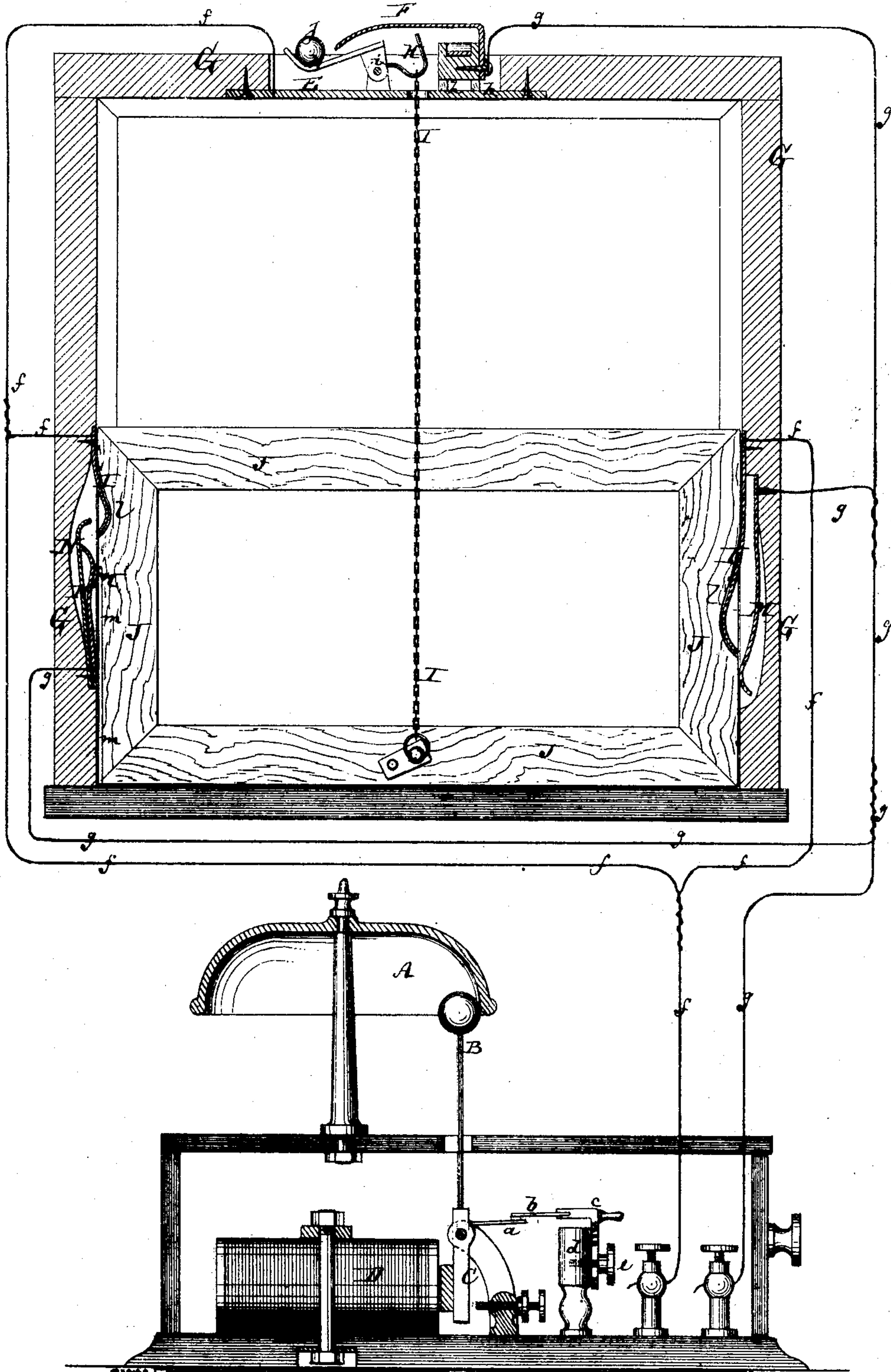


G. E. COCK & J. H. GUEST.  
 Improvement in Electro-Magnetic Burglar Alarms.  
 No. 118,199. Patented Aug. 22, 1871.



Witnesses:

Francis Mc Ardle.  
 Alex L. Roberts

Inventor:

G. E. Cock  
 J. H. Guest.  
 PER *Mumf. & Co.*  
 Attorneys.



# UNITED STATES PATENT OFFICE.

GEORGE E. COCK AND JOHN H. GUEST, OF NEW YORK, N. Y.

