

No. 699,369.

Patented May 6, 1902.

J. M. COLE.

PADLOCK.

(Application filed Feb. 25, 1901.)

(No Model.)

Fig. 2.

Fig. 1.

Fig. 3.

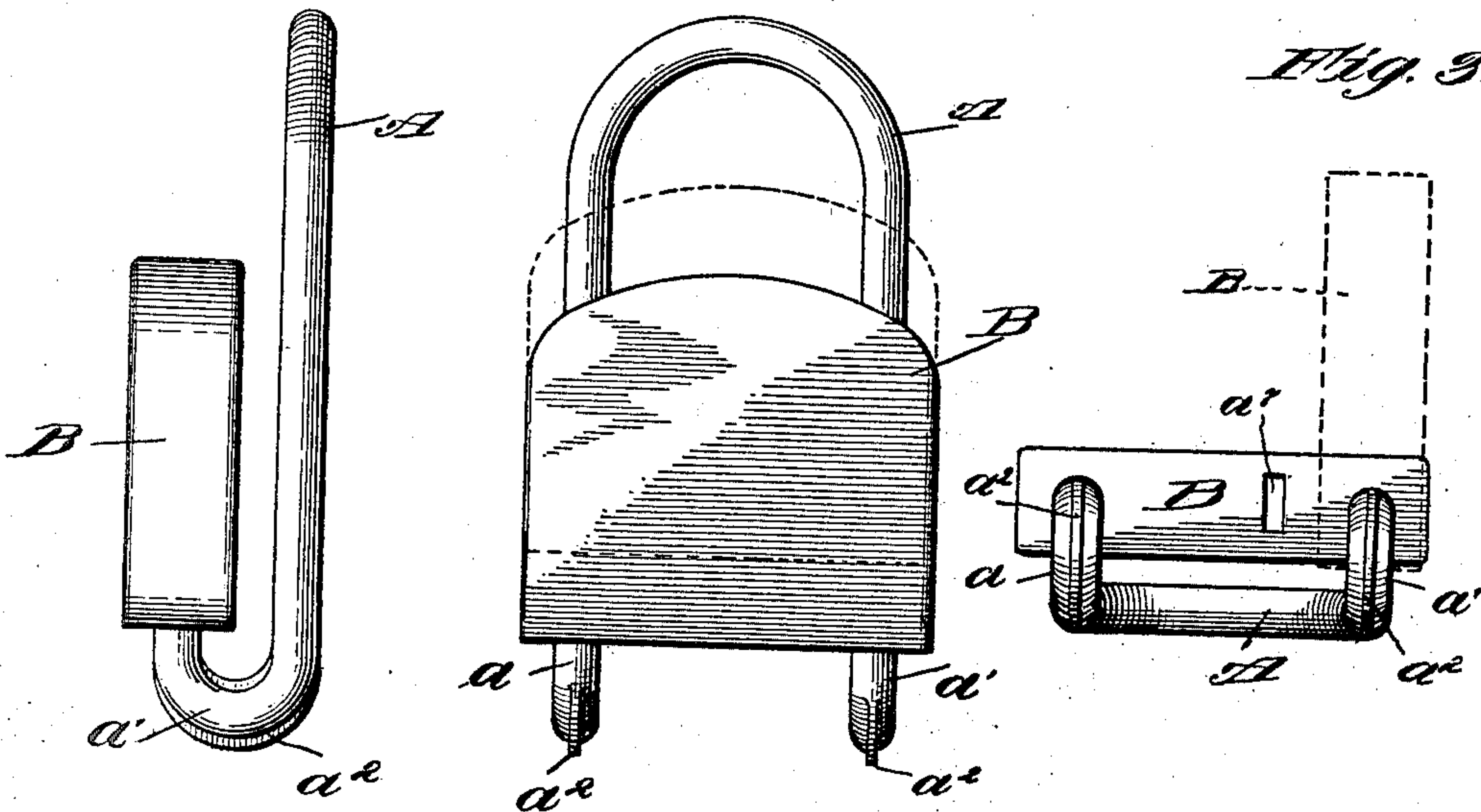
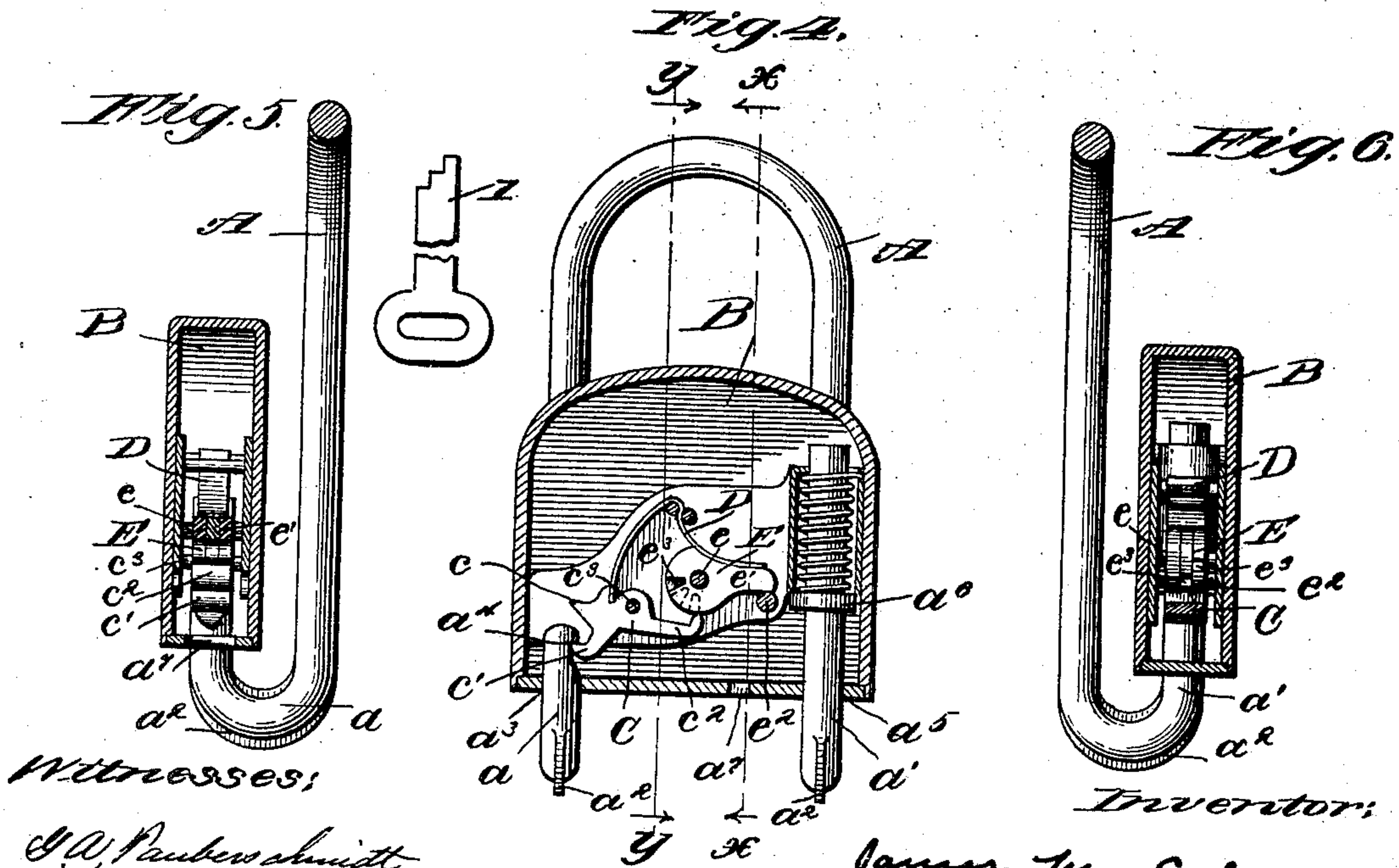


