

BIGGAR, BLOOD & GRISWOLD.

Burglar Alarm.

No. 79,895.

Patented July 14, 1868.

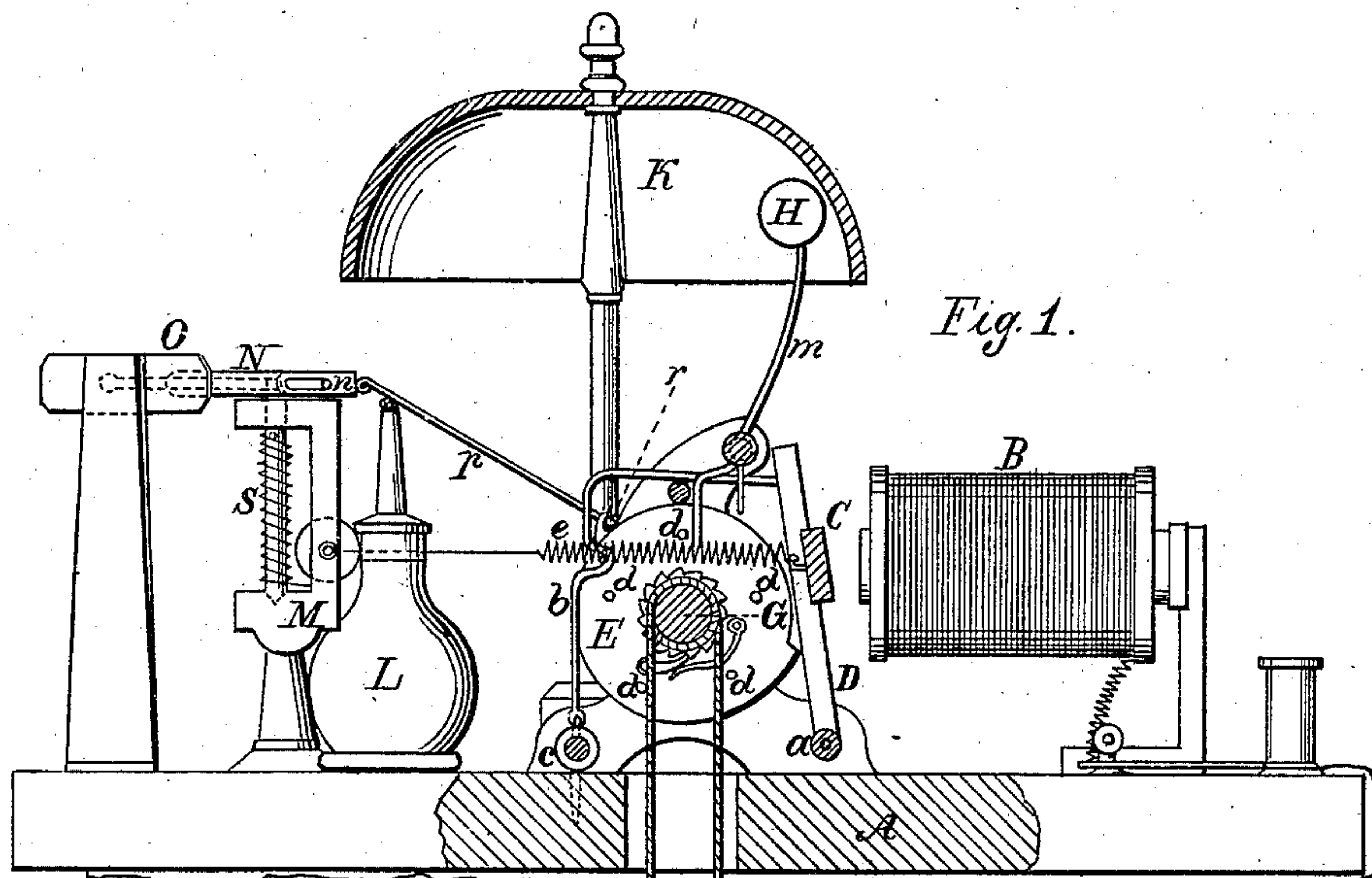


Fig. 1.

