I. & A. HERZBERG.

Improvement in Burglar-Alarms.

No. 129,344. Patented July 16, 1872.

FIG. 1.

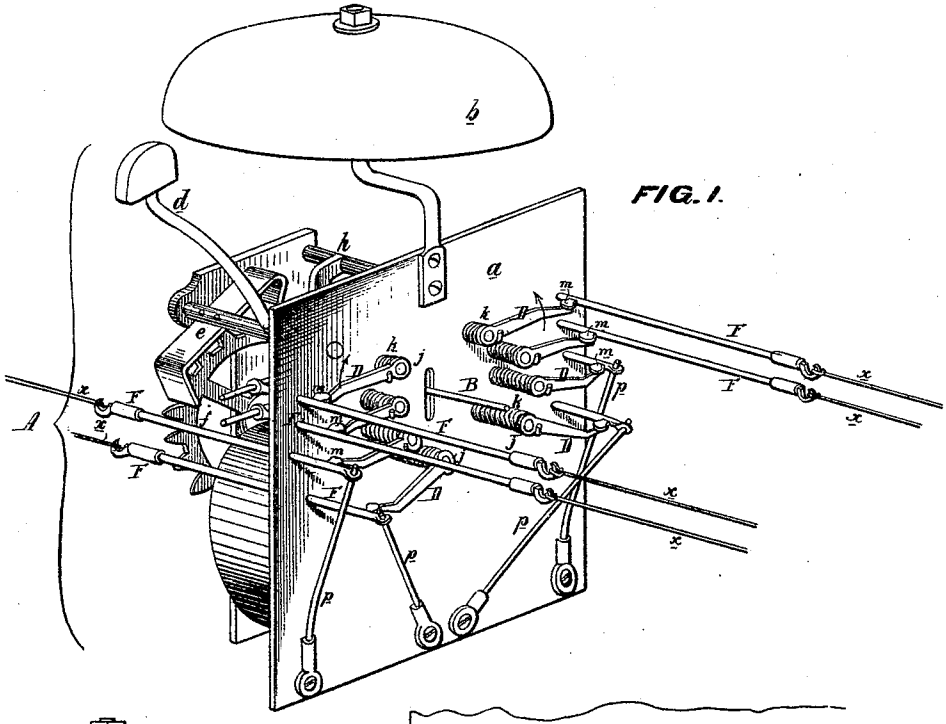


FIG. 2.

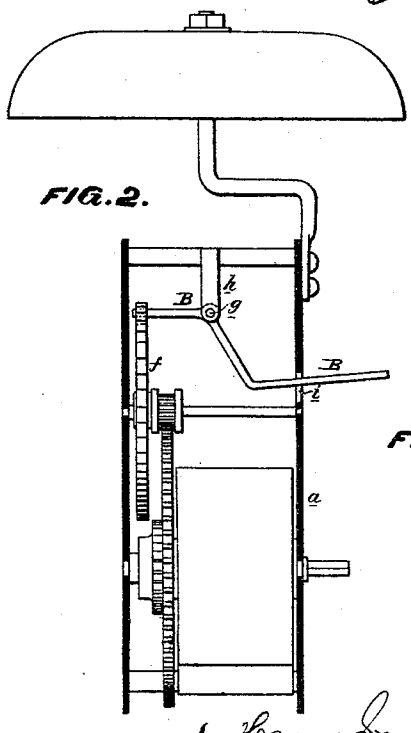


FIG. 3.

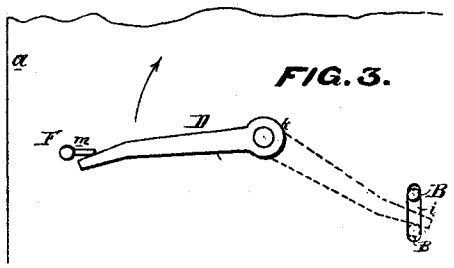


FIG. 4.

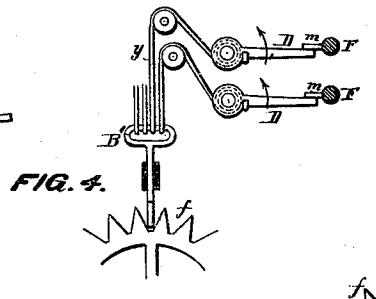
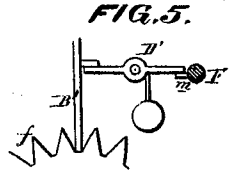


FIG. 5.



WITNESSES { Harvey Smith / Thos. Parker

Isaac Herzberg, and
Abram Herzberg
by their Attys.
Howson and Son

UNITED STATES PATENT OFFICE.

ISAAC HERZBERG AND ABRAM HERZBERG, OF PHILADELPHIA, PA.

IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. 129,344, dated July 16, 1872.

Specification describing an Improved Burglar-Alarm, invented by ISAAC HERZBERG and ABRAM HERZBERG, both of Philadelphia, Pennsylvania.

Improved Burglar-Alarm.

