

No. 694,703.

Patented Mar. 4, 1902.

H. G. VOIGHT.

PADLOCK.

(Application filed July 17, 1900.)

(No Model.)

Fig. 1.

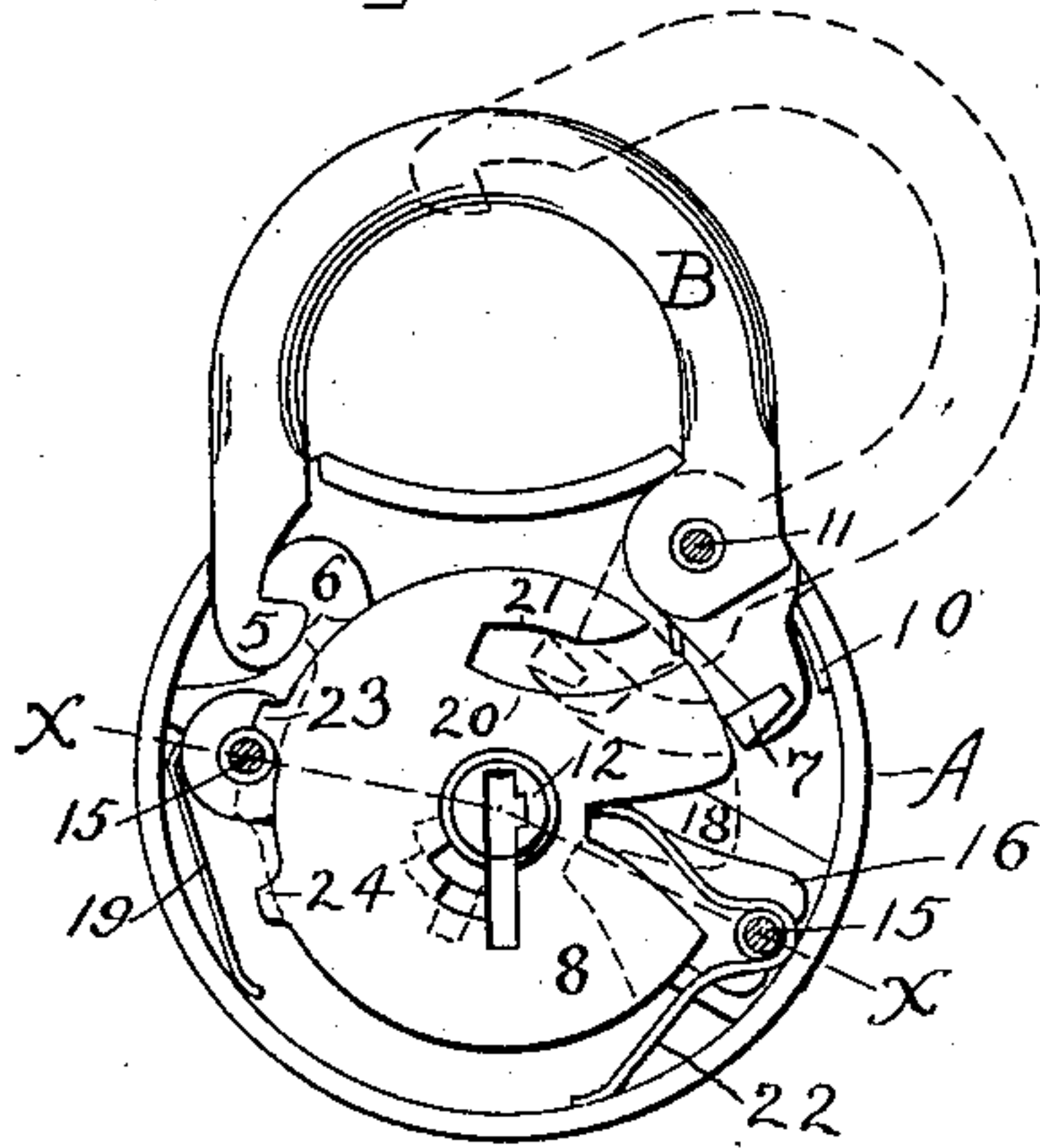


Fig. 2.

