

No. 801,694.

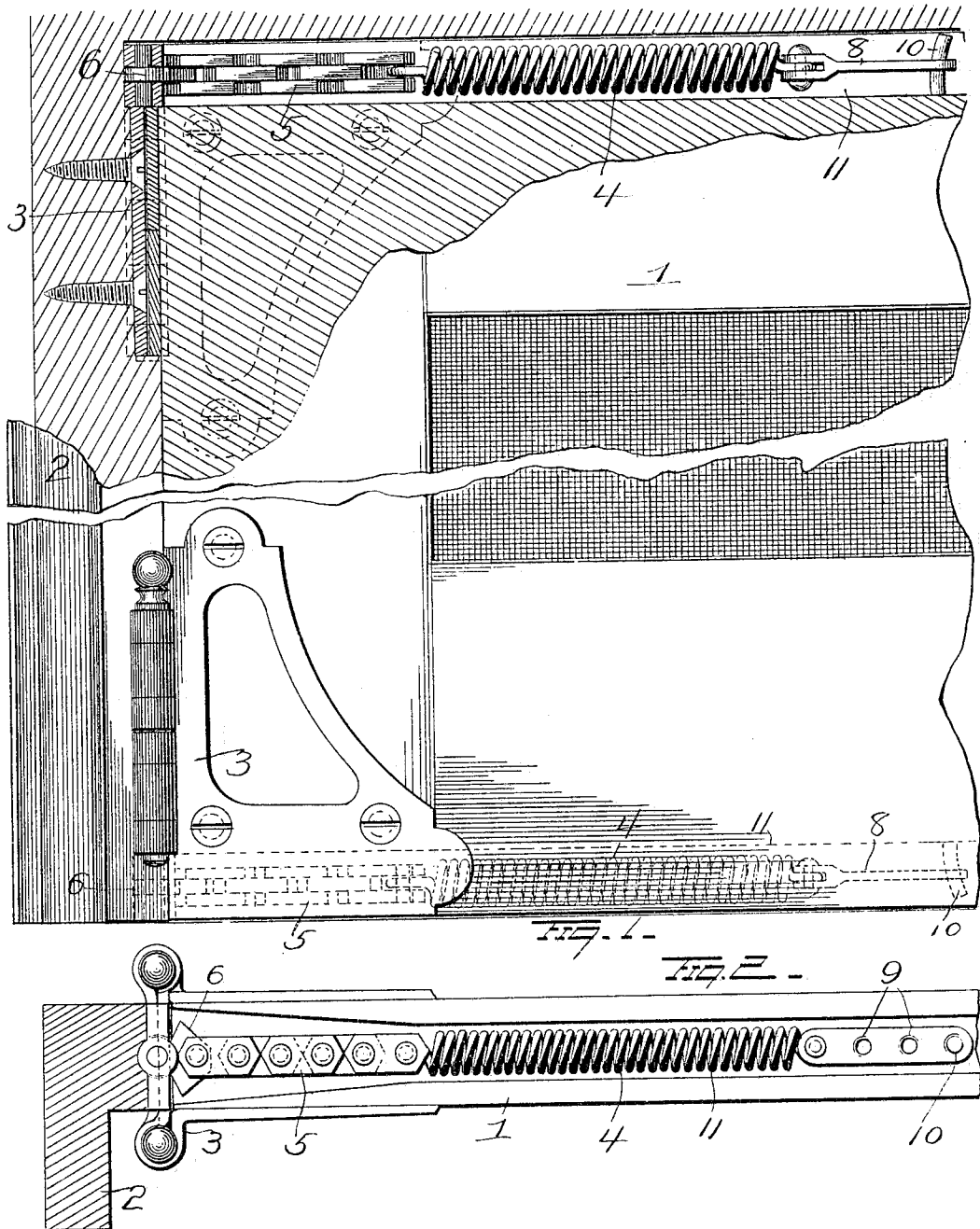
PATENTED OCT. 10, 1905.

J. L. SHEPPARD.

DOOR SPRING.

