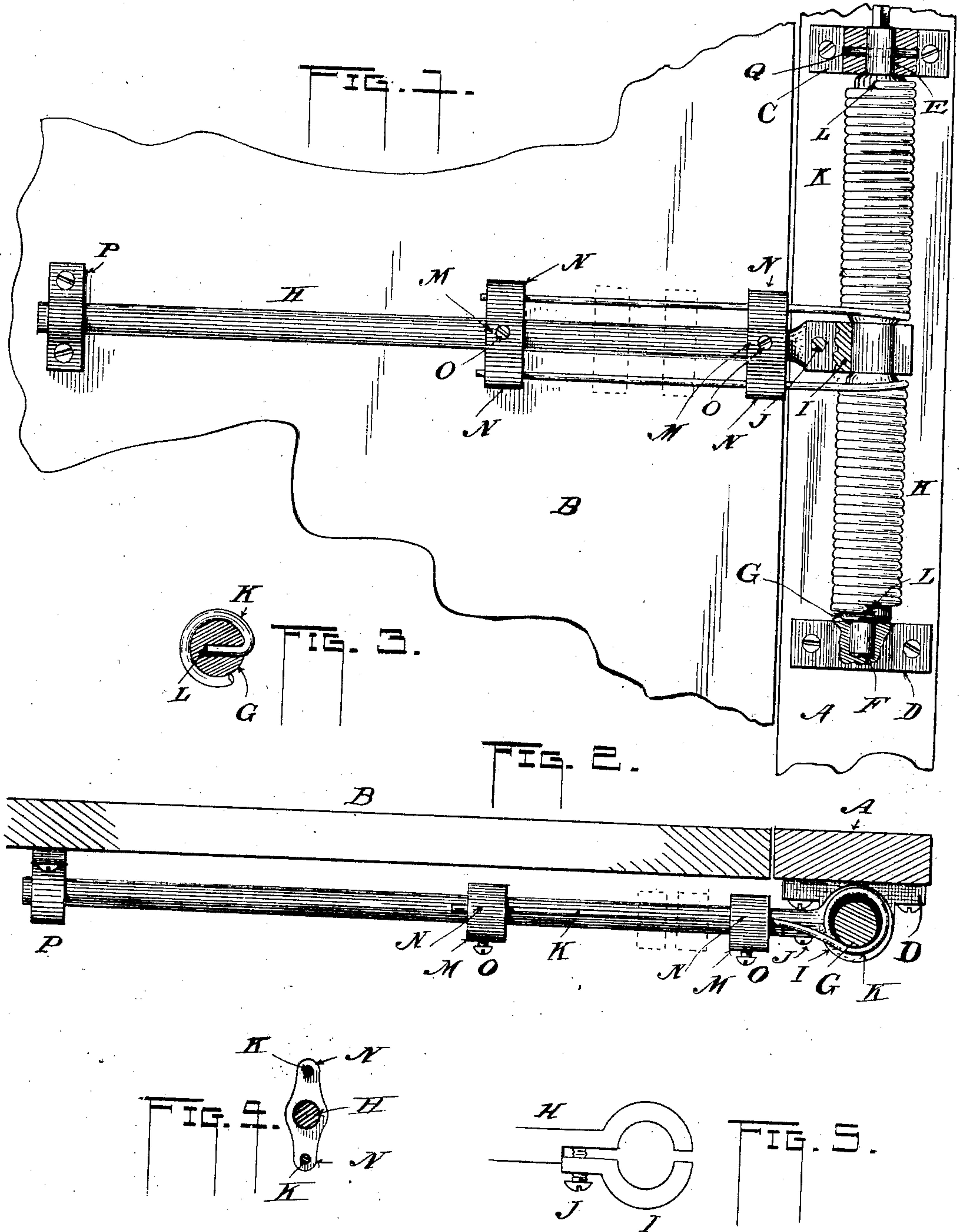


No. 826,730.

PATENTED JULY 24, 1906.

J. C. MAY.  
DOOR SPRING.

APPLICATION FILED OCT. 26, 1904.



Witnesses -  
E. J. H. H. H.  
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Att'y.



# UNITED STATES PATENT OFFICE.

JOHN C. MAY, OF PEORIA, ILLINOIS.

## DOOR-SPRING.

No. 826,730.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed October 26, 1904. Serial No. 230,114.

*To all whom it may concern:*

Be it known that I, JOHN C. MAY, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Door-Springs; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it ap-  
10 pertains to make and use the same.