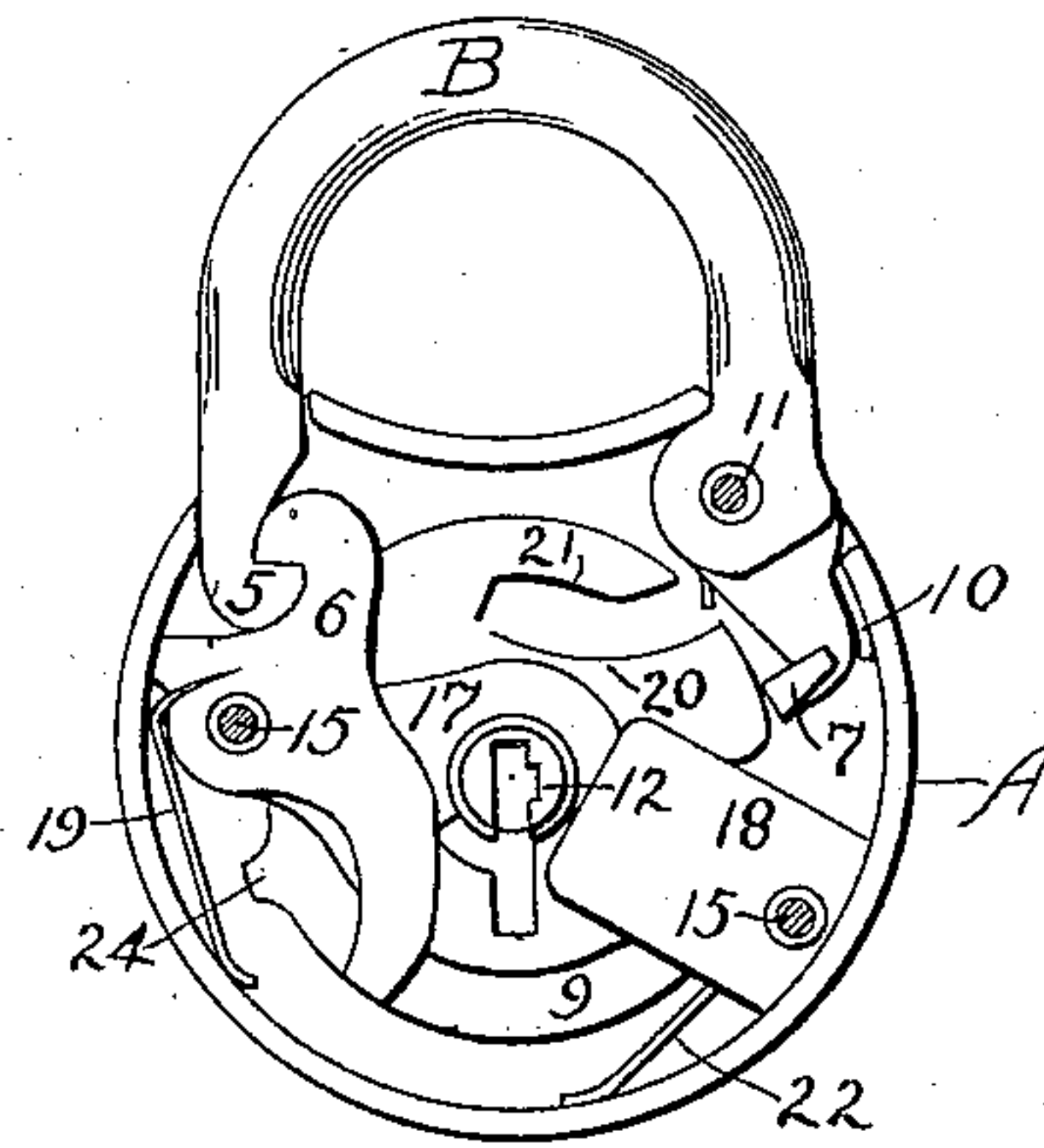


Fig. 3.

