

No. 723,550.

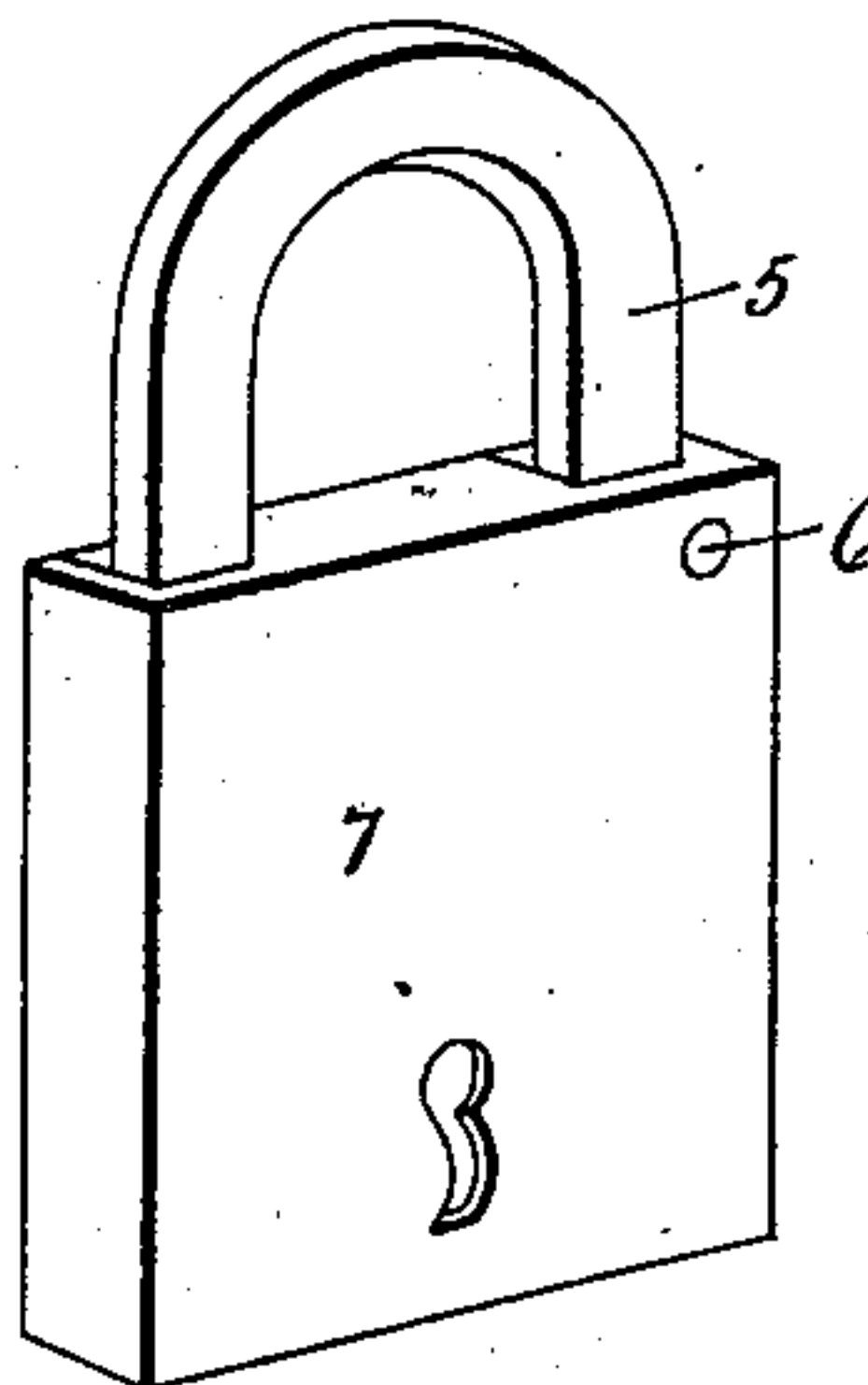
PATENTED MAR. 24, 1903.

