

No. 742,782.

PATENTED OCT. 27, 1903.

J. C. FOSTER.

LATCH.

APPLICATION FILED FEB. 6, 1903.

NO MODEL.

FIG. 1.

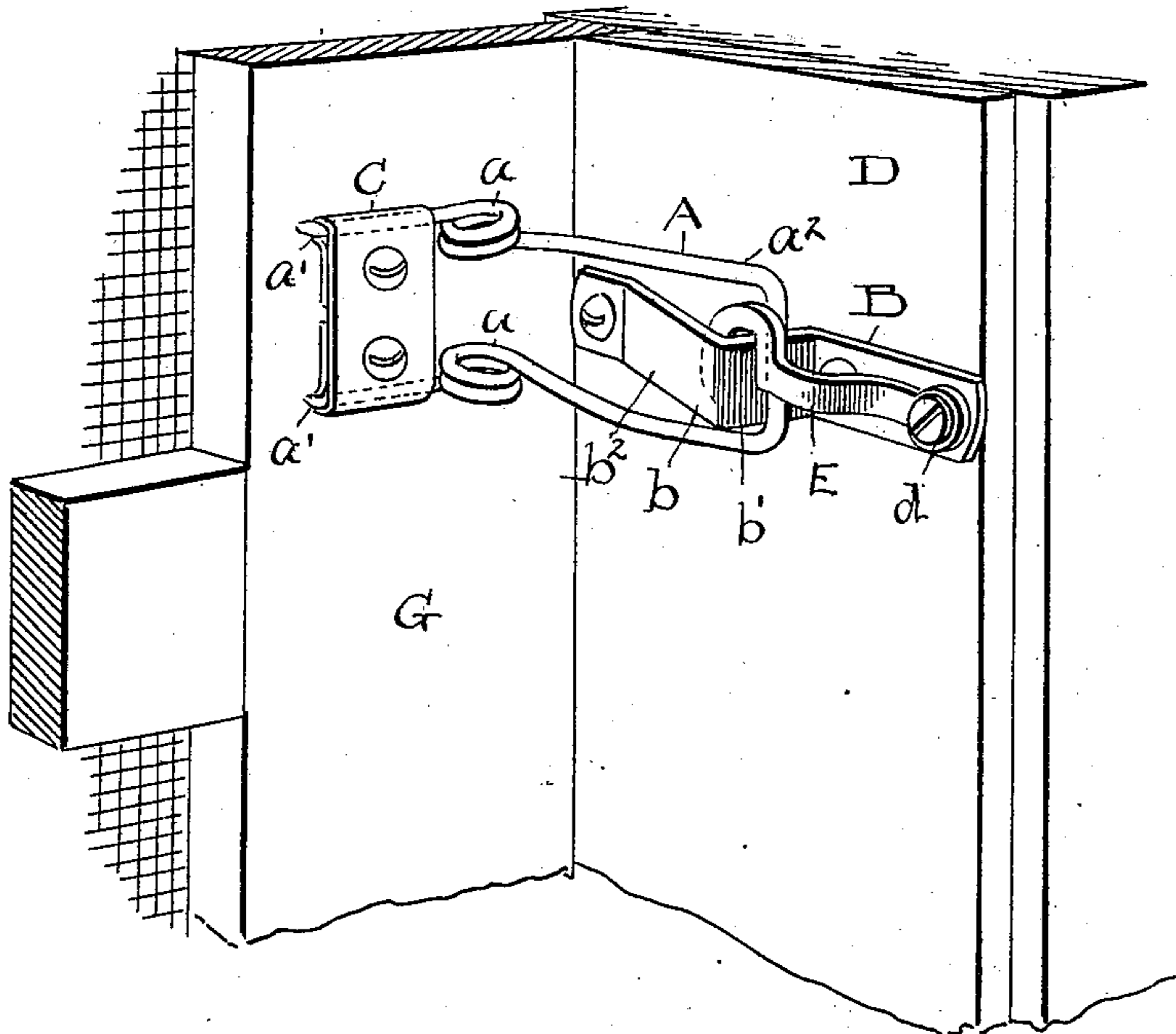
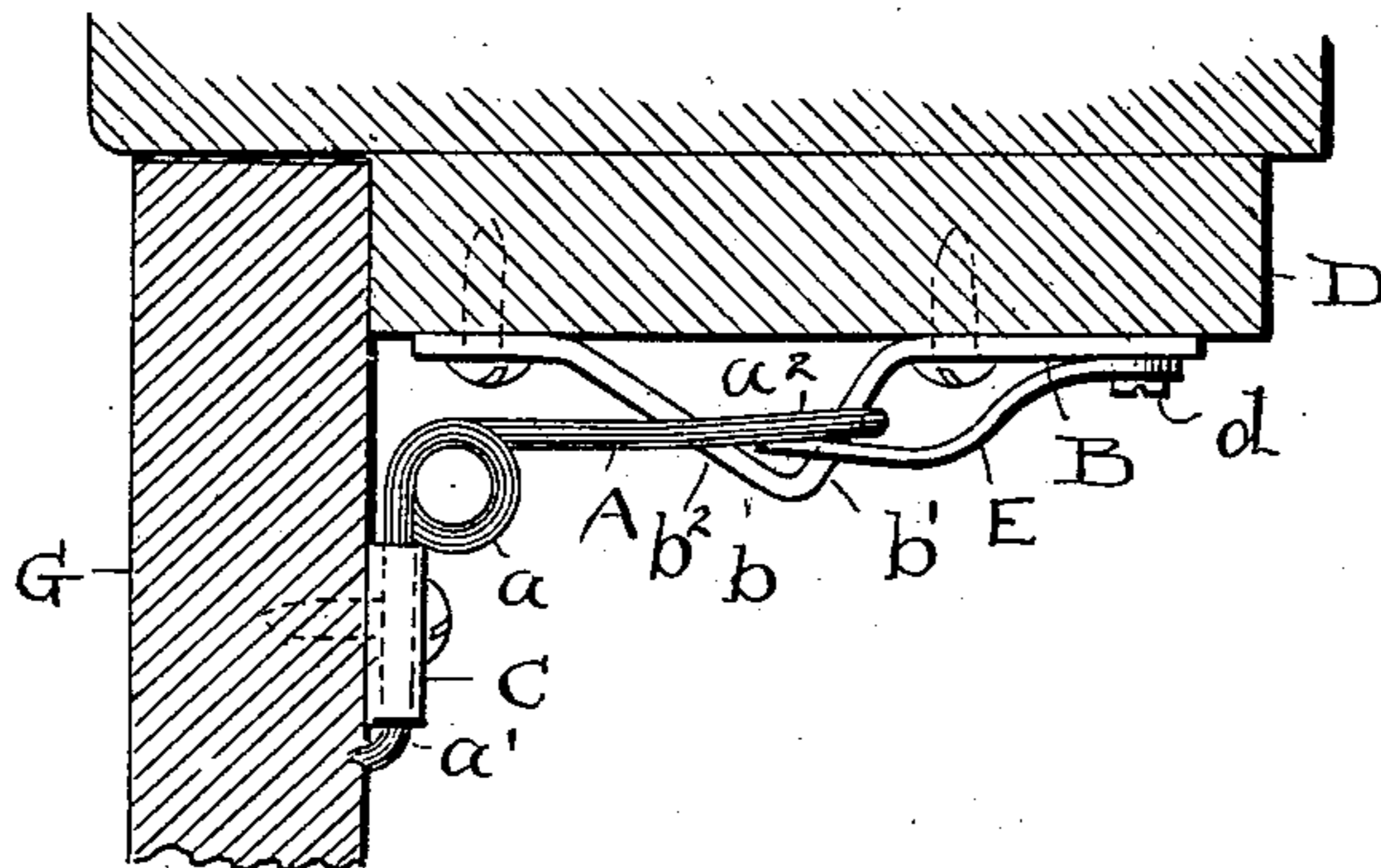


