

# Fleischel & Bussey, Lock.

N<sup>o</sup> 84,737.

Patented Dec. 8, 1868.

Fig. 2.

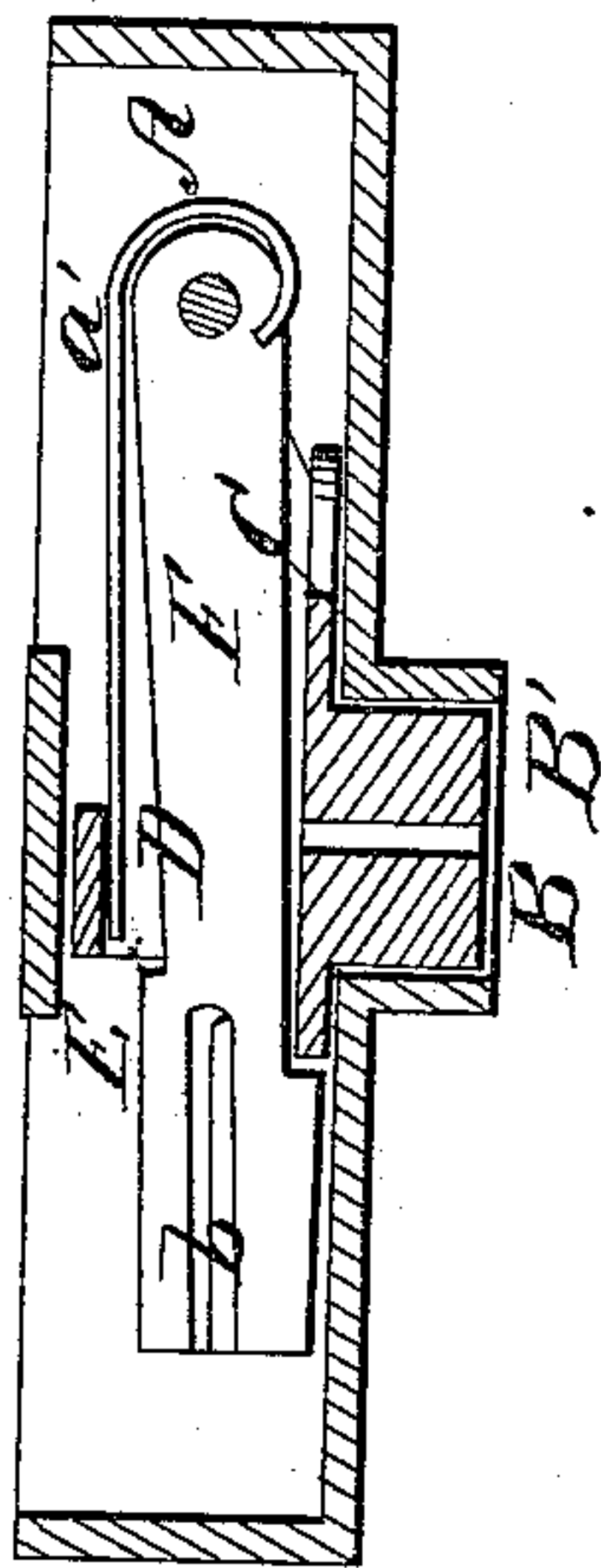


Fig. 3.

