A. E. DIETZ.
Latch.

No. 203,007. Patented April 30, 1878.

Fig 1

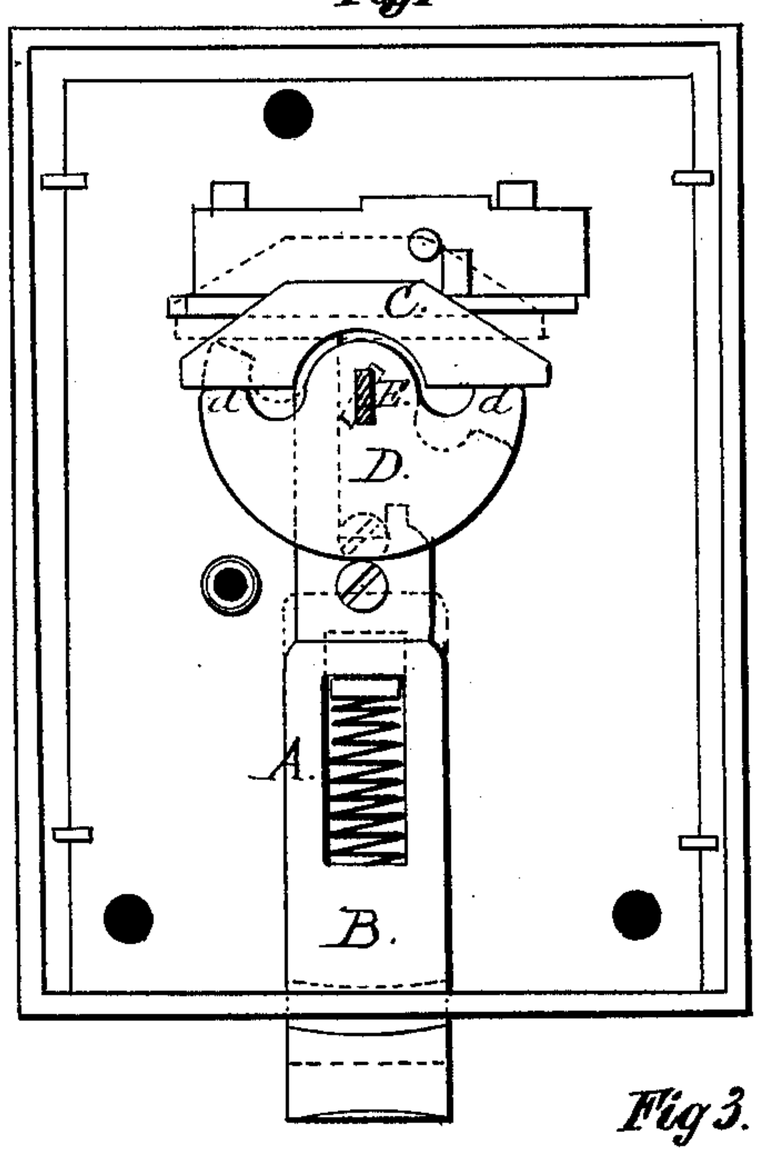


Fig 2.

