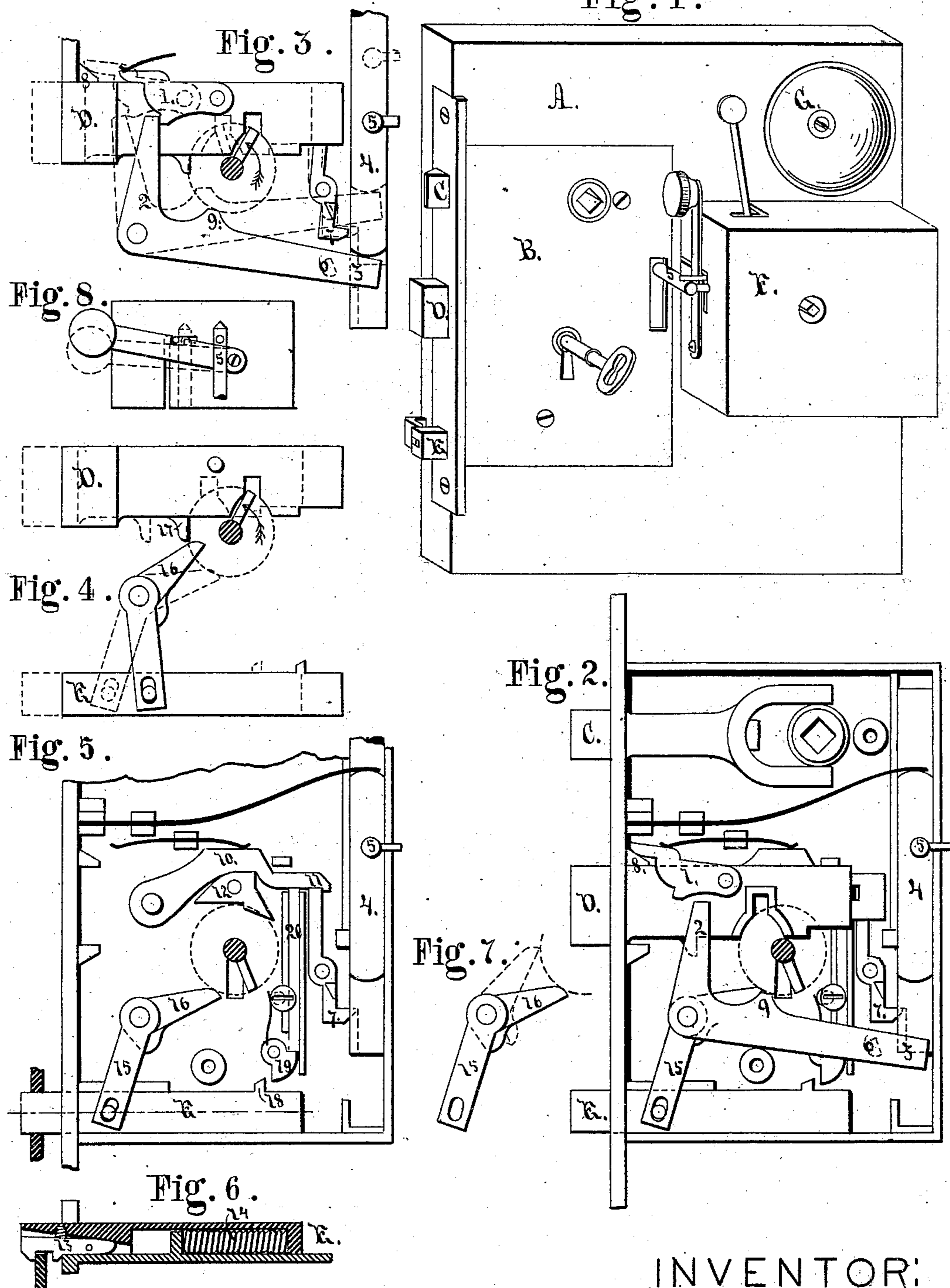


W. H. PEARCE.
Alarm-Lock.

No. 224,791.

Patented Feb. 24, 1880.

Fig. 1.



WITNESSES:

Witnessed:
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UNITED STATES PATENT OFFICE.

WILLIAM H. PEARCE, OF SPRAGUE, CONNECTICUT.

ALARM-LOCK.

SPECIFICATION forming part of Letters Patent No. 224,791, dated February 24, 1880.

