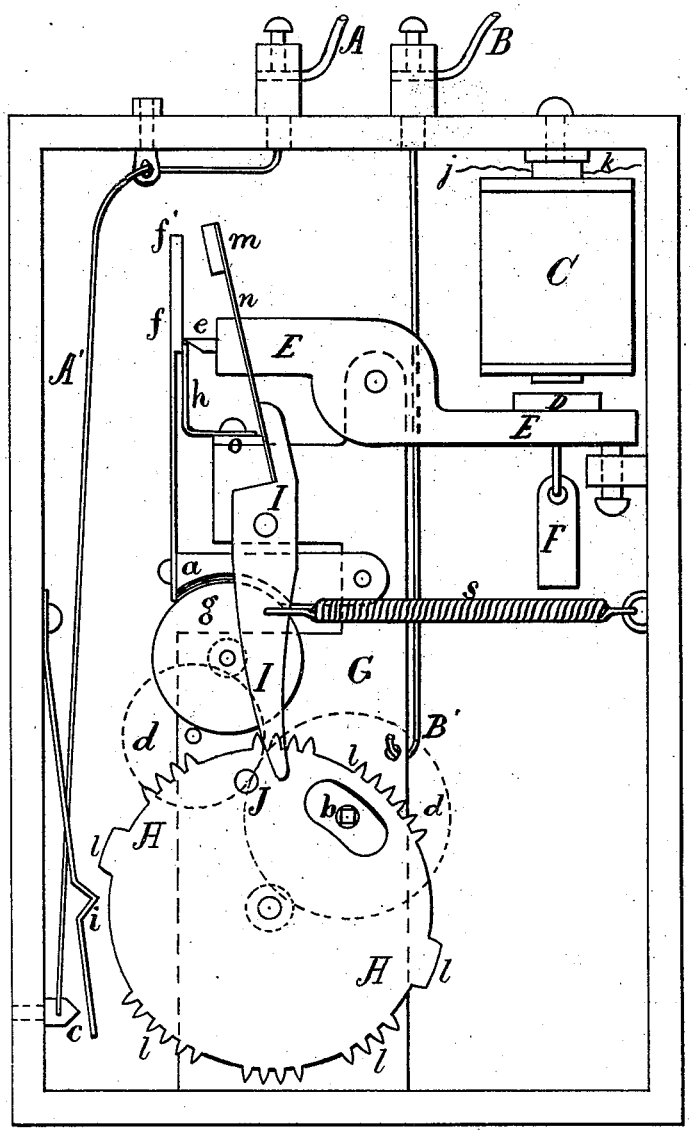
D. L. WILDRICK & W. H. DARLING.

BURGLAR-ALARMS.

No. 193,905. Patented Aug. 7, 1877.



Witnesses.

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DAVID L. WILDRICK AND WILLIAM H. DARLING, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **193,905**, dated August 7, 1877; application filed February 19, 1877.

To all whom it may concern:

Be it known that we, DAVID L. WILDRICK and WILLIAM H. DARLING, both of the city of Newark, in the county of Essex and State of New Jersey, have, as joint inventors, invented certain new and useful Improvements in Burglar-Alarms, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference thereon, which form a part of this specification.

This invention relates to that class of burglar-alarms which is designed to operate upon an open circuit; and consists in various appliances for closing the circuit and automatically transmitting the required signals—generally the number of the house or station where the instrument is located.

The improvements claimed are clearly shown in the accompanying drawing, which represents the signal-box opened.