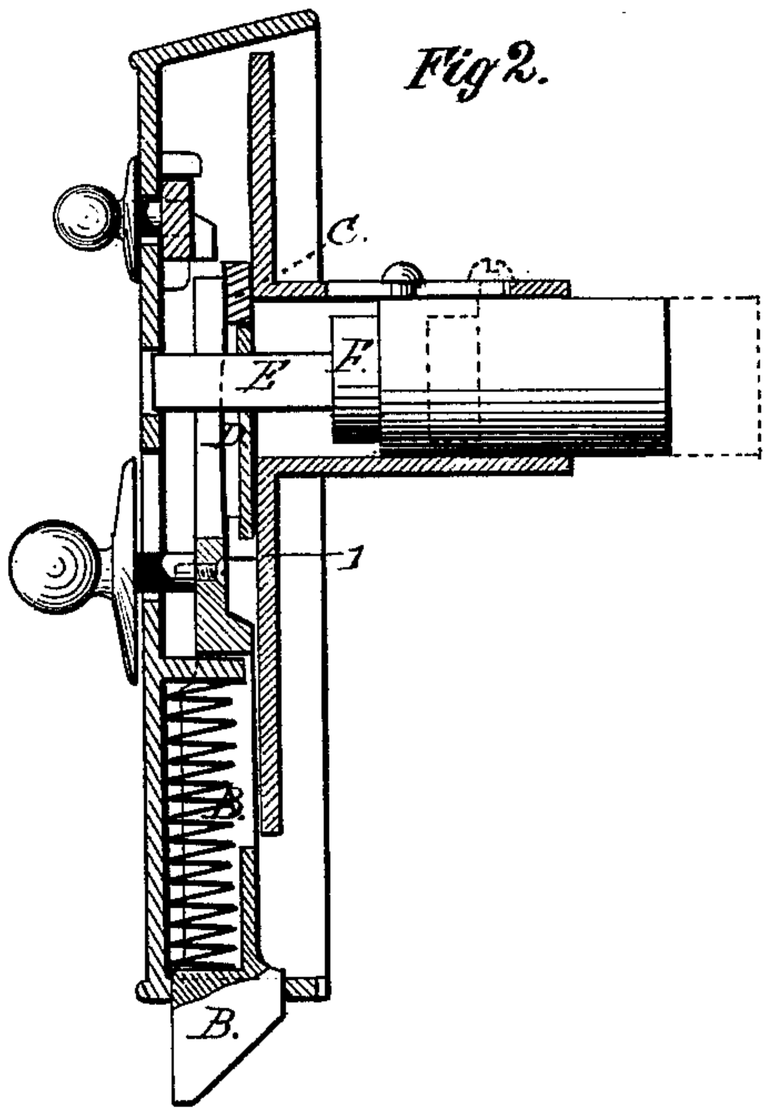
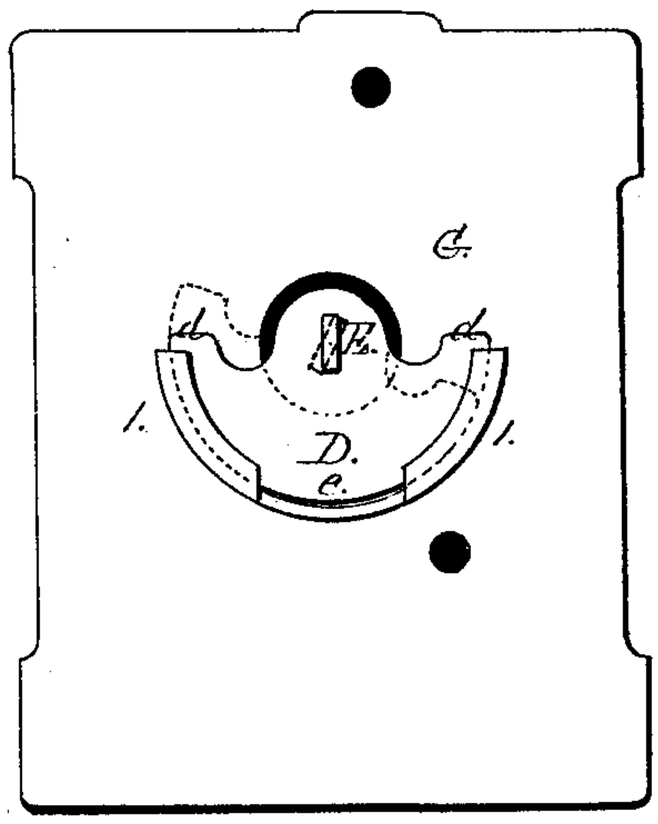


Fig 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ALONZO E. DIETZ, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN LATCHES.

Specification forming part of Letters Patent No. **203,007**, dated April 30, 1878; application filed January 14, 1878.