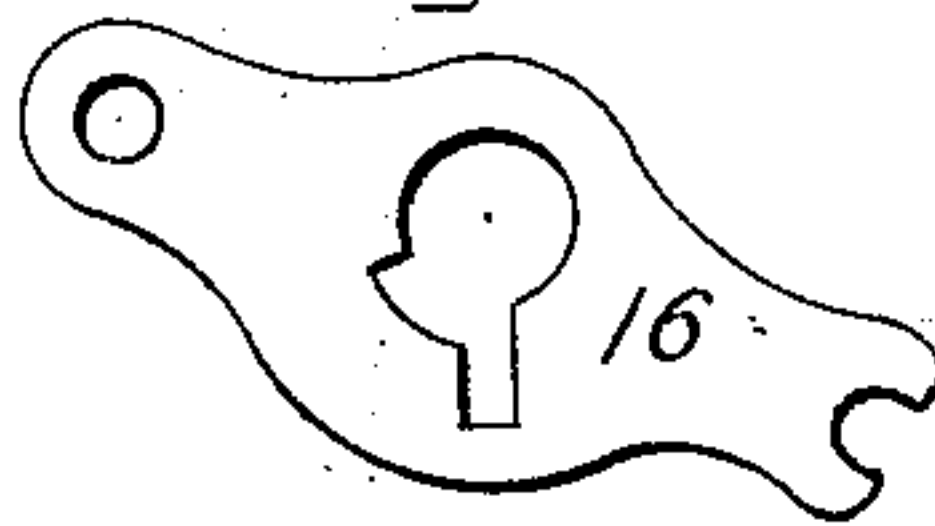
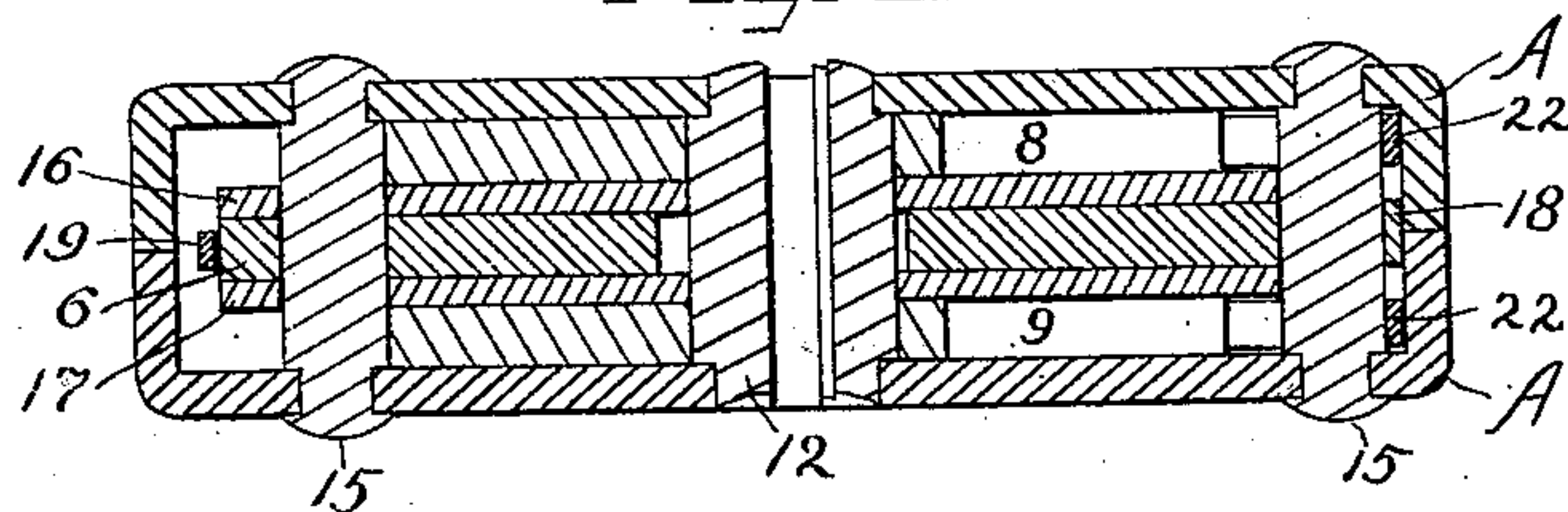


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE
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PADLOCK.

SPECIFICATION forming part of Letters Patent No. 694,703, dated March 4, 1902.

Application filed July 17, 1900. Serial No. 23,925. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Padlocks, of which the following is a specification.

My invention relates to improvements in padlocks; and the objects of my improvements are simplicity of construction and efficiency in operation.

In the accompanying drawings, Figure 1 is a front elevation of my padlock with the cap or one side of the case removed. Fig. 2 is a like view of the same with the front tumbler and front ward-plate removed. Fig. 3 is a detached view of the front ward-plate. Fig. 4 is an enlarged sectional plan view of my padlock on the line *xx* of Fig. 1.