This invention pertains to improvements in springs for use in opening doors.

The object of the invention is to provide a spring that will be equally adapted for use in  
15 opening both light and heavy weight doors.

A further object of the present invention is to provide a spring that may be adjusted to exert greater or less pull on the door on which it is used.

20 A still further object of the invention is to improve generally on a door-spring by simplifying construction and reducing the cost of production.

A further object is to provide a convertible  
25 spring device for doors that can be readily changed to operate doors either for opening or closing purposes.

In the appended drawings, Figure 1 is a view of my spring attached to a door and  
30 door-jamb. Fig. 2 is a top view of the same, showing part thereof in cross-section. Fig. 3 is a cross-section of a member, showing means of holding the end of a spring therein. Fig. 4 is a cross-sectional view of an arm  
35 which receives the pressure of the spring, showing a cross-head thereon for holding said spring. Fig. 5 is a top view of one end of the arm shown in Fig. 4, showing manner of constructing it.

40 A indicates the door post or jamb, and B the door for attachment thereto by means of hinges, which, however, are not shown. Secured to the said door-post at a convenient distance are two brackets C D, the former  
45 having an aperture E therethrough and the latter having merely a socket F. These said brackets are located one above another, as shown, and an adjusting-rod G is carried thereby, said rod being of large diameter ex-  
50 cept at its extremities, where it is reduced in size to enter the hole in one of the brackets and the socket in the other. The upper end of the rod is rounded to enter the round ap-  
55 erture in the bracket C, and the extremity is made square to receive a wrench for tight-  
ening purposes, as will be hereinafter ex-

plained. At its middle the rod G is reduced in size and receives one end of a rod H, which lies at right angles thereto. Said rod is preferably made in two portions where it en- 60 gages the rod G, as shown in Fig. 5, being in the form of a clip, one half (indicated by I) being secured to the other half by means of a screw J. Thus constructed and attached the rod or arm H is free to swing upon the 65 rod G. By reducing the rod G at its middle the rod H is prevented from shifting along it, but at the same time is allowed to turn on said rod. Two springs K are now provided, one end of each of which is held in the rod G 70 by inserting said ends in sockets made in said rod G, as shown at L in Fig. 1. Secured to the rod H are two members M, having the extensions N, Fig. 4. These members are held on the rod by means of screws O, and 75 the extremities N are bored to receive the free ends of the springs K, as shown.

At P is an eye secured to the door, through which the rod H extends and by which the door is operated through the medium of the 80 springs.

At Q in the upper bracket C, before de- scribed, is a pin, which passes through the said bracket and the upper end of the rod G, this serving to hold the rod wherever sta- 85 tioned after the springs are tightened. The mode of accomplishing the tightening of the spring is to place a wrench upon the upper squared portion of the rod G; then after withdrawing the pin Q to turn said rod G in 90 a direction to put greater tension on the springs, afterward replacing the pin.

As illustrated in the drawings, my device is applicable for use on the doors of hose- 95 houses for the purpose of opening said doors in case of fire. In this case the springs are reversed from the position necessary for the closing movement. My device is therefore adaptable for both opening and closing doors. The rod H is made of some considerable 100 length, so that the tension of the springs is communicated to its free end through the member P to the door. Greater or less leverage may be had by adjusting the said mem- 105 ber P toward or away from the spring, as will be understood. Also by adjusting the members M M to various positions along the rod H, as indicated in broken lines, greater or less pull may be had from the spring, so that both heavy and light doors can be readily 110 operated.

If it is desired to use the device for screened



or other doors that are to be kept shut by such a device, the springs are removed from the rod G, the upper one being inverted and placed upon the lower end of the said rod, 5 the lower spring being likewise placed upon the upper end of the rod. This places the free ends in position to operate in a direction contrary to that before described.

I claim—

10 In a convertible spring device adaptable for both opening and closing doors, a vertical rod secured to the door-post and adjustable axially thereon, a horizontal rod loosely attached thereto and adapted to turn there- 15 on, a spring carried on each extremity of the vertical rod the adjacent extremities of the two springs adapted to swing the door, a

member on the door within which the horizontal rod shifts, adjustable shifting members on the horizontal rod and shiftable also 20 on said springs for the purposes described, the opposite remote ends of the springs being removably held in the said vertical rod, said springs both adapted to be inverted and also to exchange places with one another for 25 changing the direction of their pressure for adapting them to doors to be opened or doors that are to be closed by them.

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

JOHN C. MAY.

Witnesses:

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L. M. THURLOW.