W. H. TAYLOR.

PADLOCK.

No. 192,847. Patented July 10, 1877.

Fig 1.

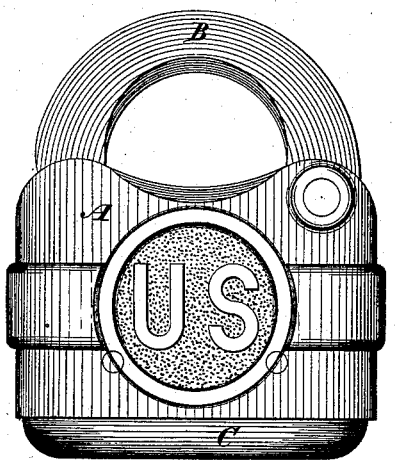


Fig 2

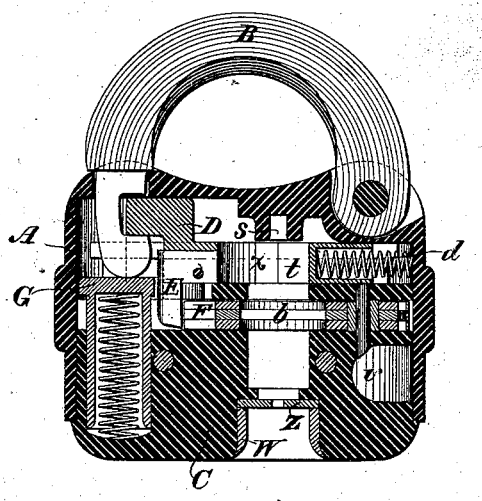


Fig 4.

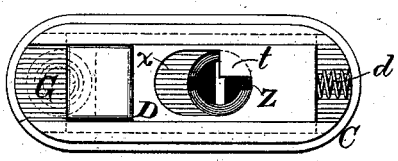


Fig 3

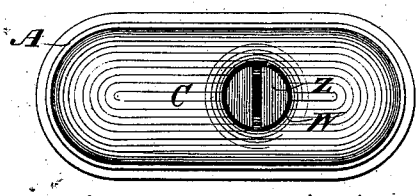


Fig 5

Fig 6

Fig 7

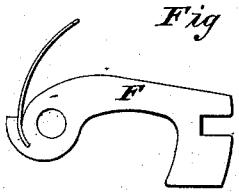
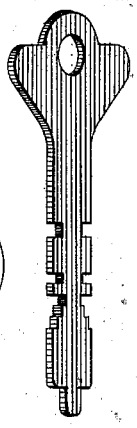
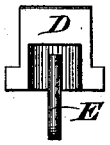


Fig 8





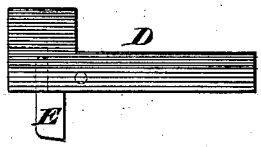


Fig 9

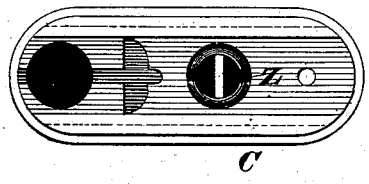
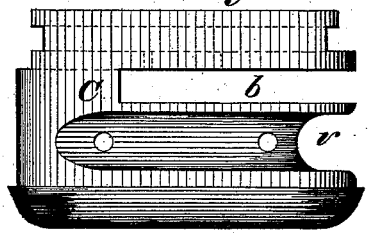


Fig 10



WITNESSES

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By his Attorneys

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UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE LOCK MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN PADLOCKS.

Specification forming part of Letters Patent No. **192,847**, dated July 10, 1877; application filed May 26, 1877.

To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented an Improved Padlock, of which the following is a specification, that will enable persons skilled in the art to which my invention relates to make and use the same, reference being had to the accompanying drawings.

My invention relates to a padlock composed of an exterior metallic shell or case, to which the hasp or shackle is hinged, and an interior metallic block, which packs the shell, and carries and protects the working parts of the lock.

