

GANO'S *Improvement in*
Permutator Pad- **LOCKS.**
 No. 118,798: Patented Sep. 12, 1871.

Fig. 1.

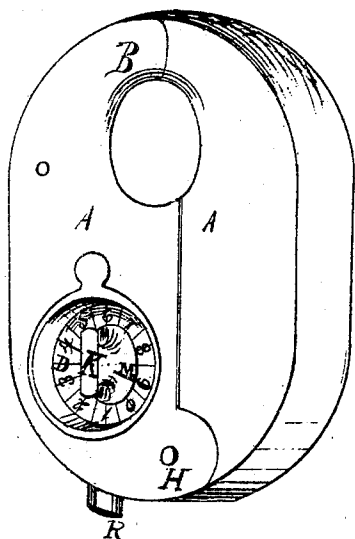


Fig. 2.

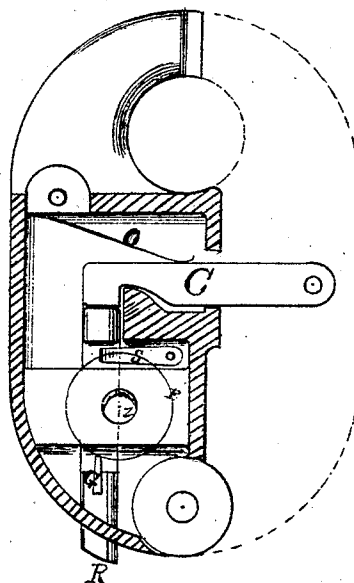


Fig. 3.

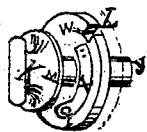


Fig. 4.



Witnesses

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IMPROVEMENT IN PERMUTATION PADLOCKS.

Specification forming part of Letters Patent No. 118,798, dated September 12, 1871.

To all whom it may concern:

Be it known that I, LOUIS H. GANO, of the city, county, and State of New York, have invented certain Improvements in Permutation Padlocks, of which the following is a specification:

My invention relates to the combination, with the hinged sections of a lock-case, of the hinged bar or catch, release-bolt, guard-wheels, and springs, for the purpose of securely closing and fastening the lock, and to afford an easy method of releasing it when desired in applying it to use.

Figure 1 is a perspective view of the lock. Fig. 2 is a plan view of one section of the lock; also, the bar or catch C, which secures the two sections together when the lock is closed. Fig. 3 is a view of one of the guard-wheels, with shaft and knob that operates it; Fig. 4, a view of the lower guard-wheel detached.

At Fig. 1 in the drawing, A A is the lock case; H, the hinged joint of the same; B, the bale or clasp by which the lock is made fast when applied in use; K, the knob that operates the guard-wheels inside the lock when opening the same. These guard-wheels are shown detached in Figs. 3 and 4 of the drawing, with the shaft Y and knob K, to which they are attached when in position in the lock L, Fig. 3, being fastened securely to the shaft Y, and L', Fig. 4, fitting on the lower end of shaft Y so as to allow it to turn independent of the wheel L on the shaft Y, but fitting closely enough to bring the two wheels together when in position; and the lower end of shaft Y rests in the opening at Z, Fig. 2, and the under side of wheel L' rests on the end of spring S, Fig. 2, as indicated by the circle line F. The guard-wheels L and L' are also provided with slots W and W', as shown in Figs. 3 and 4, and the wheel L has a spring, X, attached to its upper surface, with a pin, I, in the end of the spring, which passes downward through the wheel L, Fig. 3, which has an opening sufficient to allow the pin and spring to vibrate freely. When the two wheels are in position the end of the pin I

in spring X rests upon the surface of the wheel L', Fig. 4, at such distance from the center as will allow it to drop into the recess J. This recess is slotted at one side, so as to form a stop only on one side of the recess to the pin I when it falls in the same. O, Fig. 2, is a spring, which acts upon the bar or catch C and keeps it in place; R, the release-bolt, for pressing the catch back to open the lock; and G, a steel guard with which the bolt R is provided, that comes in contact with the periphery of the guard-wheels L and L' when in place in Fig. 1. D is a disk, graduated by lines converging toward the center, and numbered 1, 2, 3, &c., which are used in combinations to set the changes for opening the lock.

To open the lock, take hold of the knob K, Fig. 1, revolve it to the right until the spring S, Fig. 2, comes into the recess E, Fig. 4, which will bring the slots W and W', Figs. 3 and 4, exactly together. When turned far enough to allow the spring-pin I to drop into the recess J, which is determined by the index-line M on knob K, then turn the knob back and stop with the slots W and W' opposite the guard G, press upon the release-bolt R, and the lock will open; and to close it again it is only necessary to force it shut, when the spring O, Fig. 2, will press the catch G in place and retain it there, at the same time forcing the release-bolt R to its position, as shown in Fig. 2.

I am aware that guard-wheels slotted at their edges have been used in locks before, and therefore I do not claim them as my invention.

I claim as my invention—

The release-bolt R, operated upon the outside of the case, provided with a guard, G, which enters the slots of the tumblers, said bolt releasing the connecting-bar or catch C, all arranged as and for the purpose set forth.

L. H. GANO.

Witnesses:

EARLE H. SMITH,
WARREN CHAPMAN, Jr.