Our invention is based upon that for which Letters Patent No. 125,293 were granted to us on the 2d day of April, 1872; and it consists in the arrangement, described hereafter, of sliding bars having stops and weighted or spring arms, each of which, on the movement of one of said bars, will be released and operate the detent of the alarm mechanism, the said arrangement permitting a much larger number of wires to be connected with the alarm mechanism within a limited space than is possible in apparatus for the same purpose hitherto made.

In the accompanying drawing, Figure 1 is a perspective view of our improved burglar-alarm; Fig. 2, a sectional view of the same; Fig. 3, a detached view; and Figs. 4 and 5, views of modifications.

In our aforesaid patent of April 2, 1872, the alarming mechanism was controlled by a single wire or cord, and the essential feature of the invention was that the clock-work would be released and an alarm sounded on the slightest movement of the said wire in either direction, whether such movement was caused by striking against and pulling the wire or by cutting and releasing it. Our present invention consists of devices whereby a series of wires, each capable of starting the alarm, are connected to the latter within a space much less than that required in other alarm apparatus.

In the drawing, A represents a clock-work alarm, of which *a* is the front plate; *b*, the bell; *d*, the striker; *e*, the escapement-lever; and *f*, the escapement-wheel. The long arm of a bent lever, B, having its fulcrum at a point, *g*, on a fixed projection, *h*, extends through a slot, *i*, in the front plate *a*, and the short arm of the said lever is arranged, when depressed, to extend between the teeth of the escapement-wheel *f* and thus stop the motion of the latter and of the alarm mechanism. The pressure of the escapement-wheel against the short arm of the lever retains the latter in the position shown in Fig. 2, but when the said lever is withdrawn from between the teeth of the wheel by depressing its long arm it will, owing to the weight of the latter, have no tendency to return to its original position and again stop the motion of the wheel. We prefer that the lever B should act upon the escapement-wheel, but it might be combined with the escapement-lever or any other moving part of the clock-work for the purpose of stopping and releasing the same and the alarm. On the face of the front plate, adjacent to the projecting long arm of the lever B, are a number of studs, *j*, to each of which is hung an arm, D, constantly acted upon by a spring, *k*, wound on the stud, and tending to turn the said arm in the direction indicated by the arrows, Figs. 1 and 3; and each of the said spring arms, when turned back from the lever B, as shown in Fig. 1, is arranged to be held by a projection, *m*, on the sliding bar F, one of which is provided for each arm. The sliding bars F pass through and are, in the present instance, guided by the plate *a*, and to one end of each of the said bars is connected a spring, *p*, tending to draw it in one direction, while to its opposite end is attached a cord or wire, *x*, tending to draw it in the opposite direction, the tension of the wires being so regulated that the projection *m* of each bar shall be directly opposite its spring-arm D, and thus serve to retain the latter. The cords or wires *x* are conducted to the various portions of the building at which it is supposed a burglar would attempt to force an entrance, and are also conducted across passage-ways, &c., where they would be likely to be struck by a burglar. If any one of the wires is pulled the motion will be communicated to its sliding bar F, the projection *m* of which will be withdrawn from the spring-arm D, retained by it, and if the said wire is cut, its sliding bar will be moved in the opposite direction by the action of the spring *p*, which would also have the effect of releasing its spring-arm D. As soon as any one of the latter is released it will immediately, owing to the action of its spring, turn from the position shown by full lines to that indicated by dotted lines in Fig. 3, and by suddenly striking and depressing the projecting long arm of the lever B will correspondingly elevate the short arm of the latter from between the teeth of the escapement-wheel *f*, and thus

release the same and permit the alarm to be sounded. And it will be seen that this operation is effected without disturbing any of the other wires, so that a subsequent attempt to enter at any other part of the building would be as effectively announced as the first.

If desired, the location or number of the rooms to which the several wires lead may be marked upon or adjacent to their respective arms D, so that when any one of the latter is released the point from which the alarm has been sounded can be ascertained at a glance.

As the several sliding bars F, with their wires and springs, are entirely independent of each other, and as each has a separate spring-arm, D, arranged, when released, to strike and turn the retaining lever B, it will be evident that the alarm mechanism will be as much under control and as sensitive in its operation when connected with a series of wires as when operated by one wire only. It is necessary that the spring sliding bars F should be employed, but the remaining devices may be variously modified without departing from our invention. The arms D might, for instance, be dispensed with, and continuations or projecting ends of the springs *k* be substituted for the same. Another modification is shown in Fig. 4, where the lever B is dispensed with and a sliding stop, B′, connected by cords *y* to the several spring-arms D, is used in place of the same; and in Fig. 5 a sliding stop, B′, is also used, and weighted levers D′ are substituted for the arms D. Various other modifications will suggest themselves.

We claim as our invention—

The wires *x*, arranged as described, in combination with the spring sliding bars F having stops *m* and rotating weighted or spring-arms D, which, when released, operate the detent of the alarm mechanism, all as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ISAAC HERZBERG.
ABRAM HERZBERG.

Witnesses:
WM. A. STEEL,
HARRY SMITH.