In the drawings, Figure 1 represents a side view of my lock complete and locked. Fig. 2 is a longitudinal vertical section, showing the internal block and working mechanism in the locked position. Fig. 3 is a plan view of the bottom of the lock and key-hole. Fig. 4 is a plan view of the top of the block removed from the shell, showing the bolt and its actuating spring in the locked position. Fig. 5 shows a side view of one of the tumblers with its spring. Figs. 6 and 7 are views of the bolt detached. Fig. 8 is a perspective view of a key adapted to work my lock. Figs. 9 and 10 are, respectively, plan and side views of the block with all the working parts removed.

A indicates the exterior case of the lock with the shackle or hasp B hinged to it. C indicates the interior block, which is constructed to slide into the base of the shell and pack it, and be there secured, in order to prevent the shell from being stove or indented, to derange the working parts of the lock. The block has a transverse slot, *b*, in which the tumblers are pivoted, and is recessed on its top and provided with ways in which the bolt slides, as shown in Figs. 9 and 10. D indicates the sliding bolt, actuated by the spring *d*, and carrying the fence E, which engages with the ends of the pivoted tumblers F when in the locked position, and enters their gatings when they are adjusted and the bolt is retracted by the key. The tumblers are in a plane substantially parallel to that of the sliding bolt. G indicates the plunger, so constructed and applied as to spring up when the bolt is retracted, swing out the shackle, and close its aperture in the case to prevent dirt from entering the lock, and at the same time to prevent the bolt from being thrown forward and locked until the hasp has been pressed down into position to be locked.

The key is inserted at about the center of the block, passes between the tumblers, through the angular aperture *x* in the bolt, and its pintle enters a socket, *s*, in the upper part of the shell, in which it turns. The tumbler-springs, and the sides of the tumblers opposite the springs, normally bear against the inner walls of the shell, and when in this position the gatings are so arranged as not to be in coincidence, and the bolt is then locked. The key is bitted alike on each side, so that, no matter which way it may be inserted, when turned one-fourth of a revolution it will spread the tumblers until their gatings coincide, when a further turning of it will cause its side to strike the talon *t* in the bolt-aperture and retract the bolt, the fence freely entering the coincident gatings.

I prefer to use three tumblers, but more or a less number might be employed. The key-hole is formed by boring a hole in the block from the top of a diameter corresponding with the width of the key to be used, and then boring a hole in the same axial line and of larger diameter from the bottom of the block a suitable distance to leave a thin partition of metal between the two holes. This partition is then bored with a hole of still smaller diameter, to correspond with the last bits on the key, leaving a ledge, which is then slotted on opposite sides to correspond with the greatest width of the key to admit its insertion. A disk, Z, fitting the largest hole in the lower side of the block, and slotted to correspond with the width of the key, is then inserted, and a bushing, W, is placed in the hole over it and spun or burnished securely into place, the inside diameter of the bushing corresponding to the width of the key. When the disk is turned so that its slot coincides with the two opposite slots in the ledge the key can be inserted and the disk will then turn with it.

In order to render the lock as light as possible, the sides of the block may be recessed, as at *v* in Fig. 10, in a part of it not immedi-

ately contiguous to the working parts, and where indentations of the shell would not be destructive or particularly injurious.

To lock the hasp it is only necessary to press it down in place, as represented in Fig. 1, when the plunger will recede, the bolt will be released and thrown forward by its spring, the fence will pass out of the gatings of the tumblers, and the latter, by the action of their springs, will adjust themselves behind the fence and bear against it, holding the bolt locked. This construction of a padlock renders it a practically solid block of metal, incapable of being crushed by any blow or weight to which, in practice, it is liable to be exposed, and renders its working parts substantially invulnerable.

Having thus described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of an exterior shell having the hasp hinged to it, and an interior solid packing-block carrying and protecting the locking mechanism, and preventing injurious crushing or indentation of the shell, substantially as described.

2. The combination of the packing-block, the bolt provided with the central aperture and talon, and the tumblers in the block-slot, substantially as described, whereby a key bitted alike on each side may be employed to pass between the tumblers and through the bolt, and work the lock.

3. The combination of the bushing, the double-slotted ledge, and the slotted disk, substantially as described.

In testimony whereof I have hereunto subscribed my name.

WARREN H. TAYLOR.

Witnesses:

E. D. OGDEN, Jr.,

CHAS. E. VAIL.