Fig. 4.

Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

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PADLOCK.

SPECIFICATION forming part of Letters Patent No. 699,369, dated May 6, 1902.

Application filed February 25, 1901. Serial No. 48,712. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. COLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Padlocks, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to padlocks, and has for its object the provision of a padlock constructed with a hasp having forwardly and upwardly extending lower end portions, whereby the casing of the padlock may occupy a position directly in front of the hasp and also whereby the keyhole and all other necessary openings may be located in the bottom of the casing, this construction and arrangement rendering the padlock practically storm-proof, and also having certain other advantages, as will hereinafter more fully appear.

To the foregoing and other useful ends my invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings, Figures 1, 2, and 3 are respectively a front elevation, a side elevation, and a bottom plan of a padlock involving the principles of my invention. Fig. 4 is a front elevation of the same with the casing broken away, so as to show the locking mechanism. Fig. 5 is a section on line $x x$ in Fig. 4. Fig. 6 is a section on line $y y$ in Fig. 4.

My invention thus embodied in practical form comprises a hasp A and a casing B. The said shackle is preferably formed with legs a and a' , which are curved or doubled back upon themselves, so as to project forwardly and upwardly through the bottom of the casing. The said casing is mounted to shift upwardly along the upturned leg or end portion a' , so as to disengage the locking mechanism from the leg or end a , (see Fig. 1,) and is also arranged to swing upon said leg a' , so as to permit access to the inside of the shackle. (See Fig. 3.) The locking mechanism inclosed by said casing is adapted to engage the upturned end of leg a , is accessible or operable from the same side of the casing at which the forwardly and upwardly extending ends of the shackle are inserted, and is

unlocked by inserting a key through the keyhole a^7 . With this construction and arrangement both the keyhole and the shackle openings will be at the bottom of the casing and the top and sides of the casing will present surfaces absolutely without openings or cracks through which rain or snow could reach the locking mechanism. In this way my improved padlock can be exposed to the weather without having its locking mechanism impaired or rendered useless and without danger of having to break the lock as a result of rust or freezing. In order to secure greater strength and rigidity, the bend in the staple-legs can be strengthened or reinforced by webs a^2 . Thus constructed the padlock can be readily suspended with its back against a vertical surface, and when suspended by its shackle the keyhole and staple openings will, as previously stated, be underneath and in such position as to make it practically impossible for rain, snow, or dirt to enter the casing.