FIG. 2.



ATTEST.

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UNITED STATES PATENT OFFICE.

JOHN C. FOSTER, OF CLEVELAND, OHIO, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO L. A. BARTLETT, OF CLEVELAND, OHIO.

LATCH.

SPECIFICATION forming part of Letters Patent No. 742,782, dated October 27, 1903.

Application filed February 6, 1903. Serial No. 142,199. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. FOSTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Screen-Door Latches; and I do 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 appertains to make and use the same.

My invention relates to screen-door latches; and the object of the invention is to provide a latch for screen-doors which will automatically and uniformly spring into engagement when the door is closed and which is so constructed as to produce an inward pull or draft upon the door and draw it in firmly against the jamb or casing and hold it closed until the door is opened.

It frequently occurs that screen-doors become more or less warped or sprung at top or bottom and that they will strike the casing below or above, as the case may be, while they stand out more or less from the door-casing at the other end. This usually affords an opening for flies to enter and becomes more and more objectionable as the warp or spring of the door may increase and the opening be enlarged. It is also desirable to have means for holding the door closed which do not require handling when the door is to be opened and which will surrender to a push or pull upon the door without other effort to disengage the same from its fastening. I have therefore constructed this device with the double purpose of drawing and holding the door up against the casing at its otherwise more or less open top or bottom and for its automatic opening when the door is opened, and in addition to this I have provided for the locking of the door from the inside when this becomes desirable, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective front elevation of my improved catch as it appears part upon the door and part upon the door-jamb or casing and preferably locked in position. Fig. 2 is a plan view of the engaging parts shown in Fig. 1.

As thus shown, the door is equipped with a spring-catch A, which is preferably made

of spring-wire of a suitable weight and quality and is formed with two spring-coils *a* and stems or ends *a'*, extending beyond the coils, and which are secured to the door by a suitable clip C, which bears on said ends and firmly fastens them upon the door. This gives the catch A a tendency to spring or press inward; but its position and relation on the door are such as to clear the door-casing when the door is opened and closed.

B is a plate or its equivalent, which is shown here as fixed upon the jamb or casing D for the door and is provided with an outwardly-extending portion *b* of nearly V shape in cross-section and having at one side of said projection an approximately right-angled shoulder portion *b'*, adapted to be engaged by the catch A, and on the other side an inclined portion *b²*, against the surface of which the catch A strikes when the door is being closed and on which it rides and drops into engagement over shoulder *b'*. The natural action of catch A, with its springs *a*, is to press inward toward projection *b'*, and hence in the arrangement and construction of parts here shown it has a constant tendency to crowd back upon shoulder *b* and get tighter and tighter thereon, so that it operates to pull the door inward and hold it in close against the casing. Any ordinary warp or spring in the door is thus easily taken up by the stronger and definite spring action or pull of catch A over this surface *b*, while the said surface inclines enough to permit the catch to spring off and allow the door to be opened when the door is pushed from the inside or pulled from the outside. Then in order to lock the door when locking is desirable I employ a lock or locking member E, which is shown here as a hasp, pivoted at *d* on plate B and adapted to enter the projection *b* outside of catch A in the angle of said projection, as shown, thus preventing the opening of the door without disengaging the hasp or hook, and this can only be done from the inside. Otherwise and when not used for locking hasp D is thrown back out of the way. Obviously a pin with a head or other like medium may be used for this purpose. This latch or engaging mechanism may be used not only on screen-doors, but upon other doors which can advantageously employ such a construction, and it is good for

cupboard-doors, gates, and the like, and therefore is not understood to be confined exclusively to screen-doors as such, although this is its primary use and purpose.

5 The door is represented by G and the casing or jamb by D, and the fastening or engaging members A and B may be put toward the top or the bottom of the door, as it may need, or at about its middle, and it may be
10 changed up or down at will.

It has been shown that surface b' of projection b is but slightly inclined to the body of the plate, so that the spring-catch will work most advantageously both in its office
15 for drawing and holding the door tightly shut and for disengaging automatically in opening the door, while the other side b^2 of said projection has a longer and less abrupt inclination adapted to carry the catch A over
20 projection b into engaging position.

Specifically the latch A is bent at right angles between its ends and has springs a , located in the angle of the bend, and its extremities a' extending beyond said springs in
25 one direction and its loop or engaging portion a^2 extending in the opposite direction, and clip C preferably is bent at its ends around the extremities a' and in that case goes with the latch to complete the article of
30 manufacture.

What I claim is—

1. The door and the spring-catch thereon, in combination with the door-casing having

an approximately V-shaped outward projection adapted to have said catch-spring over
the same, and a fastening device entered into
said projection behind said catch and confining the catch, substantially as described. 35

2. A door and door-casing, in combination with a loop-shaped wire spring-catch on one
of said parts and a substantially V-shaped
projection on the other part, said projection
being open from top to bottom and said spring-catch constructed to engage across the top
and bottom edges of said projection, whereby
an open space is afforded within the walls of
the said projection outside said catch, substantially as shown and described. 40 45

3. A wire spring-catch of substantially loop form adapted to be secured to a door or the
like, in combination with a member adapted
to be engaged by said catch, said member
comprising an outward projection b provided
with sides b' and b^2 of different inclination,
the side b' being shaped substantially in the
form of a shoulder, whereby the said catch
rides over said shoulder and engages across
the upper and lower edges of projection b
against the rear side b' , substantially as described. 50 55 60

Witness my hand to the foregoing specification this 24th day of January, 1903.

JOHN C. FOSTER.

Witnesses:

R. B. MOSER,
R. ZBORINK.