.

EDWARD A. MORAN.