J. ROCHE.  
PADLOCK.

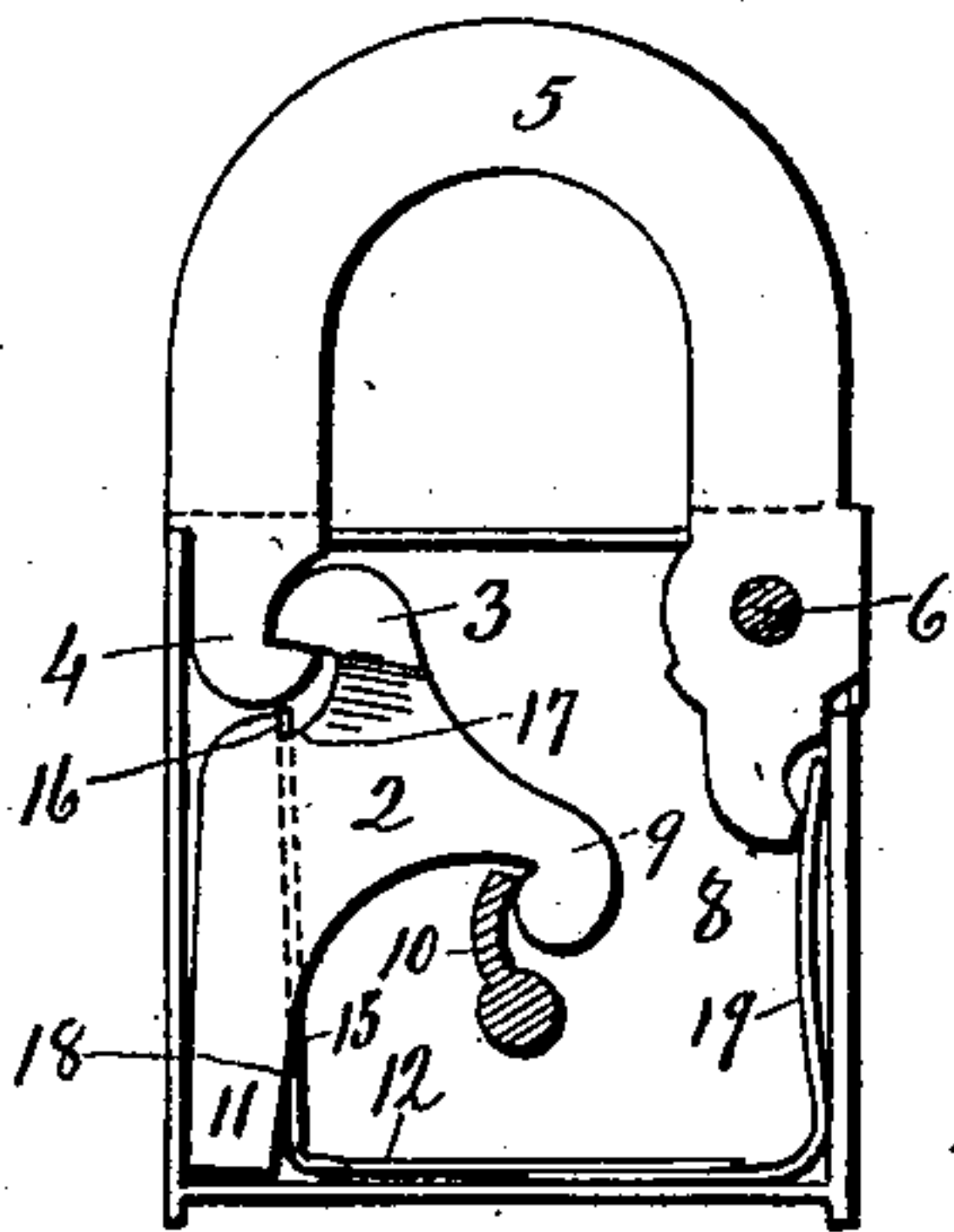
APPLICATION FILED SEPT. 15, 1902.

NO MODEL.