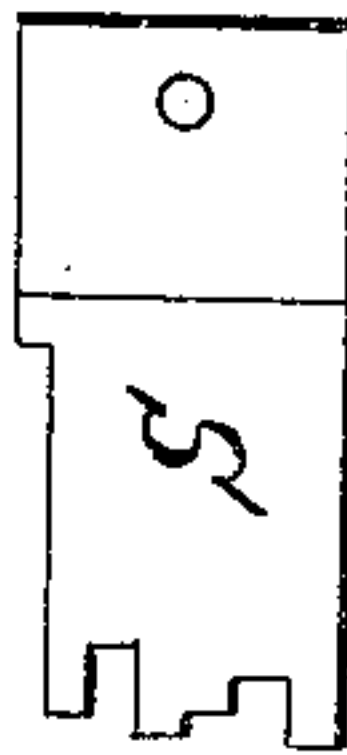
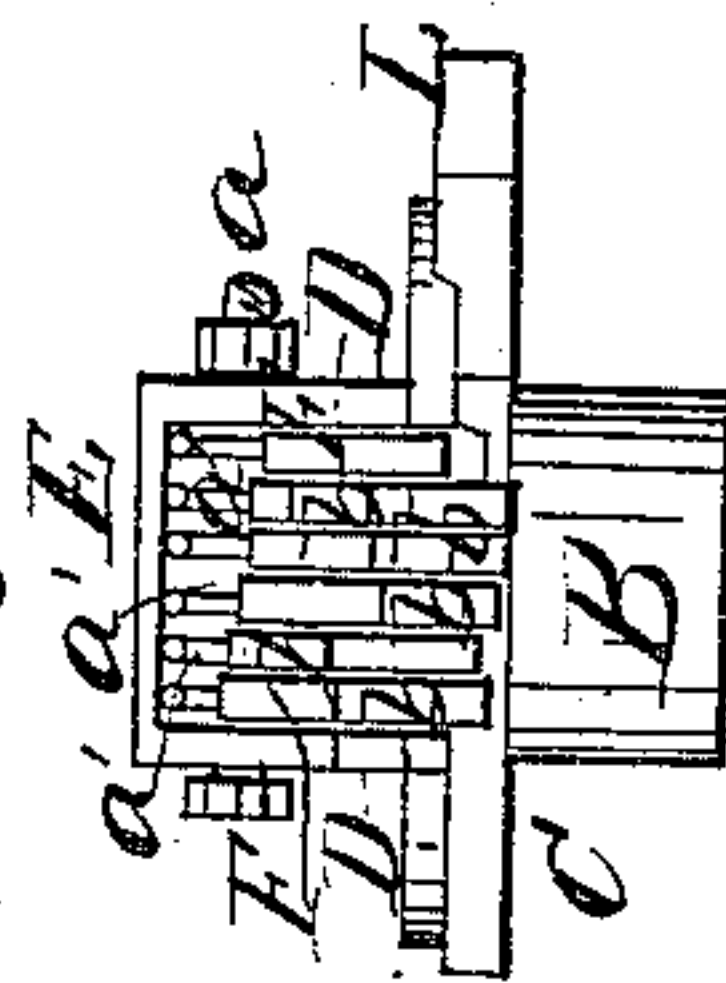
