

(No Model.)

A. WISWALL.
ELECTRIC BURGLAR ALARM.

No. 285,334.

Patented Sept. 18, 1883.

Fig. 1.

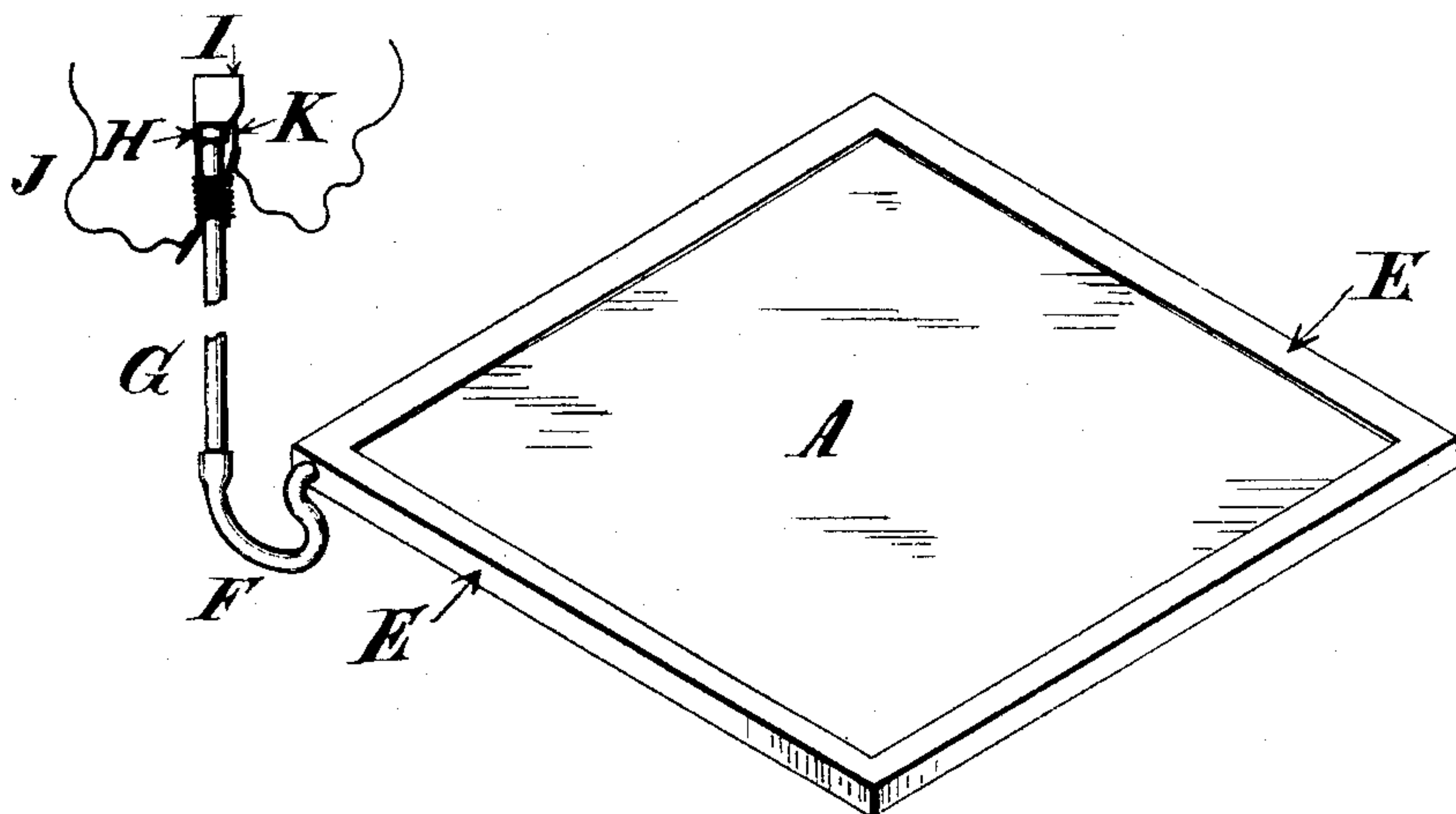


Fig. 2.