APPLICATION FILED MAY 21, 1904

2 SHEETS—SHEET 1.



WITNESSES
E. J. Nottingham
G. J. Downing

INVENTOR
J. L. Sheppard
Cy. H. A. Seymour
Attorney

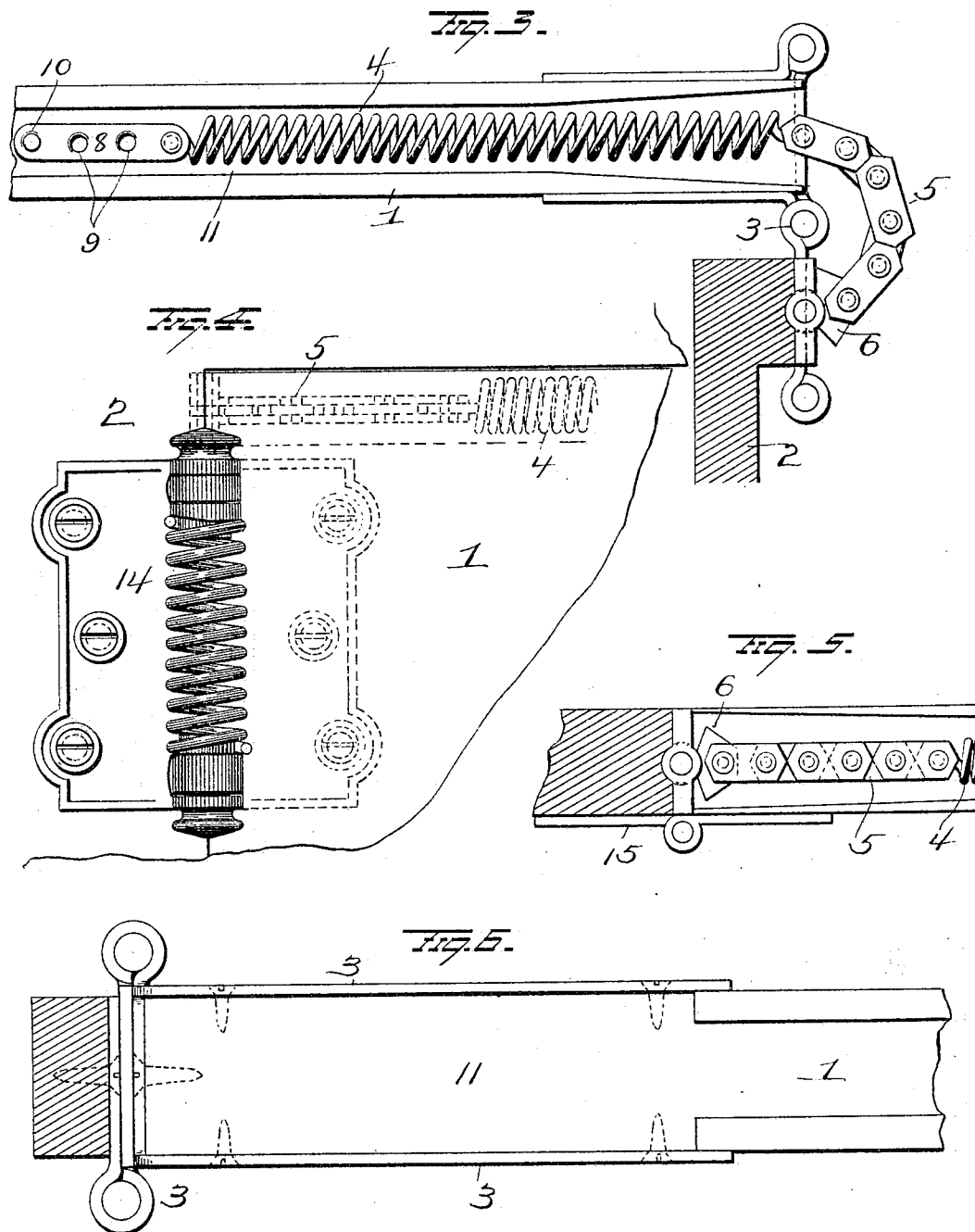
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UNITED STATES PATENT OFFICE.

JOHN L. SHEPPARD, OF CHARLESTON, SOUTH CAROLINA.

DOOR-SPRING.

