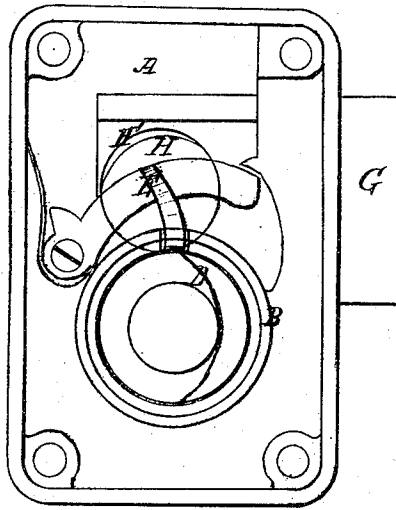


*J. Sargent,*  
*Permutation Lock.*

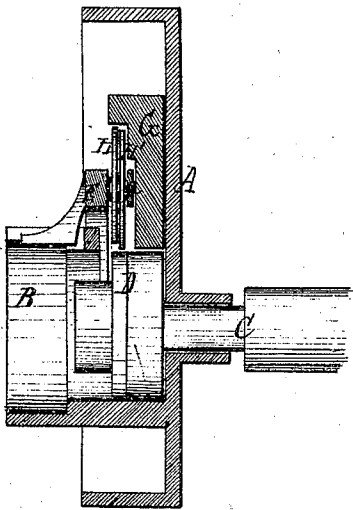
*No. 98622.*

*Patented Jan. 4, 1870.*

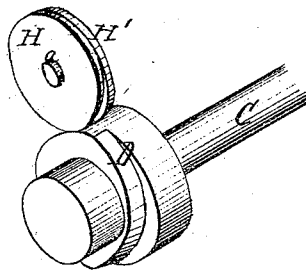
*FIG. I.*



*FIG. II.*



*FIG. III.*



Witnesses:  
*John A. Dickerson*  
*D. R. Howl*

Inventor.  
*James Sargent*

# UNITED STATES PATENT OFFICE.

JAMES SARGENT, OF ROCHESTER, NEW YORK.

## IMPROVEMENT IN PERMUTATION-LOCKS.

Specification forming part of Letters Patent No. 98,622, dated January 4, 1870.

*To all whom it may concern:*

Be it known that I, JAMES SARGENT, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Locks; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of the lock, with the back plate removed, to show the interior; Fig. 2, a vertical cross-section of the same; Fig. 3, a diagram, showing the cam and the disconcerting-eccentrics in perspective.

Like letters of reference indicate corresponding parts in all the figures.

### *Nature of the Invention.*

This lock is an improvement upon that of Linus Yale, in which an eccentric roller is combined with the cam for disconcerting the action upon the tumblers.

The invention consists in combining with the cam an arrangement of two or more eccentric rollers, of varying eccentricity, turning upon the same bearing, so that in revolving one or both may turn and alternate in action, thereby greatly increasing the difficulty of mapping out or locating the position of either.

### *General Description.*

In the drawings, A represents the case of the lock; B, the cylinder for holding the tumblers or wheels; C, the spindle; D, the cam; E, the dog, which falls to release the bolt; and G, the bolt. These are the ordinary parts employed in combination locks, and may be arranged in any desired manner; hence, they need no special description here.

A single eccentric roller, H, pivoted at *a*, to a suitable arm or bearing, and resting upon the cam D, has been before employed, as already stated. Its object is to disconcert the action inside the lock, so that an expert lock-pick or burglar cannot tell the position of the tumblers when operating upon the lock.

It has been found by experiment, however,

that such a device is not proof against the skill of an expert lock-pick, for by the use of a delicate instrument attached to the spindle outside, and by careful manipulation, the shape and position of this roller can be accurately mapped out or ascertained, and the lock opened.

To obviate this difficulty as far as possible I combine, with this roller, one or more rollers, H', pivoted to the same arm or bearing, and resting upon the periphery of the cam in the same manner; but all these rollers are made of varying eccentricity, and of different shape, and, therefore, when the cam is turned, the several rollers strike at different positions, and when one touches, the other may be removed from contact, thus alternating in action. They may also turn in different directions. By this means, owing to the different contact of the several rollers, the difficulty of mapping out and locating the same is very greatly increased.

In transferring the action from one roller to the next the loss of contact with the first disarranges the position, and thus renders it indefinite. In this manner, and for this reason, the addition of another roller to the one already in use does not produce an accumulation of the same effect in action, but produces a different action altogether, by breaking the continuity of rotation and movement and contact.

I disclaim the employment of a single eccentric; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of two or more rollers, H H', of varying eccentricity, when combined with the cam, in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JAMES SARGENT.

Witnesses:

R. F. OSGOOD,  
GEO. W. MIATT.