

(No Model.)

C. H. PAXSON.
DOOR CATCH.

No. 553,868.

Patented Feb. 4, 1896.

Fig. 1

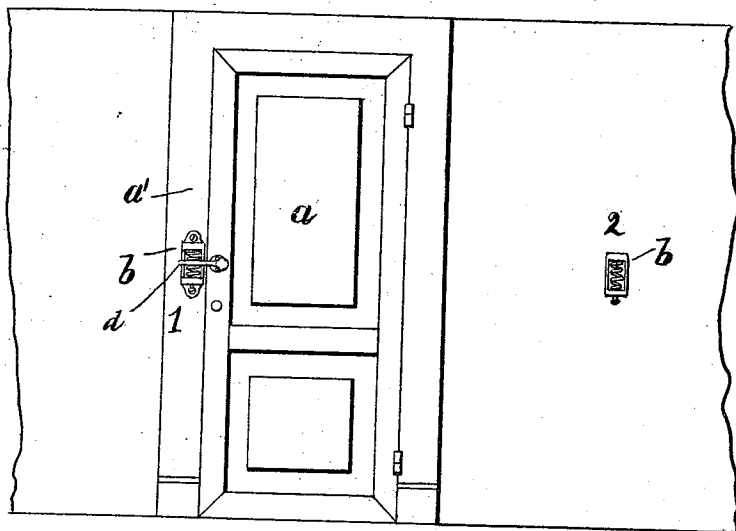


Fig. 5

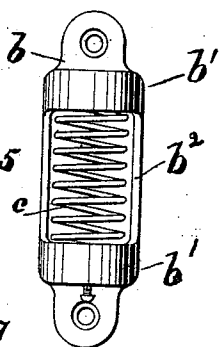


Fig. 6

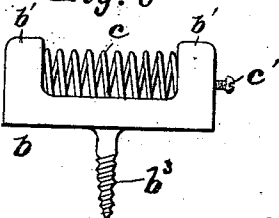


Fig. 3

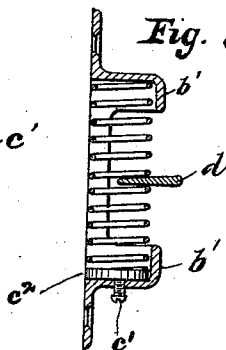


Fig. 7

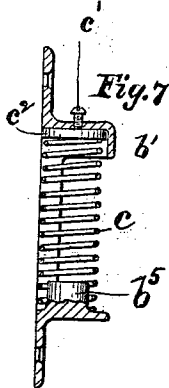


Fig. 4

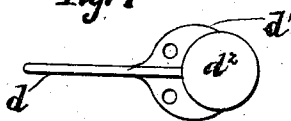
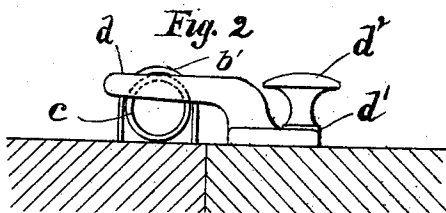


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES H. PAXSON, OF SPRINGFIELD, OHIO, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO WILLIAM T. PARKER AND RALPH P. THOMPSON, OF SAME PLACE.

DOOR-CATCH.

SPECIFICATION forming part of Letters Patent No. 553,868, dated February 4, 1896.

Application filed December 9, 1893. Serial No. 493,279. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. PAXSON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Door-Catches, of which the following is a specification.

My invention relates to improvements in door-catches; and the object of my invention is to provide a simple device adapted to be used with doors, windows, window-shutters and various other similar devices for holding them open or closed, the device being of such a construction as will enable it to readily adjust itself to the door or other object with which it is used and compensate for changes therein by shrinkage or the settling of one part with reference to the other.

My invention consists in the various constructions and combinations of parts herein-after described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation showing a door to which my invention has been applied. Fig. 2 is a sectional elevation of the device on an enlarged scale, showing the parts in position of use. Fig. 3 is a sectional elevation of the same, taken on a different plane. Figs. 4, 5 and 6 are details of portions of the same, Fig. 6 showing a slight modification. Fig. 7 is a sectional elevation showing a modified form.

Like parts are represented by similar letters and figures of reference throughout the several views.