To all whom it may concern:

Be it known that I, ALONZO E. DIETZ, of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description thereof, and of their mode or manner of operation, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and making a part of this specification.

My invention has relation to that class of locks which have an adjustable key-cylinder, or a key-cylinder capable of being extended or shortened, so that the lock can be fitted to and used upon doors of different thicknesses; and its object or purpose is to obtain a more easy and perfect adjustment of the tumbler-cylinder with the cam actuated by it that operates the bolt, and secure a better action thereof, and also to simplify the construction of such locks, so as to reduce cost of construction.

Figure 1 is a top view of the lock, showing its working parts, the cap or plate of the case and the key-cylinder being removed. Fig. 2 is a vertical cross-section of the entire structure. Fig. 3 is an inside view of the cap or plate with the revolving disk connected therewith.

The spring A, which throws the latch B forward, is placed in a cavity which is made in the latch itself. To the end of this latch is fitted a talon or cross-bar, C, against which the rotating cam or disk D acts to throw the bolt or latch, such cam or disk being rotated by the shaft or stem E of the key or tumbler cylinder F as this is turned by the key. Such rotating disk or cam D is supported on or connected with the cap G by the curved lips 1 1, and through it passes loosely the flat stem or shaft E, which is fixed centrally in and to the key-cylinder F, and which, as the key is turned, rotates such disk or cam, thereby throwing back the bolt or latch, the shoulders *d d* of the cam or plate D—one or the other of them—striking against the ends of the cross-bar or talon C, to throw back the bolt or latch whichever way the key is turned. The bolt or latch will thus be thrown back in whichever direction the key is turned. The cam or plate D thus acts directly upon the latch through the cross-bar or talon C, without the necessity for or intervention of other parts.

Figs. 1 and 3 show the cam D and cross-bar or talon C in two positions—*i. e.*, when the bolt is thrown out, and also when drawn back.

The disk or cam D, instead of being fixed or placed in the case of the lock, in immediate connection with the other working parts of the lock, is attached to the cap G of the lock, as shown in Fig. 3, being supported and held in position by means of the lips 1 1, which serve not only as guides for such disk D, but are so constructed as to form also a seat for it, in which it turns, and against which its edge *e* rests. As the edge of the cam or disk D thus rests against its seat, in which it turns, and the opening through such cam for the shaft E being slightly larger than such shaft, such shaft will be relieved from any possible pressure that may come against the cam in throwing the bolt. By so arranging such disk or cam on or in connection with the cap, a more easy and perfect adjustment of such cam with reference to the shaft E and tumbler-cylinder can be made, and the adjustment of such parts being properly made, it will not be affected or disturbed by the other parts of the lock, or by the removal of the cap from the lock.

The connection between the cam or dog which throws the latch or bolt and the key or tumbler-cylinder is effected by means of the flat shaft or stem E, (which may, however, be rectangular or oblong, or in any form such that it will rotate the cam D,) fixed centrally in the tumbler-cylinder, such shaft being of sufficient length to allow of all required extension of the key-cylinder, and passing loosely through the bolt-actuating plate or cam D, so as to permit of the easy extension of the key-cylinder, such shaft being also so shaped with respect to the opening or hole in the plate or cam D as to rotate such plate as the key is rotated.

By placing such shaft or stem E centrally with respect to the tumbler-cylinder the construction of the parts is simplified, and a more certain and uniform action of the bolt-actuating cam is secured.

What is claimed is—

1. The combination of the rotary cam D,

lips 1 1, forming seats or bearings for said cam, the stem or shaft E of the key-cylinder, and the talon or cross-bar C of the latch, substantially as and for the purpose set forth.

2. The combination of the longitudinally-adjustable key-cylinder, having the stem E, and the latch-operating cam D, having a central opening arranged to receive said stem, which is adjustable therein, substantially as described.

ALONZO E. DIETZ.

Witnesses:
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