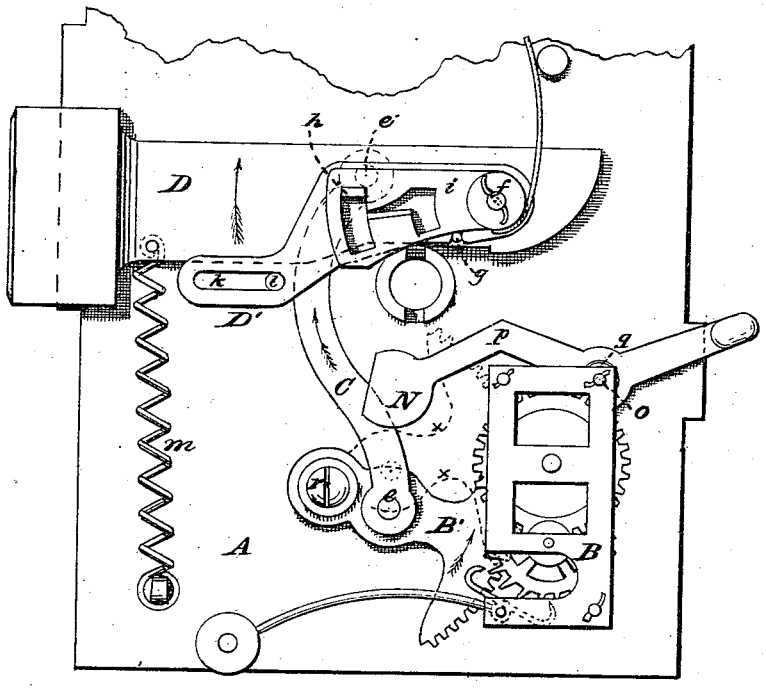
L. GRISWOLD.

Alarm-Lock.

No. 167,167. Patented Aug. 31, 1875.



Patent Assigned to

David Hays and Nathan P. Wells.

of Johnstown, N. Y.

Witnesses:—

Jerry Kick

E. M. Bannum

Lev Griswold Inventor,

By J. W. Larcher,

Atty

UNITED STATES PATENT OFFICE.

LEV GRISWOLD, OF JOHNSTOWN, NEW YORK, ASSIGNOR TO DAVID HAYS AND NATHAN P. WELLS, OF SAME PLACE.

IMPROVEMENT IN ALARM-LOCKS.

Specification forming part of Letters Patent No. **167,167**, dated August 31, 1875; application filed February 2, 1875.

CASE C.

To all whom it may concern:

Be it known that I, LEV GRISWOLD, of Johnstown, in the county of Fulton and State of New York, have invented an Alarm-Lock, and assigned to David Hays and Nathan P. Wells, of said Johnstown, of which the following is a specification:

To enable those skilled in the art to fully understand and construct the same, I will proceed to describe it as follows:

The drawing represents an elevation of the inner plate of the lock-case, showing the attachment of the alarm mechanism, key-hole escutcheon, tumblers, false bolt, and rod connecting alarm with key-bolt.

This invention is an improvement on an alarm-lock patented by Charles E. Pierce, September 26, 1871, and numbered 119,403. The keeper or nose-piece is similar to the one employed in said patent; also, alarm movement does not vary in any essential particular from those usually employed in alarm-clocks and the like, save that my invention differs in the fact that I dispense with the mainspring generally used.

A is the rear plate of the lock-case. B is the alarm. B′ is a geared sector, which engages with the alarm mechanism in the usual manner. I employ a connecting-rod, C, to connect the alarm mechanism with the bolt D, said connecting-rod being pivoted to sector B′ at *e*, and to the bolt D at *e′*, as shown in the drawing. The arrows indicate the motion and direction of the sector, connecting-rod, and bolt, as will be readily understood by reference to the drawing, when pressure is applied against the door, raising the bolt upward (or downward) on the inclined plane formed in the nosing or keeper. The bolt D is pivoted to the stud-pin *f*, a slot being formed in said bolt through which said pin is inserted, allowing the bolt to move longitudinally thereon in the operation of locking and unlocking.

My invention also relates to the employment of a false bolt, D′, which is moved longitudinally and simultaneously with the bolt D by means of the pin *g*, secured in the bolt D, and engaged in a transverse notch or slot in the false bolt D′. The false bolt is provided with an anchor-pin, *h*, which holds the tumblers *i* in the usual manner. A slot, *k*, is formed in the false bolt D′, which guides said false bolt in a fixed line with relation to the lock-case, a stud-pin, *l*, also being secured to the lock-case for that purpose, as will be readily understood. The false bolt, constructed in the manner described, will enable the bolt D to have a lateral as well as longitudinal motion independent, and not detrimental to the functions of the tumblers *i*. A spring, *m*, tends to draw the bolt D downward.

It will be observed by reference to the drawing that the tumblers are pivoted to the pin *f*. I provide a key-hole escutcheon, N, which I pivot to the standard *o* of the alarm mechanism B. Said escutcheon is bent at the point *p*, to be in a position to escape the key-bit as it is rotated in the lock. The escutcheon N is pressed against the plate A by means of the spiral spring *q*, encircling the standard *o*, so that the escutcheon cannot get out of its proper position whether open or closed. The dotted lines *x x* indicate the opposite extreme of the vibration of the sector B′. The bolt D will operate the alarm whenever the same is moved in the direction of the arrow, and, through the agency of the connecting-rod C, I dispense with a mainspring, heretofore employed for actuating the alarm mechanism, causing the alarm to operate at the first impulse; whereas those heretofore used wound up the alarm apparatus at first impulse, and the alarm would not sound at all if the bolt were then held rigid short of its farthest thrust. It is therefore obvious that the alarms heretofore used could not sound save in the return of the bolt, or its release from the point of a lever at the end of the upward thrust of the bolt.

It will be readily perceived that the connecting-rod C, with sector B′ and bolt D, imparts a positive motion to the alarm apparatus, rendering the employment of a mainspring unnecessary to actuate the alarm. The sector B′ is pivoted to the lock-case at the point *r*, so that its geared periphery engages with

the alarm train of gearing in the ordinary way.

I apply the connecting-rod C either to the key-bolt or to the knob-latch, thus dispensing with an auxiliary bolt, as is described and claimed in the patent of said Pierce.

The escutcheon N being affixed to the interior af the lock-case, it could not be easily operated against by means of powder or other explosive were the key-hole unprotected.

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

1. The connecting-rod C, pivoted to geared sector B′ and bolt D, and all operating in the manner and for the purposes set forth.

2. The false bolt D′, constructed as shown and described, and operating in conjunction with pin *g*, bolt D, and pin *l*, for the purpose specified.

3. The false bolt D′, bolt D, pins *g* and *l*, in combination with the tumblers *i*, connecting-rod C, and sector B′, operating as set forth.

LEV GRISWOLD.

Witnesses:

E. M. BARNUM,

JERRY KECK.