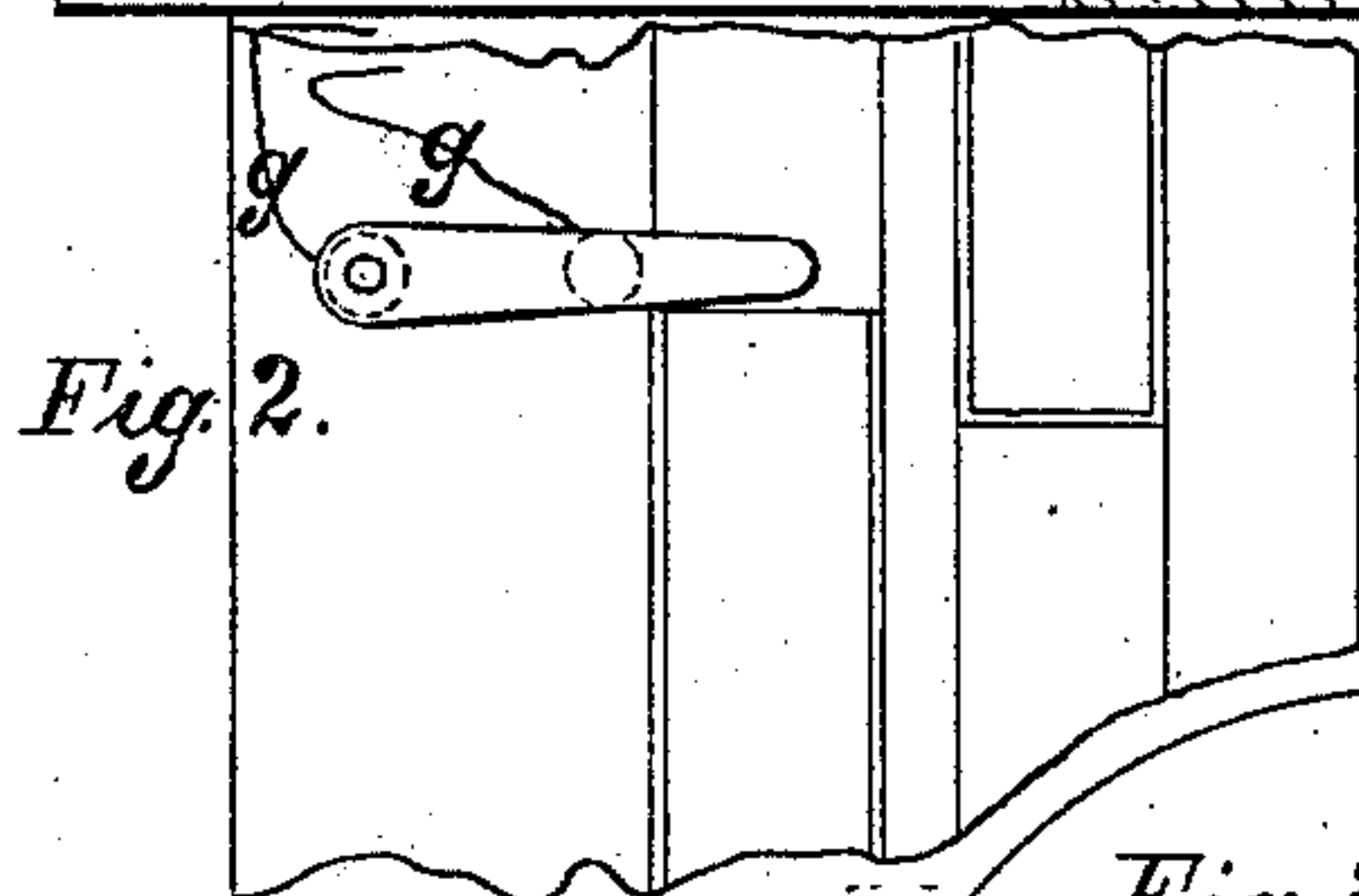


Fig. 2.

