(No Model.)

C. S. VAN WAGONER.

PADLOCK.

No. 540,705. Patented June 11, 1895.

Fig. 1.

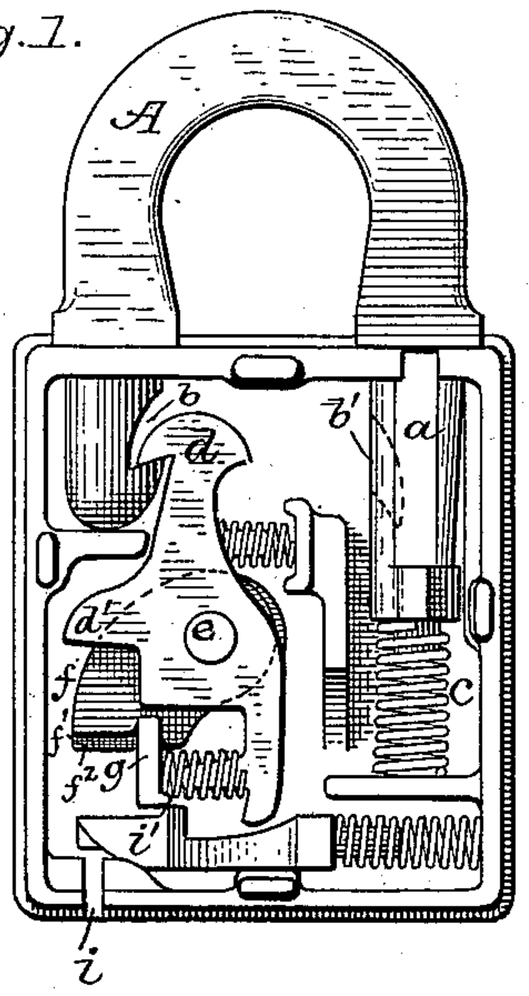


Fig. 2.

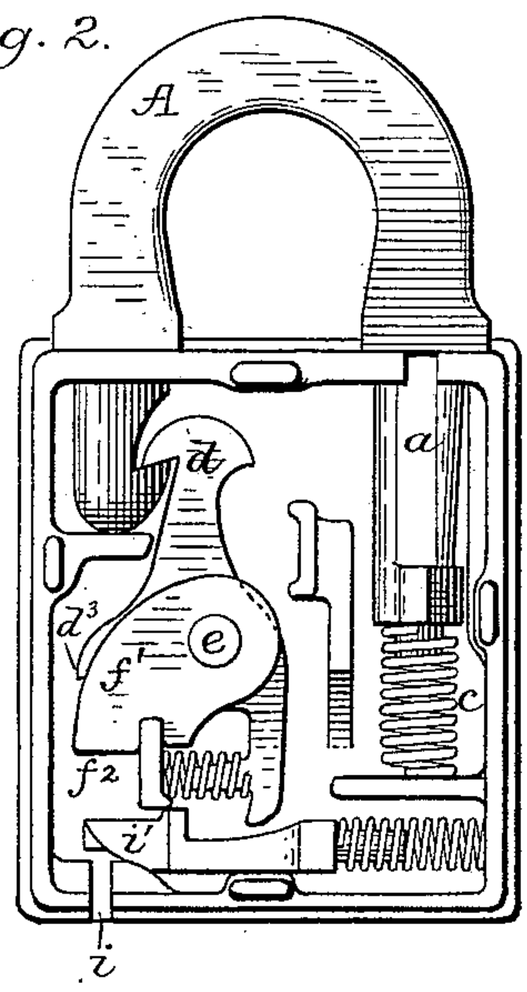


Fig. 3.

