

J. H. NELSON.
CATCH FOR SWING CLOSURES.
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900,415.

Patented Oct. 6, 1908.

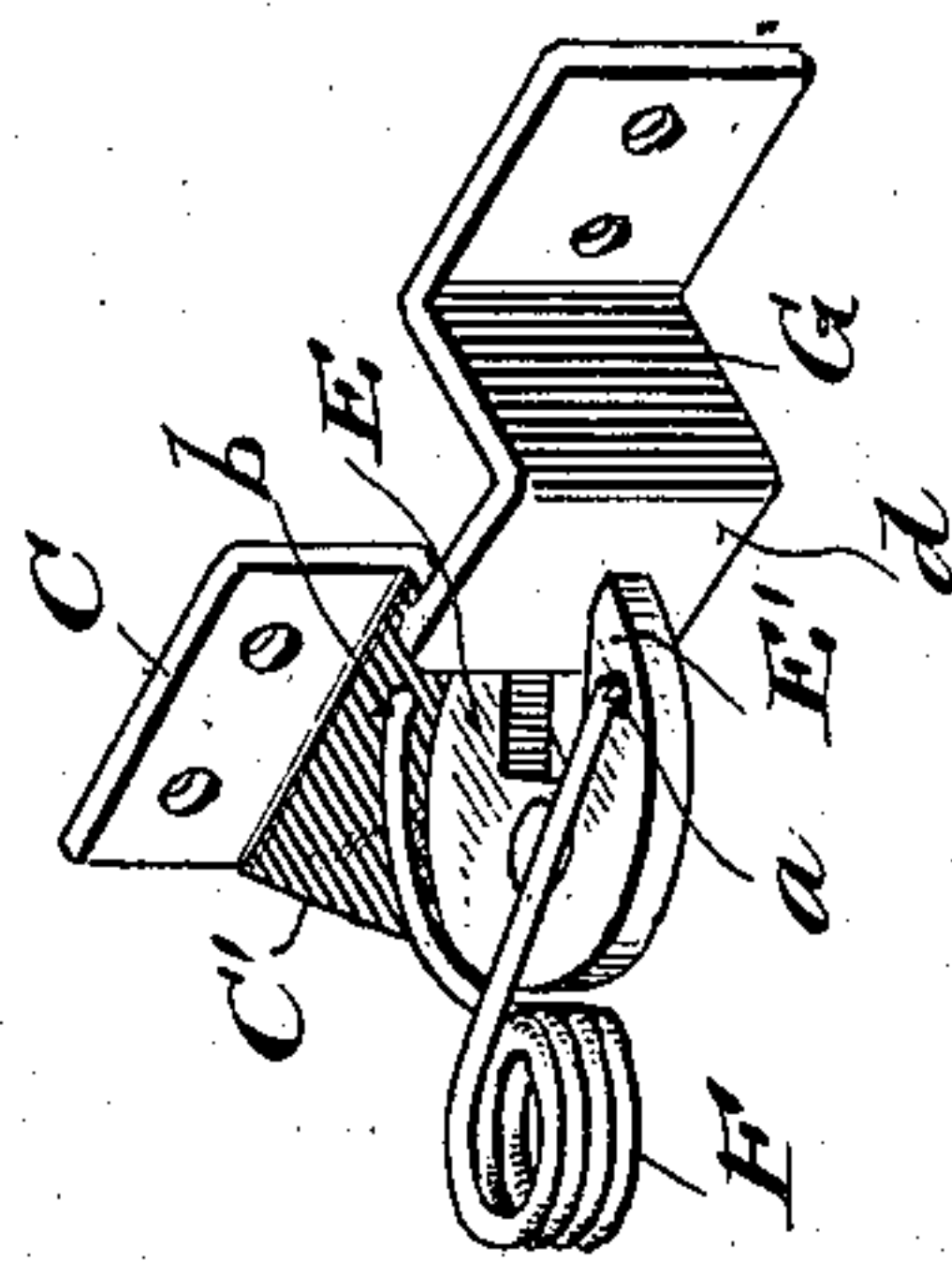