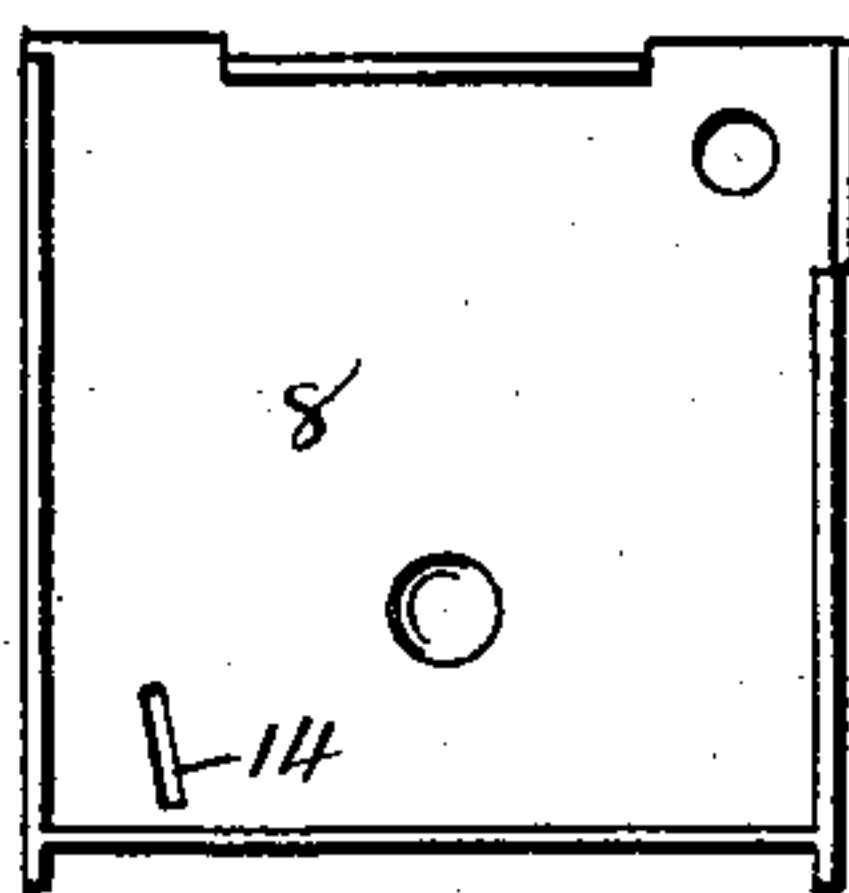
*Fig. 1*



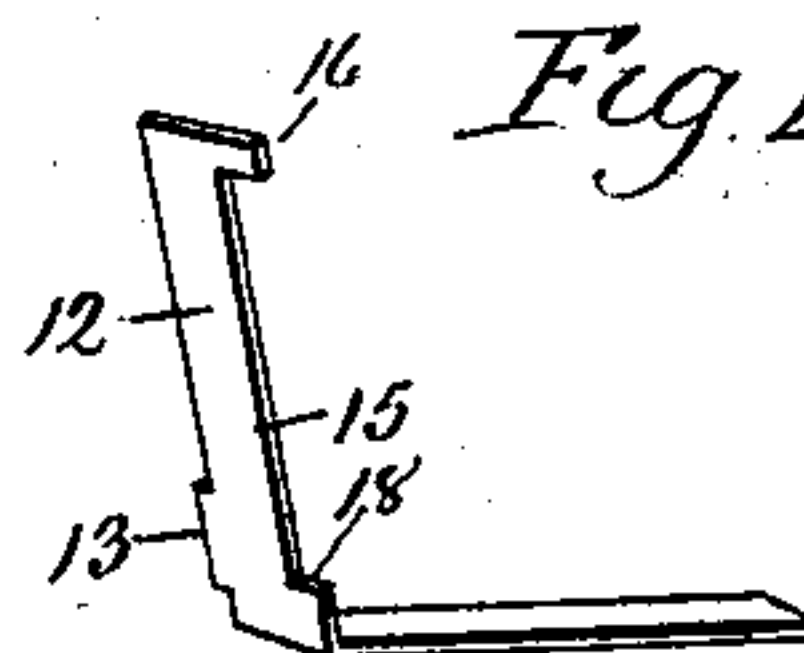
*Fig. 2*



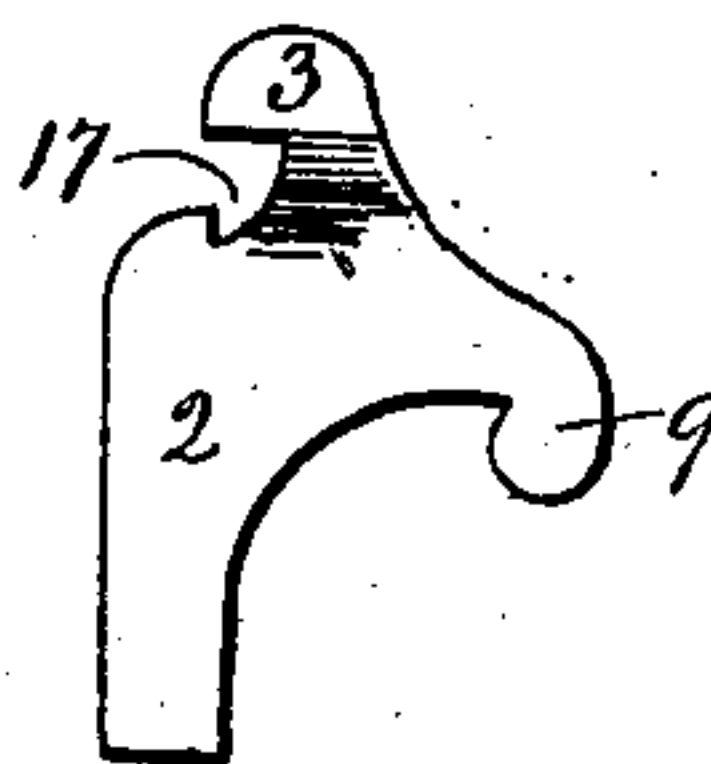
*Fig. 3*



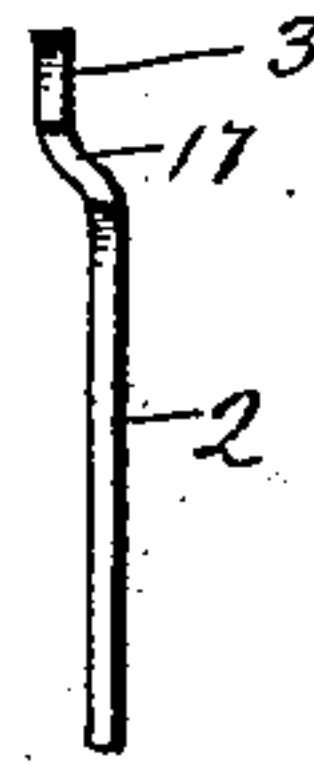
*Fig. 4*



*Fig. 5*



*Fig. 6*



Witnesses  
J. H. Humphrey  
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# UNITED STATES PATENT OFFICE.

JAMES ROCHE, OF TERRYVILLE, CONNECTICUT, ASSIGNOR TO EAGLE LOCK CO., OF TERRYVILLE, CONNECTICUT, A CORPORATION.

## PADLOCK.

SPECIFICATION forming part of Letters Patent No. 723,550, dated March 24, 1903.

Application filed September 15, 1902. Serial No. 123,471. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES ROCHE, of Terryville, in the county of Litchfield and State of Connecticut, have invented a new and useful Improvement in Padlocks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a padlock constructed in accordance with my invention; Fig. 2, a view thereof with the front member of the case removed; Fig. 3, a detached view of the rear member of the case; Fig. 4, a detached view of the tumbler-operating spring; Fig. 5, a detached plan view of the tumbler; Fig. 6, a detached edge view thereof.

My invention relates to an improvement in padlocks of the type shown and described in my prior application, Serial No. 102,353, filed April 11, 1902, the object being to produce at a very low cost for manufacture a durable and effective padlock.

With these ends in view my invention consists in a padlock having certain details of construction and combination of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention I employ a flat sheet-metal plate-like swinging tumbler 2, formed at its upper end with an inwardly-set outwardly-extending nose 3 for direct