## IMPROVEMENT IN ELECTRO-MAGNETIC BURGLAR-ALARMS.

Specification forming part of Letters Patent No. 118,199, dated August 22, 1871.

*To all whom it may concern:*

Be it known that we, GEORGE E. COCK and JOHN H. GUEST, of the city, county, and State of New York, have invented a new and Improved Burglar-Alarm; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which the drawing represents a face view, partly in section, of our improved burglar-alarm.

This invention relates to several improvements in the sounding and setting apparatus of a burglar-alarm; and consists, first, in the arrangement of an adjustable spring, whereby the movements of the vibrating armature are regulated; also, in the application to windows of a balanced metallic circuit-closer, which will serve to establish a current as soon as the sash is moved or its panes are meddled with. Finally, the invention consists in the introduction of a peculiar set of springs between the sash and window-frame for closing the circuit as soon as the sash is elevated.

A in the drawing represents the bell of the burglar-alarm. B is the clapper of the same, connected with the vibrating armature C, which is pivoted opposite the electro-magnets D. From the armature projects a horizontal spring or arm, *a*. *b* is a flat spring, secured to a frame or holder, *c*, which is vertically adjustable on a post, *d*, of the instrument. By means of a screw, *e*, the spring *b* can be secured at a suitable distance above the arm *a*. During the vibration of the armature the spring *a* will strike the spring *b* with greater or lesser intensity, according to the height of the latter. The strokes of the armature are thereby controlled, the clapper being thrown with greater or lesser violence against the bell. The alarm instrument is, by wires *f* and *g*, connected with the battery and with two metal plates, E and F. The plate E is sunk into the top of the window-frame G, and is, at *h*, insulated from the plate F held above it. H is a metal beam or bar, pivoted at *i* to metal lugs that project from the plate E. One end of the beam H is weighted by a ball, *j*, or equivalent means. The other end is, by a cord or chain, I, connected with the lower window-sash J. This chain, when the sash is down, holds the beam H balanced, so that neither end is in contact with the plate F above. When, how-

ever, the chain is pulled by meddling with the window-panes or direct contact, it draws one end of the beam down and swings the weighted end against the plate F. When, on the contrary, the chain is slackened by elevating the lower sash or cut, the weighted end of the beam H descends and carries the other end in contact with the plate F. In either case, therefore, metallic connection between the plates E and F is established, and, consequently, also a circuit through the wires and the alarm instrument operated. During day-time the chain can be disconnected from the sash J and put out of the way. The wires *f* and *g* connect, also, with plates L and M, which are secured to the inner edge of the window-frame, between the same and the edge of the window-sash. The upper spring-plate L springs into a notch, *l*, of the window-sash when the latter is down or closed; but when the same is raised it crowds the plate L against a spring, N, which is in contact with M, and establishes thereby metallic connection between the wires *f* and *g*.

A metal plate, *m*, can be secured to the edge of the sash to make direct connection between the plate L and M.

The plate L may be suspended from its fastened end, and the plate M project upward, as shown, at the left-hand side of the drawing, or both be suspended, as on the right-hand side. In the latter case the spring N and plate *m* may both be dispensed with. When the sash is raised clear of the plates L M, to be no longer in contact with the same, the circuit is closed by the spring of the plates, which throws them in contact with each other.

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

1. The adjustable spring *b*, applied to the alarm apparatus above the arm or spring *a* of the armature, as specified.
2. The beam H, pivoted between the plates E and F, and weighted at one end to operate substantially in the manner herein shown and described.
3. The spring-plates L M, combined with the spring N, and applied to the window-frame, substantially as specified.

GEORGE E. COCK.  
JOHN H. GUEST.

Witnesses:

T. B. MOSHER,  
GEO. W. MABEE.