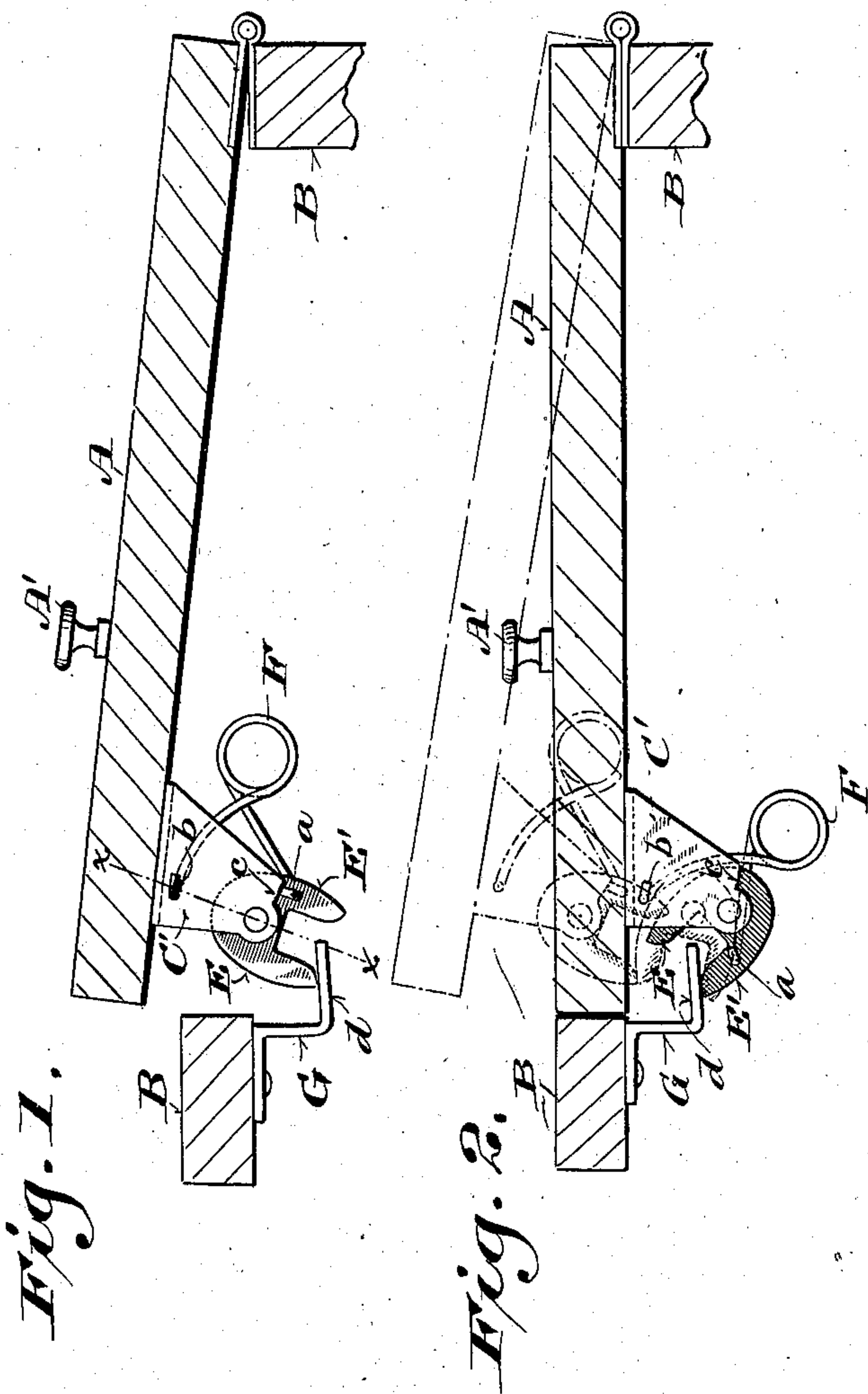


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN H. NELSON, OF MADISON, WISCONSIN.