Application filed September 29, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. PEARCE, of the town of Sprague, county of New London, and State of Connecticut, have invented a new and useful Improvement in Alarm-Locks; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a perspective view of my improved alarm-lock. Fig. 2 is a sectional view of the same. Fig. 3 shows the connection with the lock-bolt of the device for setting the alarm automatically when the bolt is shut out. Fig. 4 shows the connection with the bolt and key of the auxiliary bolt and the lever for operating the same. Fig. 5 shows the devices operated to detach and sound the alarm automatically when the lock is opened either by turning the key, or with a master-key, or what is called a "jimmy," or by forcing the door, so that it will become practically impossible to open the door or even tamper with the lock without sounding the alarm. Fig. 6 is a sectional view of the auxiliary bolt, showing the spring-catch by which it is held after it has entered the shield on the jamb of the door. Fig. 7 shows the lever for operating the auxiliary bolt. Fig. 8 is a view of the detaching device used when a spring-ratchet and bell-alarm is used.

The object of this invention is to improve that class of locks in which, in the act of locking the door, the alarm will be automatically set, and will be operated when the lock is tampered with in any manner or when the door is forced.

The invention consists in the peculiar arrangement, with the locking bolt and key, of the peculiar devices by means of which the alarm is set and operated, as will be more fully set forth hereinafter.

In the drawings, A represents a portion of a door. B is the lock; C, the spring-latch; D, the locking-bolt; E, the auxiliary bolt; F, a box containing the spring and ratchet for operating the alarm. G is the gong or bell.

In place of this alarm electric connection may be made with the lock, and an alarm may be given by either the closing or the breaking of the electric circuit; or the alarm may be given

by the explosion of some explosive agent producing a loud noise, such as gunpowder.

Referring now to Fig. 3, the bolt D is provided with the spring-pressed latch 1, which rests against the short arm of the bell-crank lever 2, the long arm 3 of which rests against the spring-pressed slide 4, on which the post 5 is secured, by means of which the alarm is set or an electric connection either made or broken.

When the bolt is shut the bell-crank lever raises the slide 4, and as the arm 3 of the bell-crank lever is provided with the cam 6, and the hinged lever 7 is also provided with a cam, the lever 7 is pushed over against the slide and under the same when the slide is fully raised, so that the bell-crank lever may now be released, which is done by the nose of the latch 1 sliding up the incline 8 and passing above the short arm of the bell-crank lever. The bolt being now shut and the door locked, the key comes in contact with the projection 9 on the bell-crank lever, which replaces the long arm into its first position, the slide 4 and post 5 being held by the hinged lever 7, which is held in that position by the spring-pressed hinged arm 10, the end 11 of which holds the lever in position, as is shown in Fig. 5. When, now, the key is turned in unlocking, it comes in contact with the pivoted cam 12, by which the hinged arm 10 is raised, releasing the arm 7, and the reaction of the spring returns the slide 4 to its original position. The arm 5 releases the alarm, which now sounds until it is run down or is stopped. The arm 5 may at this moment make or break an electric circuit, and thus start the alarm, or it may release a device which will explode a cartridge.

The auxiliary bolt E is provided with a catch which enters the plate on the door-jamb and a coil-spring, 4, and when the door is forced will rebound, and may thus be arranged to make or break an electric circuit or explode a charge.

The auxiliary bolt E is operated by the jointed bell-crank lever 15 16. The end 15 is connected with the bolt, and the end 16 rests on a shoulder of the end 15, as it is shown in Fig. 5.

When the key comes in contact with the arm 16 the bolt is pushed outward; but when the key is turned in the direction to open the

lock the arm 16 is raised until it meets the projection 17 on the bolt D, by which it is replaced into its original position, as is shown in Fig. 4.

5 When only one alarm is used the projection 18 of the bolt E comes in contact with the hinged cam 19 and raises the slide 20, which, resting against the hinged arm 10, raises the same and releases the hinged lever 7 and slide
10 4 in the same manner as the turning of the key before described, and the alarm is sounded in the same manner.

The bolt D may be provided with a cam to raise the arm 10, so that no matter how the
15 bolt is pushed in the alarm must be sounded.

This lock may be used on any kind of door or drawer, and will faithfully warn the owners of any unlawful tampering with the same.

It is obvious that the alarm may be placed
20 at any desired point, and the motions of the slide 4 or bolt E transmitted to the alarm by wires for electric purposes, or by any other mechanical means, and as the locking of the
25 bolt sets the alarm it will always be ready to give the required warning.

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

1. The combination, with the bolt D, of the latch 1, bell-crank lever 2 3, and slide 4, arranged to set the alarm, as and for the purpose set forth. 30

2. In an alarm-lock, the auxiliary bolt E, provided with the spring-latch 13 and the coiled spring 14, and means, substantially as
35 described, to operate an alarm, as described.

3. The combination, with an alarm, of the slide 4, hinged lever 7, arm 10, and cam 12, arranged to release the slide 4 and start the
40 alarm, as and for the purpose set forth.

4. The combination, with the auxiliary bolt E, of the cam 19, slide 20, arm 10, hinged lever 7, and slide 4, by which the alarm is released when the bolt is drawn into the lock, substantially as and for the purposes set forth. 45

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Witnesses:

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