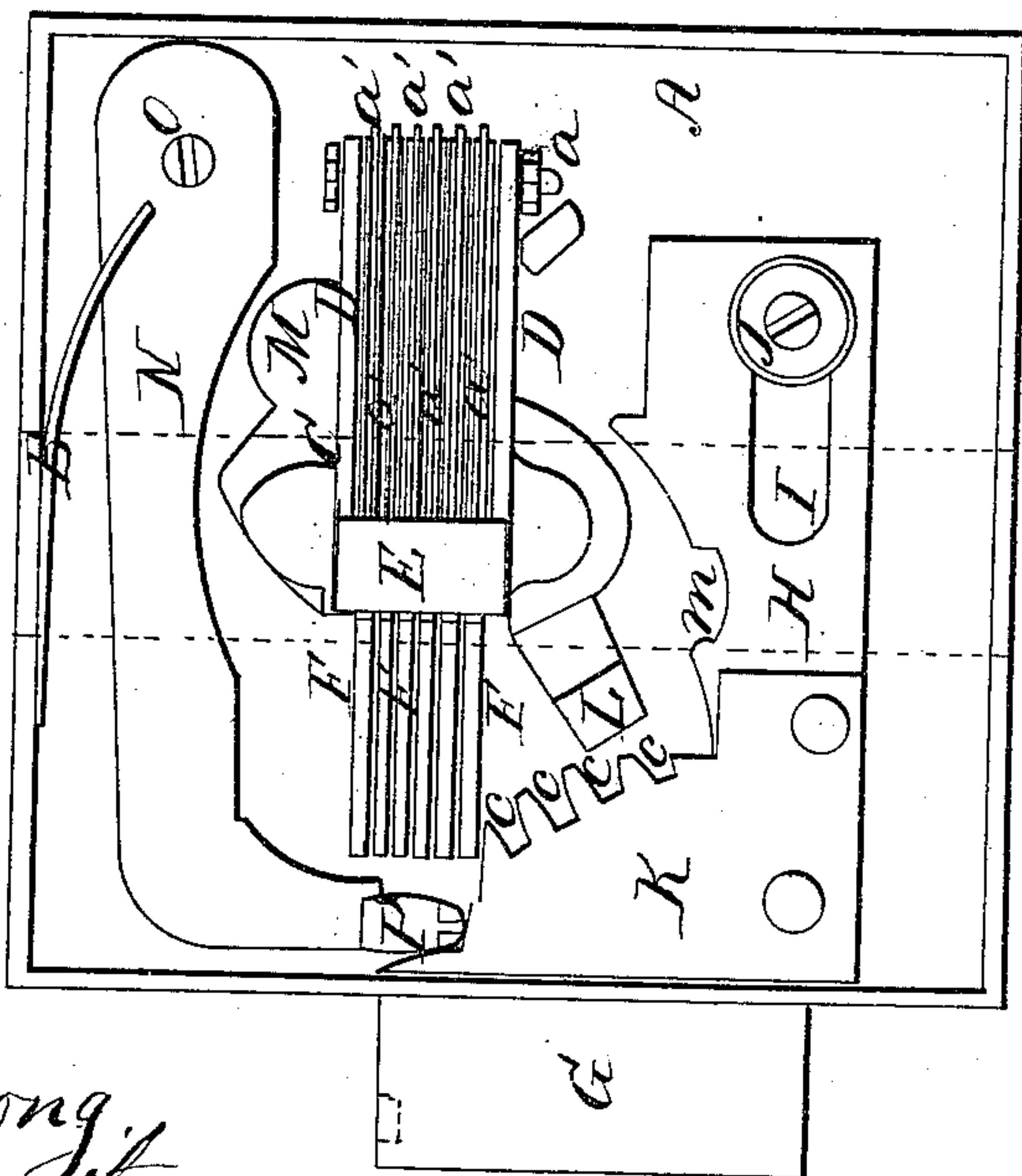