A A designate the two parts of the case, and B the shackle. The said shackle is provided with the usual beveled and hooked nose 5 for being locked by the dog 6 and with a T-shaped heel 7, the side projections of which serve as a fence in connection with the tumblers 8 and 9. The said shackle is also provided with an ordinary spring 10 around its pivot 11 for exerting a constant tendency to force the shackle into its unlocked position. The ordinary slotted key-hub 12 is centrally located in the case, and the two tumblers 8 and 9 are concentrically mounted thereon. The two pins or posts 15, that assist in holding the two parts of the case together, have mounted on them the two ward-plates 16 and 17 between the tumblers 8 and 9, and between the said ward-plates are the dog 6 and the filling-block 18, the dog being mounted on the left-hand one of the two posts 15 and the filling-block on the right-hand one of the said posts. The dog 6 is provided with a spring 19 for forcing it into engagement with the hooked nose 5 of the shackle, and the tail of the dog extends downwardly to near the slotted hub, so that it may be operated by one of the bits of the key. The tumblers are centrally notched with radial shoulders for being acted upon by the broad side of the key-bit instead of the edge of the key. They are slotted from their periphery inwardly, the

said slot on its lower wall 20 being on the arc of a circle of about the same radius as the outer corner of the shackle-heel 7 and the upper wall 21 of the said slot being on the arc of a circle of which the key-hub is the center. I also provide the tumblers with a slot or recess to receive one arm of the tumbler-springs 22, the other arm of which spring bears on the wall of the case, whereby the said springs exert a constant tendency to hold the tumblers in their position for locking the heel of the shackle. The movement of the said tumblers by the said springs is limited by means of the peripheral stop 23 acting on the left-hand one of the posts 15, while the movement of the said tumblers in the opposite direction, as by the key, is limited by the stop 24 acting on the said post 15. Upon inserting the proper key when the parts are in the locked position shown in Figs. 1 and 2 and turning the said key in the right-hand direction the tumblers are both thrown into a position to bring their slots in front of the fence on the heel 7 of the shackle, as indicated by broken lines in Fig. 1, while at the same time a bit of the key acts on the tail of the dog 6 to release the dog from the shackle and permit the shackle-spring to throw the shackle outwardly, as indicated by broken lines in Fig. 1. As soon as the pressure on the key is released the tumblers and dog return to their normal positions under the influence of their springs. The return movement of the tumblers when the fence or heel of the shackle is within the slots in the tumblers is permitted by reason of the upper wall 21 of the tumbler-slot being concentric with the key-hub and tumblers, whereby the upper corner of the fence clears the said wall in the return movement of the tumblers, as shown by the broken lines in Fig. 1. In order to again lock the shackle, it is only necessary to press the shackle into the case, when the heel will force the tumblers back against their springs, while the beveled nose will force the dog back against its spring, so the said tumblers and dog will snap into their locking position as soon as the shackle is fully home.

While for security I prefer to employ the dog and lock the shackle at both heel and toe,

it should be noted that the tumblers and heel will operate the same and make an operative and effective padlock with the dog removed.

I claim as my invention--

5 1. The combination of the slotted key-hub, with the tumbler concentrically mounted thereon and slotted from its periphery inwardly, and the shackle having a heel consisting of a body portion to one side of the
10 plane of the said tumbler, and a side projection on the broad side of the said body portion that serves as a fence and lies in the plane of the said tumbler for coacting therewith by passing in between the two walls of the
15 slot in the said tumbler while the body portion of the heel swings along by the broad side of the said tumbler, whereby both the fence and body portion of the heel come within the circle described by the periphery of the said
20 tumbler, substantially as described.

2. The combination of the case with the slotted key-hub, the slotted tumbler concentrically mounted on the said key-hub, the shackle having a fence on its heel for coact-
25 ing with the said tumbler, and a spring having one part acting on the said case and another part acting on the said tumbler with a constant tendency for normally holding the said tumbler in its locking position, substan-
30 tially as described.

3. The combination of the shackle having a fence on its heel, with the tumbler having

a slot for said fence extending from its periphery inwardly, one wall of the said slot being on the arc of a circle of about the same
35 radius as the outer corner of the shackle-heel 7, and the other wall of the said slot being on the arc of a circle of which the axis of the key is the center, and a spring acting on the said
40 tumbler for normally holding it in the locking position, substantially as described.

4. The combination of the slotted key-hub with the slotted tumbler concentrically mounted thereon, the dog 6 with a tail ex-
45 tending toward the said key-hub for being acted upon by a key-bit, and the shackle having a nose for engaging the said dog and a heel having a fence for acting in connection
50 with the said tumbler, substantially as described.

5. The combination of the slotted key-hub, with the slotted tumblers mounted concentrically thereon, the ward-plates 16 and 17
55 between the said tumblers, the dog 6 with its tail extending between the said ward-plates to a position adjacent to the said key-hub, and the shackle having a hooked nose for engaging the said dog and a heel with a fence
for acting in connection with the said tumblers, substantially as described.

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Witnesses:

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