engagement by the hook 4 of the shackle 5, which turns upon a pivot 6, mounted in a telescopic sheet-metal case composed of two members 7 and 8, not requiring particular description because described in my prior application. The said tumbler 2 is formed with an inwardly-extending operating-arm 9, co-acting directly with a key 10, which when turned rocks the tumbler upon the foot 11, formed at its lower end, as upon a pivot, the said foot bearing upon the lower flange of the inside member 8 of the case, at the lower-left-hand corner thereof. The said tumbler is controlled by a flat sheet-metal tumbler-spring 12, consisting of two arms of about equal length and when in the case standing at about a right angle to each other, the up-

per arm of the spring being formed with a retaining-lug 13, entered into a narrow slot 14, formed in the inside member 8 of the case. The outer edge of the said upper arm of the spring is cut away to form a shallow recess 15, substantially corresponding in depth to the thickness of the tumbler 2, which sets into the said recess and is supported by the said arm of the spring. By cutting away the spring as described I form at the upper end of its upper arm a forwardly-projecting tumbler-stop 16, which enters a stop-notch 17, formed in the upper edge of the tumbler, at a point nearly below, but a little to the left of the nose 3 thereof, whereby the spring is engaged with the tumbler, which exerts a constant effort to maintain it in engagement with the shackle. By forming the recess 15 in the spring I also produce at the lower end of the said recess a retaining-shoulder 18, which engages with the inner edge of the foot 11 of the tumbler and prevents the inward displacement thereof.