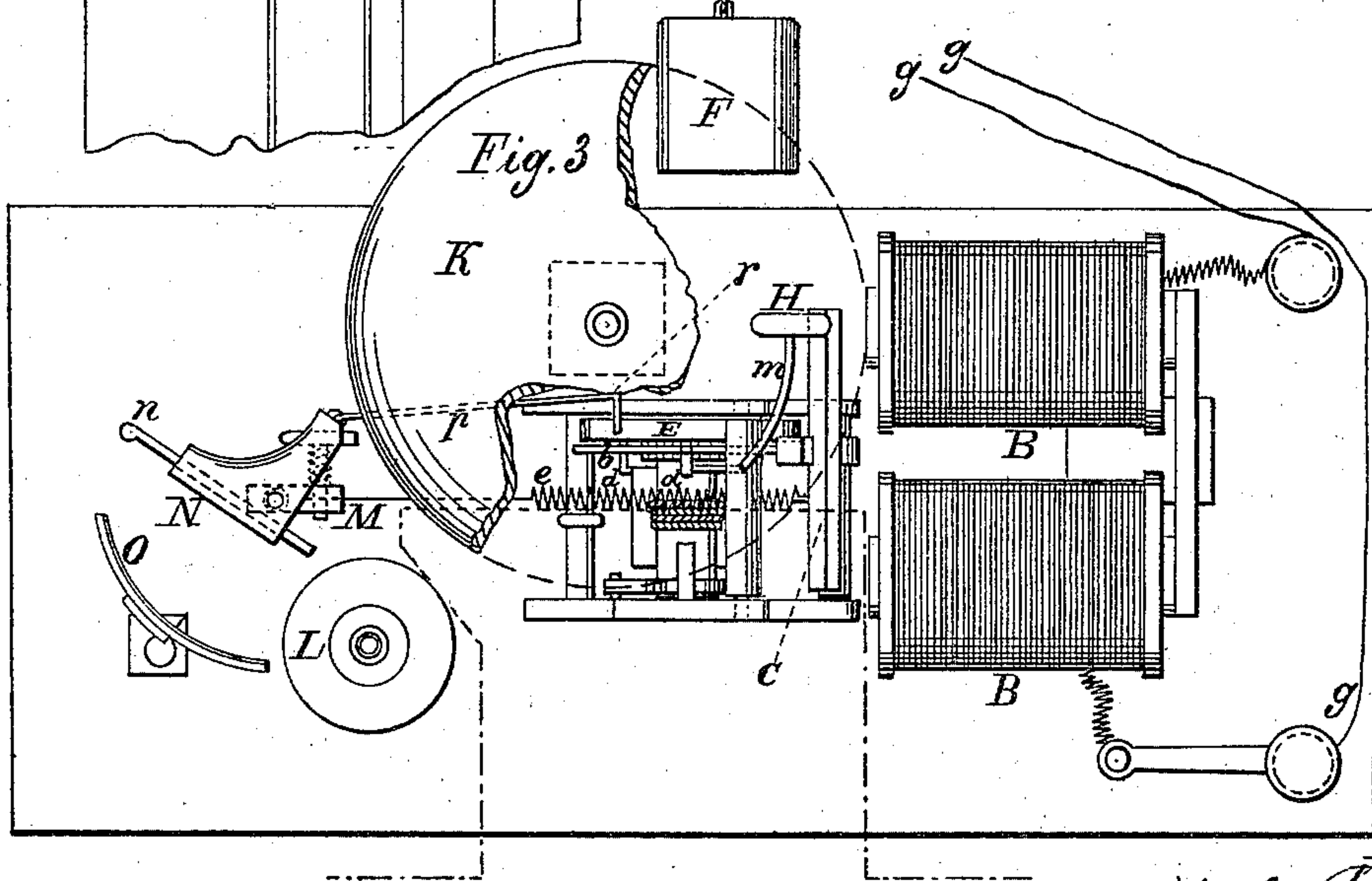


Fig. 3.