CATCH FOR SWING-CLOSURES.

No. 900,415.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. NELSON, a citizen of the United States, and resident of Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Catches for Swing-Closures; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 The object of my invention is to provide a simple, economical, durable and positive catch for doors or the like, the catch being so arranged as to dispense with a hand releasing grip, thereby obviating any cutting of the
15 hinged member to which it is attached in order that a connection from the outside may be had; said invention therefore consists in various peculiarities of construction and combination of parts as hereinafter fully set forth
20 with reference to the accompanying drawings, and subsequently claimed.

In the drawings: Figure 1 represents a cross-section of a door and frame illustrating a catch embodying the features of my invention applied thereto, the door being ajar, with the catch in its unlocked position resting upon a gripping-plate; preparatory to being actuated thereby (if the door is pushed in) to catch said door and draw it tightly
25 against said door-frame; Fig. 2, a similar view showing the door closed; and the position assumed by the parts of the catch with relation to the door in this position, the other position of said catch being shown in dotted
30 lines as the door is swung open, and Fig. 3, an inverted perspective view of the catch in its locked position, detached from the door.

Referring by letter to the drawings, A indicates a door having a knob A', the door being hinged to a frame or casing B of any suitable structure. Fast upon the inner side of the door adjacent to the front edge of same is the flange C of a bracket C', and in pivotal connection with this bracket is a tumbler recessed to provide tappet-fingers E, E', one of which fingers has an aperture therein engaged by the end *a* of a lower branch of a spiral-spring F. The end *b* of an upper branch of the spring is engaged with an aperture in said bracket, there being a crossing of
40 said spring branches. The bracket C' is

shown provided with a stop shoulder *c* in the path of the end *a* of the lower branch of the spring F to limit backward rock of the tumbler when the door A is opened, and the upper branch of the spring is in the path of said
55 tumbler on its forward rock.

Secured to the door-frame is a gripping-plate G having a tongue *d* projecting into the path of the tumbler-fingers so that in opening or closing of the door said fingers will be
60 alternately actuated thereby.

Assuming the door to be in the position shown in Fig. 2, a further closing movement will cause the finger E, in contact with the tongue *d* of the gripping-plate G to rock the
65 tumbler on its pivot and cause the same to straddle said tongue. This movement causes a swing of the spring on the pivot-end *b* of its upper branch, and due to the rock of
70 said tumbler there is a contraction of the previously expanded spring, the end *a* of same passing across and forward of a line *x—x* crossing the tumbler axis in Fig. 1. The contraction of the spring also causes the
75 tumbler finger E' to exert a leverage on the tongue *d* of the gripping-plate G, whereby the door is automatically drawn tight in its seat by the time said tumbler comes in contact with the upper branch of the spring in
80 its path.

When the door is opened, a reverse rock of the tumbler takes place and the spring is expanded as it swings on the pivot-end *b* of its upper branch, contraction of said spring, after the end *a* of its lower branch passes the line *x—x* aforesaid, being limited by the stop-shoulder *c* of the bracket C' positioned as
85 above specified.

I claim:

90 The combination of a bracket attachable to a swinging closure such as a door, a tumbler in pivotal connection with the bracket and recessed to provide tappet-fingers, a spiral-spring having crossed end
95 branches in pivotal connection with said bracket and tumbler, one of these branches being in the path of the tumbler, a gripping-plate attachable to the closure frame for engagement with the tumbler-recess on swing
100 of the closure to its seat, said spring having swing in connection with the aforesaid

bracket coincident with expansion and contraction incidental to pivotal play of said tumbler, and means for limiting contraction of the aforesaid spring when the aforesaid
5 tumbler clears the gripping-plate.

In testimony that I claim the foregoing I have hereunto set my hand at Madison in

the county of Dane and State of Wisconsin in the presence of two witnesses.

J. H. NELSON.

Witnesses:

MARY H. MAIN,
W. E. MAIN.