The lock is also formed with a shackle-operating spring 19, which engages at its upper end with the heel of the shackle and is entered at its lower end under the lower arm of the spring 12, these two springs being arranged in the same way as the corresponding springs of my prior application aforesaid.

When the key 10 is turned from left to right, the tumbler 2 will turn upon its foot 11 as upon a pivot against the power of the spring 12 until the nose 3 of the tumbler has been disengaged from the hook 4 of the shackle, which will then be thrown into its open position by the shackle-operating spring 19; but soon after the tumbler has been moved sufficiently to release the shackle the tumbler-stop 16 binds in the bottom of the stop-notch 17 in the tumbler, so as to positively stop the further inward movement thereof, whereby the setting of the spring is prevented, the stopping of the tumbler in this way being due to the fact that the tumbler and spring move upon different centers. In this way the tumbler-spring is made to constitute a safety-stop for itself and for the tumbler.

Of course a plate-like tumbler and a tumbler-spring such as described may be used in



padlocks not corresponding in other respects to the padlock shown and described. Thus such a tumbler and such a spring might be used in other forms of lock-cases, and the  
 5 shackle-operating spring might be differently constructed and arranged. I would therefore have it understood that I do not limit myself to the particular construction shown and described, but hold myself at liberty to  
 10 make such departures therefrom as fairly fall 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—

15 1. In a padlock, the combination with the case thereof, of a shackle, a swinging plate-like sheet-metal tumbler coacting directly with the shackle and with the lock-key, and an independently-formed spring coacting  
 20 with the tumbler which it retains in position in the case and in engagement with the shackle.

2. In a padlock, the combination with the case thereof, of a shackle, a swinging plate-  
 25 like sheet-metal tumbler adapted to engage directly with the shackle and with the key and formed with a stop-notch, of an independently-formed tumbler-spring coacting with the tumbler to maintain the same in en-  
 30 gagement with the shackle and engaging with the tumbler to prevent the same from being swung unduly beyond its shackle-releasing position, whereby the setting of the spring is prevented.

3. In a padlock, the combination with the case thereof, of a shackle, a swinging plate-  
 35 like sheet-metal tumbler engaging directly with the shackle and adapted to be engaged directly by the key and formed with a stop-notch, of a tumbler-spring provided with a  
 40 tumbler-stop entering the stop-notch and preventing the tumbler from being swung unduly beyond its shackle-releasing position,

whereby the setting of the spring is prevented.

4. In a padlock, the combination with the case thereof, of a shackle, a swinging plate-  
 45 like sheet-metal tumbler engaging directly with the shackle and adapted to be engaged directly by the key, and a sheet-metal tum-  
 50 bler-spring a portion of the outer edge of which is cut away to form a recess for the reception of the tumbler which is supported by the spring which tends to maintain the tum-  
 55 bler in engagement with the shackle and which constitutes a safety-stop for itself.

5. In a padlock, the combination with the case thereof, of a shackle, a swinging plate-  
 60 like sheet-metal tumbler adapted to engage directly with the shackle and to be engaged directly by the key and formed at its lower end with a foot upon which it turns as upon a pivot, and a tumbler-operating spring coact-  
 65 ing with the tumbler to maintain the same in engagement with the shackle, and to hold its said foot in place.

6. In a padlock, the combination with the case thereof, of a shackle, a swinging plate-  
 70 like tumbler adapted to be engaged directly by the shackle and by the lock-key, provided with a stop-notch and formed at its lower end with a foot upon which it turns as upon a pivot, and a flat sheet-metal tumbler-oper-  
 75 ating spring, the outer edge of which is cut away for the reception of the tumbler and which spring is provided with a tumbler-stop entering the said notch, and with a retaining-  
 80 shoulder coacting with the foot of the tumbler to prevent the displacement thereof.

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

JAMES ROCHE.

Witnesses:

R. J. PLUMB,

OTIS B. HOUGH.