No. 801,694.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed May 21, 1904. Serial No. 209,061.

To all whom it may concern:

Be it known that I, JOHN L. SHEPPARD, a resident of Charleston, in the county of Charleston and State of South Carolina, have
5 invented certain new and useful Improvements in Door-Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved door-spring, and more particularly to improved mounting therefor, the object of the invention being to provide improvements of this
15 character extremely low in cost, easily applied, and which will not only return the door to its closed position but also hold the door by direct action or pull against the jamb and prevent sagging.

20 A further object is to provide an improved door-spring which will be hid from view and which will dispense with large clumsy spiral-spring hinges and not mar the general appearance of the door.

25 With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described, and pointed out in the claim.

30 In the accompanying drawings, Figure 1 is a view in elevation, partly broken away, illustrating my improvements. Fig. 2 is a top plan view. Fig. 3 is a view in horizontal section through the upper end of the door and
35 frame, showing the spring and chain in elevation and the door open; and Figs. 4, 5, and 6 are views of modifications.

1 represents a swinging door, and 2 a jamb, to which the door is connected by three wing
40 or leaf hinges 3 to enable the door to swing freely in both directions.

To close the door, normally hold it in closed position, and maintain it in close contact with the jamb, preventing sagging, coiled springs
45 4 are located in recesses in the upper and lower edges of the door, and while in most instances only one spring is necessary two can be effectually employed and in some cases may be preferred, and I will now describe in
50 detail the construction and mounting of said springs.

The springs 4 shown are of the general coiled closed type, connected at one end by a flexible chain 5 with a bracket 6, secured in
55 the jamb 2, and pivotally connected at its other end with a bar 8, having a series of

openings 9 to receive in any of which a pin or post 10 in the door-recess 11, and by adjusting said bar to receive the post or pin 10 in
60 other of the openings 9 the tension of the spring can be adjusted at will. The bracket 6 may form a part of the hinge or be separate therefrom.

The chain 5 comprises a series of flat metal links pivotally secured together and having
65 inclined ends adapted to engage each other, compelling the spring to bend in the arc of a circle, be always disposed centrally in the door-recess out of contact with the walls of
70 said recess, and prevent wear, at the same time always insuring a direct pull of the chain.

It is to be understood that the above description of one spring applies alike to both
75 the springs at the upper and lower edges of the door, and, as above mentioned, one of these springs (the lower) can be dispensed with, if preferred.

A vast number of different ways of mounting the spring or springs in the door might
80 be employed, and it is not necessary to herein point out the many modifications which might be resorted to without departing from my invention.

Instead of employing ordinary three-wing or leaf hinges I might employ the well-known
85 double-spring hinges 14, as shown in Fig. 4, and I might employ other forms of hinge and might use my improved spring closer in connection with ordinary butt-hinges 15, as
90 shown in Fig. 5, in which the door swings in one direction only.

It will be observed that my improved springs are entirely hid from view, are totally independent from the hinges, can be applied
95 on any door now in use, and might also be used on gates, shutters, and like devices, and in any and all uses will not only serve to close the movable member, but will maintain a perfect fitting and hanging door and prevent
100 sagging when open or closed.

A great many forms of hinge might be employed, one form being shown in Fig. 6, in which the side wings of the hinge extend
105 up and constitute the recess for the spring.

The spring might be differently constructed—and I would have it understood that when
110 I say "spring" I wish it understood that this term is broad enough to include any elastic body, such as rubber and the like—and a great many changes other than mentioned might be made in the general form and arrangement of the parts described without

departing from my invention. Hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall
5 within the spirit and scope of my invention.

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

10 The combination with a jamb, a door, hinges connecting them, and a recess in the door, of a spring in said door-recess connected with the door at one end, a chain connected to the other end of said spring and com-

prising a series of pivoted links having beveled abutting ends to compel the chain to 15 bend in the arc of a circle corresponding with movement of the hinge out of contact with the door-recess and means connecting one end of the chain to the jamb.

In testimony whereof I have signed this. 20 specification in the presence of two subscribing witnesses.

JOHN L. SHEPPARD.

Witnesses:

WM. G. SHEPPARD,
P. A. MURRAY.