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UNITED STATES PATENT OFFICE.

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CONNEAUT, OHIO.

ELECTRO-MAGNETIC BURGLAR-ALARM.

Specification forming part of Letters Patent No. 79,895, dated July 14, 1868.

To all whom it may concern:

Be it known that we, WILLIAM J. BIGGAR, JOHN C. BLOOD, and D. M. GRISWOLD, of Conneaut, in the county of Ashtabula and State of Ohio, have invented a new and useful Improvement in Magnetic Burglar-Alarms; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of our improved magnetic burglar-alarm; Fig. 2, a detached view of a circuit-breaker connected with a window. Fig. 3 is a plan or top view of the instrument.

Similar letters of reference indicate corresponding parts.

This invention relates to improvements in the construction and arrangement of an instrument for giving an alarm, on the entrance of a burglar into a house, by means of a magnetic circuit; and it consists in connecting copper wires with a battery to run through the house, and having circuit-connections attached to the doors and windows, so that when a window or door is opened by a burglar the break of the circuit shall release the armature from the magnets, and thus act upon an alarm by striking a bell and lighting a fluid-lamp or candle in the room where the instrument is placed, as hereinafter more particularly described.

On a suitable base, A, are placed two coil-magnets, B B, provided with an armature, C, attached to a frame, D, pivoted at *a*, and connected with a bent wire lever-catch, *b*, pivoted at one end at *c*, which catch is formed so as to engage pins *d d* on the side of a wheel, E, and hold it fast when the circuit is complete and the armature is connected with the magnets, but is released from the pins when the circuit is broken and the armature is released from the magnets, being drawn therefrom by a spiral spring, *e*, when the break in the circuit occurs, as hereinafter described.

The electro-magnetic circuit is formed by a copper wire, *gg*, which extends through a building to be protected against burglars, and provided with circuit-connections *h h*, Fig. 2, and breakers at the windows and doors, one end of the wire being connected with the positive

and the other with the negative pole of the battery. The wire being thus arranged throughout a house and the proper connections made with the magnets, the operation thereon is obvious, and when a break occurs in the circuit by the opening of a door or window by a burglar the armature C will be released from the magnets and drawn by the spring *e*, when the lever-catch *b* is thrown from one of the pins *d* and releases the wheel E held by the catch, so that it shall be turned by means of a heavy weight, F, attached to a cord, *j*, running over the axis G of the wheel E, by the turning of which the pins *d d* strike the handle *m* of a clapper, H, of the bell K, and thus sounds an alarm.

In connection with the instrument is also provided, as an additional means of alarm, a self-lighting apparatus operated at the same time as the bell-alarm.

The lamp L is set alongside of a stand-post, M, on the top of which is an elbow-lever, N, which holds a match, *n*. The lever N is provided with a rod, *p*, the outer end of which catches on a projection, *r*, on the periphery of the wheel E, to set it for lighting the lamp when the electro-magnetic circuit is complete, and when the wheel is released, as before described, the rod *r* is thrown off and the elbow-lever N is drawn around by the spiral spring *s* attached to the post M, when the match is brought in contact with a sanded rubber, O, and ignited, and thence carried to the wick of the lamp to light it.

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

The combination and arrangement of the magnets B B, armature C, pivoted frame D, wheel E, provided with pins *d* and catch *r*, hinged lever-catch *b*, bell K, hammer H, handle *m*, spiral springs *s e*, catch *p*, swinging holder N, rubber O, stand M, lamp L, weight F, cord *j*, shaft G, wires *g*, and circuit connections and breakers, all substantially as and for the purpose herein shown and described.

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