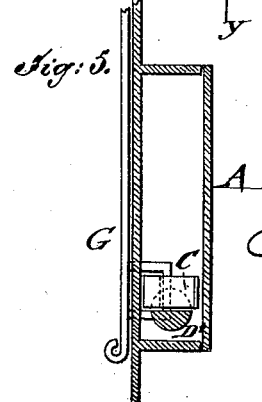
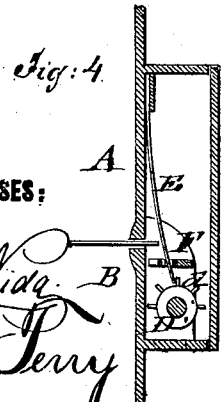
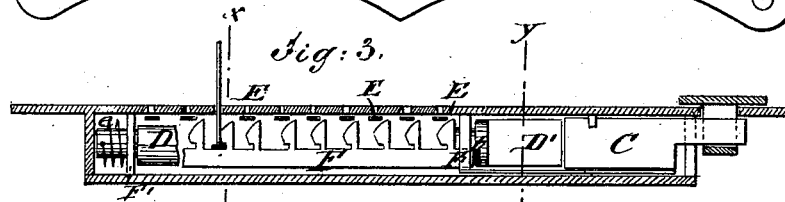
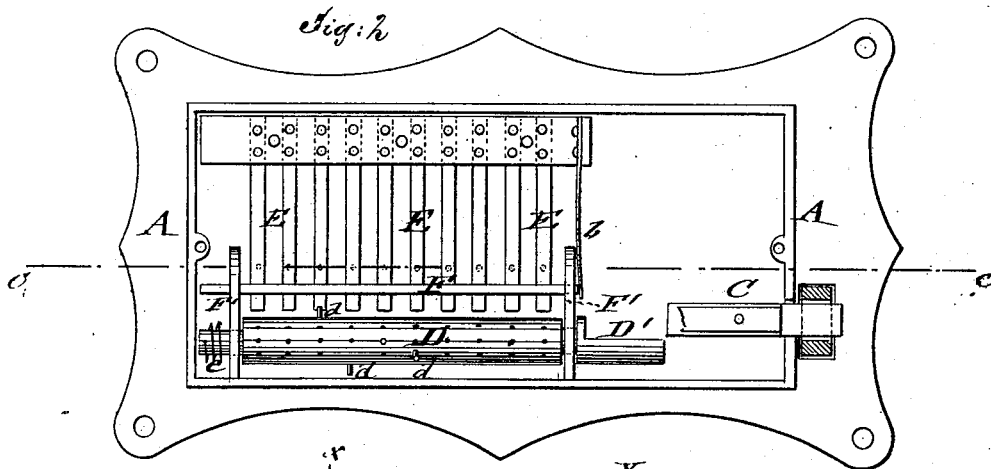
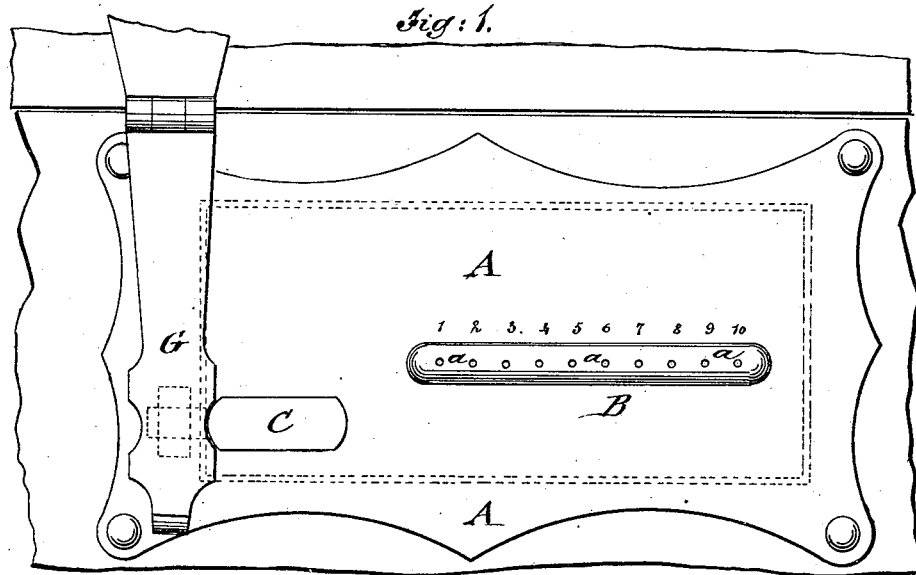


A. E. PETERS.  
Combination-Lock.

No. 167,929.