In the various door-catches which have heretofore been devised trouble has been experienced in their operation owing to the fact that the different parts on which the catch is to be applied change position owing to uneven settling of the building or shrinkage of the parts or for other reasons. I overcome this by employing as one element of the door-catch a simple coiled spring arranged in a novel manner and adapted to operate in connection with an extending finger which closes against said spring at right angles to the axis thereof.

In the accompanying drawings, *a* represents an ordinary door hinged to one side of a suitable frame *a'* in the usual manner.

Secured to the door frame or jamb is a casing or housing *b*, provided at each end with a curved projecting portion *b'* and between said projecting portions with a recess *b''*. This housing is preferably made hollow and is adapted to receive a coiled spring *c*, which may be pressed into the same from the rear, so that the ends thereof will fit in the curved projections *b'* *b'* at one end of said housing, and provided with an adjusting-screw *c'*, carrying at its inner end a plate *c''*, which rests against one end of said spring, the other end of said spring being adapted to rest directly against one end of the housing *b*. This constitutes one element of the catch. The other consists essentially of a projecting finger *d*, preferably formed integral with a plate *d'*, from which it extends upwardly and outwardly, as shown in Fig. 2. The finger *d* is made slightly beveled in cross-section, and is made of a width slightly greater than the distance between the coils of the spring, and is secured to the door in such a position that when the door is closed it lies across the axis of said spring and between the coils thereof. The plate *d'* may be further provided with a knob *d''*, which may be formed integral therewith or screwed thereon, as desired. Any well-known means of securing the respective parts to the door and jamb may be employed, ordinary screws being generally employed.

In Fig. 6 I have shown the housing *b* provided with a screw-threaded stud *b''*, adapted to screw directly into the jamb or other part to which the device is to be applied.

A device as thus constructed, it will be seen, is extremely simple and is especially adapted for holding screen-doors, closet-doors, window-shutters, and for similar purposes where a simple catch is desired. By employing two of the spring-housings and springs secured on opposite sides of the door, as shown at 1 and 2 in Fig. 1, the door may be held either open or closed, the finger being adapted to engage with the catch 1 when the door is shut and with catch 2 when it is open, the back of the finger being adapted to enter the coils of the spring of catch 2 and the front of the finger in catch 1.

It will be seen that any shrinking of the

door or uneven settling of the parts will not influence the operation of this catch, as the projecting portion will engage with the coils of the spring equally well at any point between the respective curved portions b' of the housing.

In Fig. 7, instead of having the curved projections b' at each end formed in the nature of sockets, I provide at the lower end a projecting stud b^b , over which one end of the spring is adapted to fit, the other being placed in the curved socket projection b' , as before, with the adjusting-screw c' and plate c^2 arranged in said housing. This construction is considered preferable for the device as used in an exposed position, as it permits any water or moisture which would collect about the spring to readily pass off from the housing, which would not be the case if the curved socket portions b' were employed at the top and bottom.

Having thus described my invention, I claim—

1. The combination with a swinging door and its frame or jamb, of a projecting finger secured to one of said parts and a supporting-frame secured to the other part, a yielding friction holding device in said frame consisting essentially of a series of yielding coils separated by a series of spaces, said finger being formed to enter said spaces and be retained by said yielding coils, substantially as specified.

2. The combination with a housing or frame, a series of yielding coils separated by intervening spaces secured in said housing, an

adjusting device at one end of said housing for adjusting the tension of said coils, a swinging door adjacent to said housing and a projecting finger thereon adapted to engage in the spaces between said yielding coils and be retained thereby, substantially as specified.

3. A door-catch consisting essentially of two co-operating parts, one of said parts consisting of a housing having a coil-spring arranged therein so as to project laterally therefrom, a projection at one end of said housing to engage said spring and an adjusting device at the opposite end of said housing to adjust the tension of said coils, the other part consisting essentially of a finger having a beveled edge to enter the spaces between said coils, substantially as specified.

4. The combination with a casing or housing b , having at each end a curved and extending portion b' , and a recess portion b^2 , between the extended portions, a coil-spring in said housing adapted to be exposed through said recess, means for adjusting the tension of said spring, and a co-operating part consisting of a curved extended projection having a beveled edge adapted to enter the spaces between the coils of said spring, substantially as specified.

In testimony whereof I have hereunto set my hand this 1st day of December, A. D. 1893.

CHAS. H. PAXSON.

Witnesses:

OLIVER H. MILLER,
CHAS. I. WELCH.