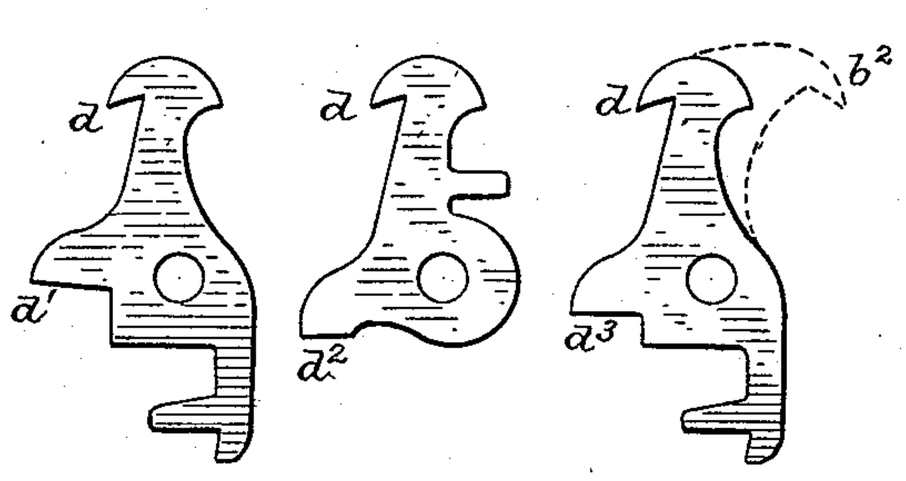


Fig. 4.

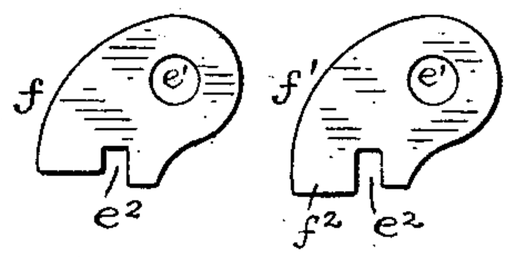


Fig. 5.

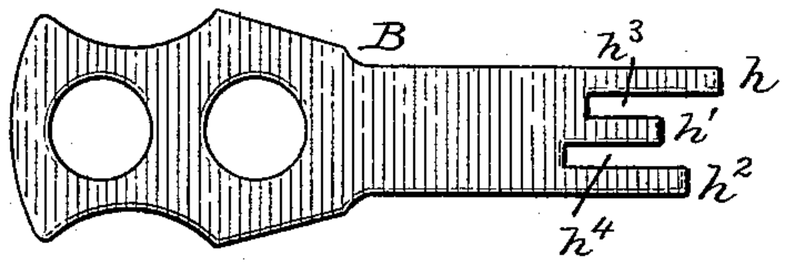
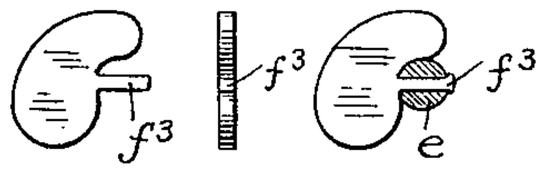


Fig. 6.



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UNITED STATES PATENT OFFICE.

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PADLOCK.

SPECIFICATION forming part of Letters Patent No. 540,705, dated June 11, 1895.

Application filed November 7, 1890. Serial No. 370,657. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS S. VAN WAGONER, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Padlocks; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and exact description of my invention.

My said improvements, pertain to that class of padlocks, which involve a non-rotative thrusting action of their keys, for releasing the tumblers from their locking engagement with the hasp. In some cases, such locks have hasps, which are automatically projected into their unlocked position, as by a spring, as soon as released from the tumblers; and in other cases, the hasps if thrown too far from their normal positions, will so completely control the hasp, as when not thrown far enough, as, for instance, in such locks as were disclosed in United States Letters Patent No. 421,966, issued to J. S. Peacock February 25, 1890. Locks of this general class, have heretofore embodied two or more tumblers, pivoted on one stud, and mounted side by side, in close contact with each other. The key slit in the lock case, enables such access to the outer side surface of the outer tumbler, (as by the use of a suitably formed lock picking wire,) in such a manner, that lateral pressure may be so applied to the outer tumbler, as to cause it to frictionally engage with the next tumbler, and so on throughout the set of tumblers, and enable them all to be moved together, and to release the hasp, when thrusting force is meanwhile applied to the wire.

The prime object of my present improvement, is to render such locks absolutely secure against the described method of picking, and to that end, I have interposed between the tumblers a stationary or "parting" plate, which prevents any rotative movement from being imparted from one plate to another. Said plates, may also economically enable such desirable variations to be made in the locks, as will be conducive to security against other than true keys.

To more particularly describe my invention I will refer to the accompanying drawings, in which—

Figure 1 illustrates the interior of a three-tumbler padlock embodying my invention. Fig. 2 illustrates the same lock with two of its tumblers and one friction-plate removed, leaving the innermost tumbler and one friction or parting plate. Fig. 3 illustrates the three tumblers detached. Fig. 4 illustrates the two parting-plates detached. Fig. 5 illustrates the key for said lock. Fig. 6 illustrates in several views a tumbler-pintle and a parting-plate of another form.