Patented Sept. 21, 1875.



WITNESSES:  
Chas. Nida  
A. F. Perry

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# UNITED STATES PATENT OFFICE.

ALFRED E. PETERS, OF MONCTON, CANADA.

## IMPROVEMENT IN COMBINATION-LOCKS.

Specification forming part of Letters Patent No. **167,929**, dated September 21, 1875; application filed July 10, 1875.

*To all whom it may concern:*

Be it known that I, ALFRED E. PETERS, of Moncton, in the county of Westmoreland, Province of New Brunswick and Dominion of Canada, have invented a new and Improved Combination-Lock, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front view; Fig. 2, a rear view with back plate detached; Fig. 3, a vertical longitudinal section on line *c c*, Fig. 2, and Figs. 4 and 5 are vertical transverse sections respectively on the lines *x x* and *y y*, Fig. 3 of my improved combination-lock.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish a combination-lock for trunks, boxes, safes, and other purposes, that may be set with great facility without giving an opportunity to be picked, as the parts cannot be reached by tools, and the lock be set to a large number of combinations.

The invention consists of a spring-acted roller with interchangeable pins, that are acted upon by spring-bars depressed by a pin inserted through perforations of the face-plate. The springs are engaged by a sliding and toothed spring-bar that releases the preceding spring, and secures thereby the return of the spring-acted roller, except when the correct combination is set in regular succession, which prevents the return of the roller and allows the throwing of the bolt.

In the drawing, A represents the casing of my improved combination-lock for trunks and other purposes, which casing is provided at the face-plate with raised part B, having a series of perforations, *a*, that are numbered or lettered, and admit the insertion of a pin of suitable thickness. Behind the holes are applied to the inner side of the face-plate a series of spring-bars, E, which correspond in numbers with the holes *a*, and are fastened at one end and loose at the other, so that by the insertion of the pin the corresponding spring-bar is depressed. A toothed and recessed bar, F, is placed below the holes and at right angles to the springs, so that the same may enter into the corresponding teeth when depressed and be retained by the recesses back

of each tooth. The toothed bar slides in supports F', and is acted upon by a spring, *b*, that carries the bar by the depression of a spring, E, sidewise, till the same has passed into the recess, and is then locked therein by the bar, releasing at the same time any spring-bar that has before been locked in the same manner, so that only one spring at one and the same time can be retained thereby. The spring-bars strike with their free ends pins *d*, which are interchangeably set into holes of a roller, D, turning in supports F' below the sliding bar F. The pins may be set into any desired combination that is possible between the number of holes employed, a very large variety of different combinations being given. When five pins are used five lines of holes have to be arranged in longitudinal direction on the roller. When more are used a larger number of lines have to be provided, the pins being secured into the holes of the roller according to the numbers selected and in consecutive order on the longitudinal rows of holes. The roller D is acted upon at one end by a spiral spring, C, that has a tendency to throw the same into its original position, its other end being recessed to allow the sliding of the lock-bolt C when the recessed part faces the same, so as to allow its passage. In any other position of the recessed roller end the bolt cannot be thrown and the lock be opened. When the pin is inserted according to the regular succession of numbers that have been selected, the spring-bars are depressed, striking, in this case, one pin after the other, and retaining the roller in position by the consecutive contact of spring and pin, until the roller is fully turned and admits the throwing back of the bolt. If, however, any other spring-bar is depressed or the regular succession of the numbers not kept up, the preceding spring is released and the roller instantly carried back to its original position, or not affected at all, as no pin is in the way of the depressed spring-bar. Whatever spring may be depressed, the roller cannot be turned so as to open the bolt without the use of the combination as selected. The same may be set to a different combination by removing the back plate and changing the pins in the roller accordingly. For closing the lock the bolt is

thrown and the pin inserted into any one of the holes, so that the last retaining spring-bar is released and the roller carried back into its original position for locking the bolt. This arrangement furnishes a combination-lock of small and neat shape that may be conveniently used for various applications, offering the great advantage of requiring no special key, as it can be opened by any pin, preventing any tampering with the lock or opening of the same in very effective manner.

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

1. A combination-lock composed of a series of spring-bars capable of being depressed at

the free ends, a sliding and toothed spring-bar, and a spring-roller with interchangeable pins and recessed end, substantially as and for the purpose set forth.

2. The combination of the spring-bars, capable of depression by a pin inserted through holes of the face-plate, with a sliding and spring-acted bar, having teeth and recesses corresponding to the number of springs, so as to lock each spring when depressed, and release the same by the locking of the next spring, substantially as set forth.

ALFRED EDWARD PETERS.

Witnesses:

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G. F. ATKINSON.