Fig. 1.



Witnesses:  
Geo. H. Strong,  
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# UNITED STATES PATENT OFFICE.

CHARLES FLEISCHEL AND WILLIAM C. BUSSEY, OF SAN FRANCISCO, CAL.

## IMPROVEMENT IN DOOR-LOCKS.

Specification forming part of Letters Patent No. 84,737, dated December 8, 1868.

*To all whom it may concern:*

Be it known that we, CHARLES FLEISCHEL and WILLIAM C. BUSSEY, of the city and county of San Francisco, State of California, have invented an Improved Revolving-Tumbler Door-Lock; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use our said invention or improvements without further invention or experiment.

The nature of our invention is the construction of an improved revolving-tumbler lock which is especially adapted for use on the outer doors of stores and large buildings, in which a secure and at the same time cheap lock is required. This is accomplished by constructing a case, through which is made an opening connecting with the outside, and in which turns a short shaft, which is spread so as to form a disk inside the case. Two plates rise from the inner surface of the disk, and between these plates is placed a number of tumblers, consisting of elongated metal plates having slots in one end at various depths from the bottom of the case, through which the wards pass when they are in a line, caused by the introduction and turning of the proper key. The bolt passes through the side of the case, which supports and guides it. Within the case the bolt forms a flat bar, which extends along the bottom across the case, and has a slot in it. A screw passes loosely through this slot and into the side of the case, and thus guides that end of the bar, so that the bolt moves freely without any tendency to bind. A steel plate is fastened to the bolt inside the case, and has its edge formed into wards corresponding to the number of the tumblers. The disk on the inner end of the tumbler-shaft has an arm projecting from one side, which enters a slot in the extension of the bolt, and thus moves the bolt. On the other side of the case is a bent arm, pivoted at one end and having a point at the other, which enters a hole in the bolt to prevent its being moved when drawn back, and, by an equivalent device, prevents its being withdrawn after being shot out. The bent arm is pivoted and operated when the key is introduced, and turned by an arm or lug, which projects from that

side of the disk and raises the arm sufficiently to allow the bolt to pass, after which it drops into place again.

To more fully explain our invention, reference is had to the accompanying drawings, forming a part of this specification, of which—

Figure 1 is a view of our invention, with the back plate removed. Fig. 2 is a side elevation of the tumblers. Fig. 3 is an end view of the tumblers.

Similar letters of reference in each of the figures indicate corresponding parts.

A is the case of the lock, having a hole through the front plate, through which the cylinder B passes, and is made sufficiently long to pass through the door to which the lock may be attached. This cylinder has attached to its inner end an irregular disk, C, or the disk and barrel may be cast in one piece. From the upper side of this disk (the lock lying face down) rise two rigid plates, D D, connected at the top by a bar, E. The tumblers F F are placed between these plates, as many being used as may be desired, and they are kept down by the springs *a' a'*, as shown. At one end the tumblers all move on a pin, *a*, and at the other they have each a slot cut in the direction of their length, as shown at *b b*. The bolt G, where it passes through the side of the case, is made sufficiently strong and large. Within the case it continues across the lower or front plate as a flat bar, H. A slot, I, is made through this bar, and a screw or bolt, J, fastened to the front plate and projecting through the slot, steadies and guides the bolt in its movements. A steel plate, K, is firmly fastened to the upper or back side of the bar H, and its edge is formed into wards *c c c*. From the disk C an arm, L, projects, and operates the bolt by entering a recess, *m*, in the bar H as the disk turns. At the other side of the disk is another projection, M, which operates the arm N. This arm is pivoted at O, and is bent, so that at the other end it forms a point, P, which keeps the bolt from moving. The point is kept in the slot in the bolt by a spring, R. To move the bolt, and lock or unlock the door to which it may be attached, the key S is introduced into a slot, B', in the cylinder B, and passing through the disk C the wards of the key come in contact with the tumblers, and raise each one until the slots *b*



*b b* are in a line, when the key is turned, moving the cylinder, disk, and tumblers. The projection *M* raises the point *P* by coming in contact with the arm *N*, thus allowing the bolt to be moved in either direction. At this instant the arm *L* enters the recess in the bar *H* and moves the bolt forward, the slots in the tumblers passing over the wards *c c c* on the plate *K*. The wards *c c* and the plate *K* are so placed that, if the tumblers be raised and partly turned in trying to pick the lock, they will fall into some of the wards when released. It will also be impossible to move the bolt by raising or even partly revolving the tumblers, as the point *P* will not have been raised far enough to allow the bolt to be forced back until a considerable portion of the turn has been completed. The tumblers describe one-fourth of a circle in their movement.

This mechanism gives us a cheap, durable, and safe lock, which is adapted for use on ordinary outer doors which need such locks.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The plate *K*, fastened upon the bolt of the lock, and provided with the wards *c c*, &c., in combination with the cylinder *B*, disk *C*, and revolving tumblers *F F*, substantially as described, and for the purposes set forth.

In witness whereof we have hereunto set our hands and seals.

CHS. FLEISCHEL. [L. S.]  
W. C. BUSSEY. [L. S.]

Witnesses:

GEO. H. STRONG,  
C. W. M. SMITH.