A and B are, respectively, the insulated wires of the signal-circuit, which bring the current to, and carry it away from, the box, the wires in their complete circuit being connected to a battery, as well as to the station to which the signals are to be transmitted. The magnet for the alarm-circuit is shown at C, and its armature D is fastened to a lever, E, of non-conducting material, terminated at the other end by a point, *e*, and weighted at F, so as to balance not only the other end of lever E, but the spring-catch *f* and brake *a*, controlling the automatic workings of the alarm. The wire A enters the box, and is then carried by wire A′ to the point or button *c*. The wire B enters the box and is attached, at B′, to a clock-movement, G, furnished with a spring and a winding-stem, *b*, and at *d d* with wheels transmitting a rapid motion to a regulating-wheel, *g*, and a slower motion to the signal-wheel H, the rim of which is furnished with suitable projections to strike the spring-key *i*, and close the circuit by pressing the key against the point or button *c*, as shown in the drawing. A brake, *a*, lies on the rim of the wheel *g*, and prevents the rotation of any of the wheels *g*, *d d*, or H.

A stop, *h*, secured to the top of the clock-movement, is placed so that the spring-catch *f* (attached firmly to the brake *a*) hooks upon it when the brake is raised, and prevents the latter from falling on the wheel *g* until the proper motions have been performed. The motion desired in case of an alarm is one revolution of the wheel H, which transmits the required signal twice, the rim of the wheel H being provided with two sets of teeth, *l l*, for effecting that object when revolved in connection with the spring-key *i*.

The required revolution is produced by the briefest action of the alarm-circuit affecting the magnet C, its wires *j k* being connected to the doors or windows of the building to be protected, in any usual manner, and the circuit fully closed.

The closed circuit produces an upward movement of the armature D, and thereby lowers the point *e* of lever E, but on the breaking of the circuit by any action of burglars the point *e* engages the spring-catch *f* attached to a brake, *a*, and being raised by the weight F or an equivalent spring, lifts the brake from the wheel *g*, and allows the spring of the clock-movement to give the desired motion to the signal-wheel H. The spring-catch *f*, when raised, immediately hooks upon the stop *h*, and is only dislodged when the wheel H, after making a revolution, brings into play a hammer, *m*, secured to the spring *n* on lever I, and actuated by a pin, J, inserted in the wheel H, where it will move the lower end of lever I through a small arc. The upper part of lever I is kept constantly pressed against the foot *o* of stop *h* by a spring, *s*, and the hammer *m* is so adjusted that when the lever I is pushed by the pin J the spring *s* is stretched to a certain extent, and on its recoil the hammer *m* strikes the head *f′* of the spring-catch *f*, and detaches it from the stop *h*. Its weight, with that of the brake *a*, causes the latter to fall on the wheel *g*, and the movement of the wheel H is thus checked immediately after its pin J has engaged the lever I.

Starting from this point at the beginning of each movement, it is evident that wheel H can make but one revolution, when the brake will fall upon the wheel *g* and stop its motion.

It may be observed that the lever E can be provided with the point *e* at the side or in some other place to engage the spring-catch *f*, as described; and we do not, therefore, limit our-

selves to the exact construction of the lever and pin that is shown, but claim the right to make it in any desirable form.

We likewise do not limit ourselves to the precise arrangement of the pin J that is shown; but claim the right to use any equivalent means of tripping the lever I in the manner described.

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

1. The arrangement, in a burglar-alarm, of a signal-wheel, brake-wheel, brake, and connections to the armature of an alarm-magnet, for starting and stopping the signal-wheel, as set forth.

2. The combination, in a burglar-alarm, of the magnet C, (connected with the building to be protected in any usual manner,) armature D, and lever E, or its equivalent, with the signal-wheel H and brake-wheel *g*, both revolved by weight or spring, substantially in the manner described, and controlled by the falling of the armature D from the maguet C, in the manner set forth.

3. The pin J, or its equivalent, on the signal-wheel H, operating in combination with the lever I and hammer *m* to drop the brake when lifted from the wheel *a* by lever E.

4. The stop *h*, spring-catch *f*, and hammer *m*, operating with the point *e* on lever E to raise and drop the brake *a*, as and for the purpose described.

In testimony that we claim the foregoing we hereto affix our signatures in presence of two witnesses.

DAVID L. WILDRICK.
WILLIAM H. DARLING.

Witnesses:
OLIVER DRAKE,
E. A. DRAKE.