In the lock shown, the hasp A, has a long shank *a*, and when its keeper notch *b*, is released by the tumblers *d*, it is projected by the spiral spring *c*, which is normally compressed. In one form of these locks, the shank *a*, has a keeper notch as indicated in dotted lines at *b'*, and the tumblers have on their rear upper edges, a locking hook or finger (one of which is indicated on dotted lines at b^2, Fig. 3), so that in picking, should either one of the tumblers be thrown too far rearward, before releasing the others from the keeper notch *b*, the hasp would still be confined in place, by the engagement of said tumbler at the notch *b'*, but to locks having this construction, my improvements are equally applicable.

Three tumblers *d*, are shown in Fig. 3, and at their key seats *d'*, d^2, and d^3, they are varied in the matter of location, with reference to the hook or finger. The tumblers are freely pivoted on a rigid stud *e*. The outer, and inner tumblers, have their springs below said stud, but the spring of the middle tumbler, is above the stud. As heretofore organized, these tumblers were in close contact, but in accordance with my invention, they are separated by two parting, or friction plates *f*, and *f'*, and between which, the middle tumbler is located. Said plates may be variably shaped and applied, so long as they are fixed, or stationary, for preventing the simultaneous rocking movement of the tumbler, which would otherwise be possible, under the frictional engagement incident to lateral pressure, upon either of the side tumblers. The parting plates of Figs. 1, 2 and 4 are in

a preferred form, each having a hole e', by which it is readily mounted on the stud e, and a slit at e^2, which is occupied by the edge of a thin web g, on the case (serving also as a seat for two of the tumbler springs), so that when dropped into place, the parting plates are positively locked, or braced against rotation on the stud. Although the tumblers are thus centrally separated from each other, their locking ends are closely grouped, in order that all may properly engage with the hasp at its notch, such of the tumblers as require it, having their hooked ends bent inwardly, to a degree corresponding with the thickness of the parting plates.

The key B, Fig. 5, has at its end, three nibs or faces h, h', and h^2, which respectively engage with the key seats d', d^2, and d^3 on the tumblers, as heretofore, but it also has two slots h^3, and h^4, which respectively correspond with the parting plates f and f', which at their lower outer corners project into the path of the key. It will be seen that the parting plate f', at its lower outer edge projects at f^2, lower than the corresponding portion of the plate f, and hence the slot h^4, is longer than the other, thus affording some measure of security, in favor of the true key, but the plates may be exact duplicates, without departure from the main feature of my invention.

The parting plates may be rendered non rotative, by providing each with a tail piece f^3, as shown in Fig. 6, the stud e, being provided with a slot or transverse holes, for the reception of the tail pieces of the several plates. The stud e, being integral with the case, renders it desirable that the parting plates should be applied to said stud, but it is obviously immaterial to their function, in what manner they are confined in their positions between the tumblers. Inasmuch as only the tumblers adjacent to the sides of the lock case, are exposed to lateral pressure, in picking, it is obvious, that more than two parting plates are not actually necessary, even if four or more tumblers are employed, and a single parting plate, will at least afford partial security against picking pressure, applied to one of the outside tumblers, and in a lock having but two tumblers, only one parting plate will be required. So far as relates to their prime function, the parting plates need not project into, or across the path of the key, and in that case, the key need not be slotted with reference to the plates.

The key slot i, in the end of the case near one corner, is guarded by a latch faced spring bolt i', which retires under thrusting pressure applied to a properly entered key, and as soon as the tumblers are rocked, the hasp flies outward. While it is generally desirable, that a padlock requiring a thrusting key should have a spring actuated hasp, it will be obvious that the hasp may be of the ordinary type, which requires manipulation for moving it to its unlocked position.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a padlock, the combination with a hasp, of pivoted tumblers which engage with the hasp, and are adapted to be released therefrom by the thrusting movement of a key, and a stationary parting plate positively locked between the tumblers, substantially as described, whereby the lock is rendered more secure against picking by preventing one tumbler, from imparting movement to another, as a result of its frictional contact therewith.

2. In a padlock, the combination of a hasp, tumblers pivoted upon a stud, and engaging with said hasp, and a stationary parting plate, positively locked, and held in place by said stud between the tumblers.

3. In a thrusting key padlock, the combination with tumblers, of interposed positively locked stationary parting plates, which project into the path provided for the key, substantially as described.

CORNELIUS S. VAN WAGONER.

Witnesses:

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C. T. STORK.