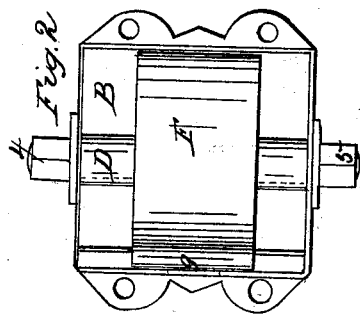
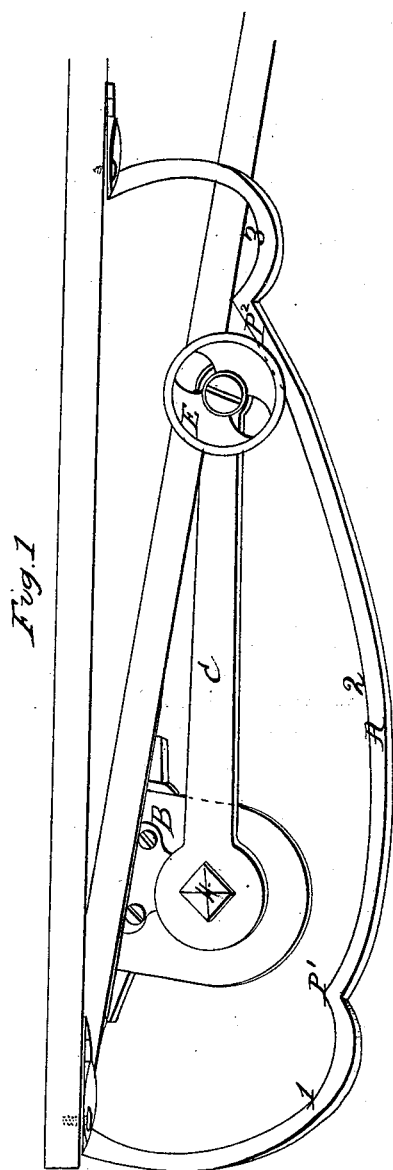


*T. Peck,*  
*Door Spring.*  
*N<sup>o</sup> 5,864.      Patented Oct. 17, 1848.*



# UNITED STATES PATENT OFFICE.

THOMAS PECK, OF SYRACUSE, NEW YORK.

## DOOR-SPRING.

Specification of Letters Patent No. 5,864, dated October 17, 1848.

*To all whom it may concern:*

Be it known that I, THOMAS PECK, of the city of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Machines or Apparatus for Closing Doors and Sometimes Named a "Door-Spring;" and I hereby do declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a top view, and Fig. 2, a section of the interior of the spring box.

The nature and principle of this invention consists in providing a cam rod or rail of triple curvature and affixing it upon the lintel, or frame above the door, and of affixing a spring on the door in combination with a traveling rod or arm, which has a grooved pulley on one end of the same, which traverses the cam rod or rail, previously referred to, and thereby graduates the power of the spring in acting upon the door, to close the door, in a more simple and perfect manner than any heretofore known.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

Description of Fig. 1—(A,) is a cam rod or rail fastened by screws to the cross piece above the door, (1,) (2,) (3,) on the triple curves (or triple curve) of said cam rail. This rail may be made of iron, or brass, either molded, or forged, as may be most suitable. (B,) is a spring-box fastened by screws on the cross piece of the top panel of the door. (C,) is a traveling arm fixed upon the upper shoulder (4) of an arbor extending through the spring box. The arm (C,) is fixed upon the arbor at such an angle of inclination with the cam rail (A) as to allow the pulley (E), which has a groove on its periphery, to travel on the cam rail in such a manner, that as the door is opening, or closing, the elastic force of the spring is so graduated in acting to close the door, that all jarring is prevented. The traveling arm (C,) is fixed in no other manner upon the door, than by setting snugly on the shoulder of the arbor, the square socket of the arm being made to fit exactly on the shoulder of the arbor.

Fig. 2, is a view of the interior of the spring-box. (D,) is an arbor extending through the center of the spring box and fastened by buttons to each end, upper and

lower, of the same. The arbor is made with two square shoulders which extend outside of the spring box and numbered (4,) (5,) (F,) is a broad barrel spring made of thin plate steel. The inside extremity or end of the spring, is attached to the arbor by a small screw, or a pin, or by having a flange on the spring to catch a groove in the arbor. Either of these modes of fastening will answer. (G,) is the outer extremity of the barrel spring and fastened to one side of the spring box in the same manner as the other end may be attached to the arbor. The flanges on the right and left hand sides of the spring box, are for the purpose of affixing the box to, or on, the door, having the arbor perpendicular. The spring can be screwed up by a wrench to any degree of tension. All that is necessary to affix this apparatus to operate on any door, is, first attach the cam rail on the cross piece above the door, on that side toward which the door moves when it is opened, then screw the spring box, at the proper place, on the door, which place is regulated by the shape of the cam rail and the length of the traveling arm. On an operating model, having the cam rail of the identical shape of (A,) Fig. 1, the length of the rail across from 1, to 3, is five inches and five-eighths, and the length of the arm (C) is four inches four-eighths, and the center of the arbor affixed with the spring box on the door, is exactly two inches from the inside of the cam rail curve 1, in a horizontal line. When the cam rail is attached as described, and also the spring box, the traveling arm is fastened on the shoulder of the arbor in such a manner as to allow the groove of the pulley (E,) to traverse the cam rail as the door is opening or closing.

This apparatus will allow any door to which it may be attached, to open its full width, and when the traveling arm will have traversed, by the opening of the door, along the rail until the pulley passes the point P', the tension of the spring is so far removed from acting to close the door, that the projecting point P', acts as a hold back to keep the door open, answering, thus, an important purpose in public houses.

The superiority claimed for this spring or apparatus for closing doors is the peculiar and simple combination of the traveling arm (C,) with the cam rail (A), by the which, the elastic force of the spring (F,) is so graduated or regulated in its application in

closing the door, that it is exerted at the exact points to prevent jarring of the door by closing, for the door in the act of closing travels slow as the pulley is traversing the large curve (2) and then somewhat faster after the pulley has passed the point or projection of the curve at P<sup>2</sup>. It is very simple. Any person, almost, can put it into operation. All the parts but the spring may be made of cast iron.

What I claim as a new and useful improvement, is—

The peculiar formed cam rod or rail, A, in combination with the traveling arm (C) and the pulley (E,) for the purpose substantially as described.

THOMAS PECK.

Witnesses:

R. WOOLWORTH,  
J. WAY.