The locking mechanism, which engages the shackle-leg a and which permits the keyhole to be located between the two shackle-openings, comprises a dog C, having relatively long and short portions c and c' and having an arm c^2 . The said dog is pivoted at c^3 and is subject to the pressure of the spring D. The tumblers E are pivoted at e , are provided with arms e' , resting on the stop e^2 , and are also provided with notches e^3 , these notches being arranged out of register with one another, so as to make it necessary in unlocking the lock for the tumblers to be given different extents of movement. The forwardly-projecting and upturned end of leg a enters the bottom of the casing through the opening a^3 and is provided with a notch a^4 . The forwardly-projecting and upturned end of leg a' enters the casing through opening a^5 and is provided with a shoulder a^6 , which limits the upward shift on the part of the casing. When locked, the portion c' of the dog engages the notch in the upturned end of the staple-leg a , as shown in Fig. 4, and the arm c^2 of the dog bears against the under sides of the tumblers E. The spring D is also arranged to hold the tumblers down upon the stop e^2 . The keyhole a^7 is located below the arms e' of said tumblers, and the key I is adapted to enter

said hole and to give the tumblers different degrees of movement, so as to bring the notches e^3 into register at a point above the upturned end portion of the arm c^2 . The actuation of the tumblers in this manner will permit the spring D to throw the dog C out of engagement with the notch in the shackle-leg a , the end of the arm c^2 then being free to swing upward and into the notches e^3 , such movement carrying the portion c' downward and out of said notch, the dog rotating in the same direction as the tumblers, and the casing can then be shifted upward out of engagement with said leg, as shown in Fig. 1, and then swung to one side, as shown in Fig. 3. When the padlock is closed or relocked, the upturned end of leg a is caused to enter the casing by way of opening a^3 , and its end striking the portion c causes the portion c' to swing into engagement with the notch, the spring D then returning the tumblers to the position shown in Fig. 4, such movement on their part being possible by reason of the arm c^2 being thrown downward and out of engagement with the notches e^3 . In this way the rotation of the dog is each time in the same direction as that of the tumblers.

Thus it will be seen that I provide a strong and simple padlock, which will not be liable to rust or freeze up, so as to make trouble in unlocking, and which is free from openings through which falling rain, snow, or dirt can enter and injure the locking mechanism. I do not, however, limit myself to the construction of locking mechanism shown and described. Furthermore, it will be seen that with the shackle extending upwardly and back of the casing the latter will when the padlock is in use be free from contact with or even near proximity to the surface of any object. In this way there will be no possibility of rain or snow entering the lock. It will also be seen that the position of the casing and locking mechanism in front of the shackle makes the operation of the padlock—that is to say, the locking or unlocking and adjustment of the casing relatively to the shackle—easy and con-

venient, as the casing is in position to have unlimited upward movement and to swing over half-way around. As previously stated, the key-opening is located between the two shackle sockets or openings, and accordingly the tumblers and dog are constructed and arranged to rotate in the same direction, whereby the upward pressure of the key upon the tumblers will operate to disengage the dog from the notch in the shackle-leg or upturned portion a . This construction, as stated, also permits of free and unlimited upward movement of the casing B in unlocking the padlock regardless of the length and breadth of the shackle.

What I claim as my invention is—

1. A padlock comprising suitable locking mechanism inclosed by a suitable casing, and a shackle arranged directly back of said casing, said shackle having forwardly and upwardly projecting lower end portions to which the said casing and locking mechanism are applied, substantially as described.

2. A padlock comprising a shackle, locking mechanism engaging said shackle, a casing inclosing said locking mechanism, the said shackle being formed with upturned lower end portions adapted to extend through openings or sockets in the bottom of the casing, and the said locking mechanism including a dog and a plurality of tumblers, the dog engaging the shackle and the said tumblers engaging the said dog, the dog and tumblers being rotatable in one and the same direction for the purpose of disengaging the dog from the shackle, so as to unlock the padlock, and the said dog and tumblers being both rotatable in an opposite direction for the purpose of allowing the dog to engage the shackle, so as to relock the padlock, substantially as described.

In witness whereof I hereunto subscribe my name this 15th day of February, A. D. 1901.
JAMES M. COLE.

Witnesses:

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