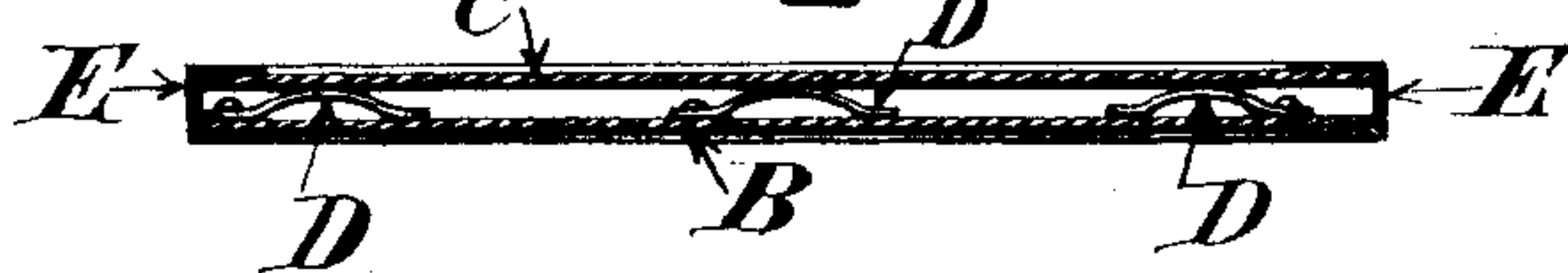


Fig. 3.

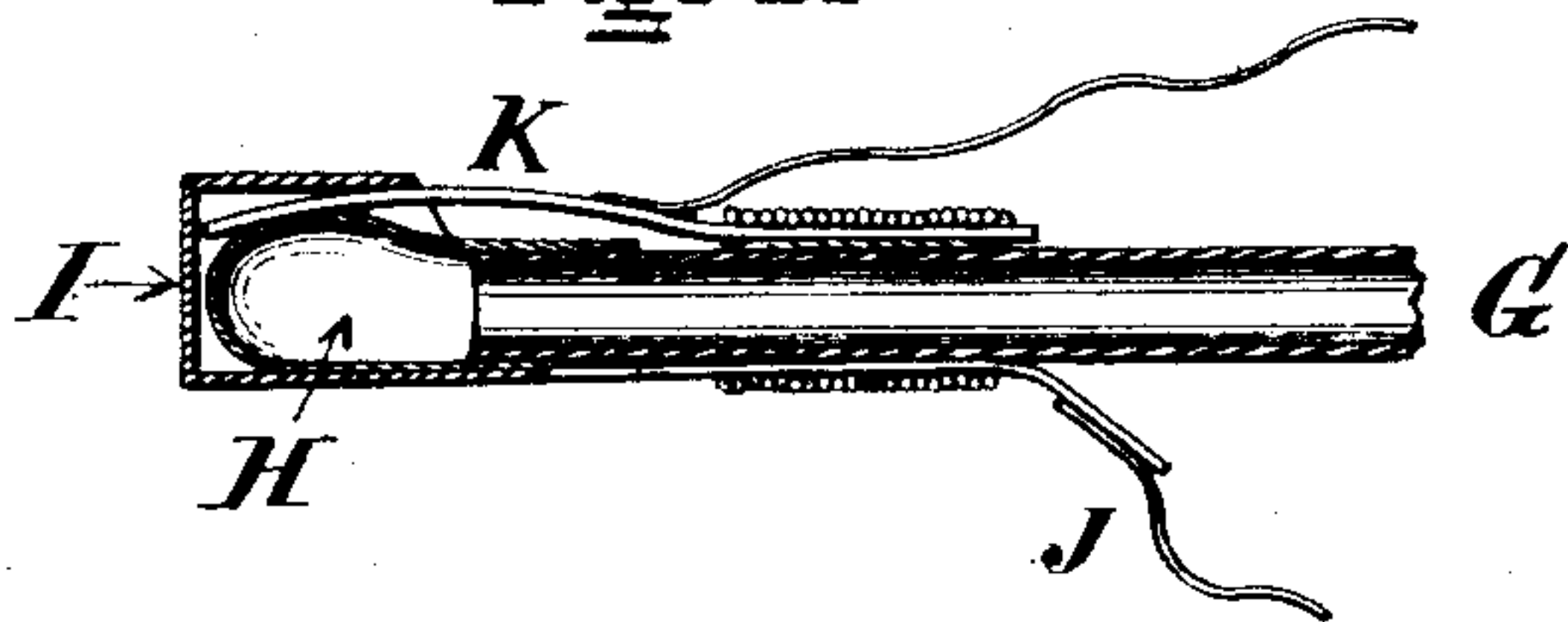
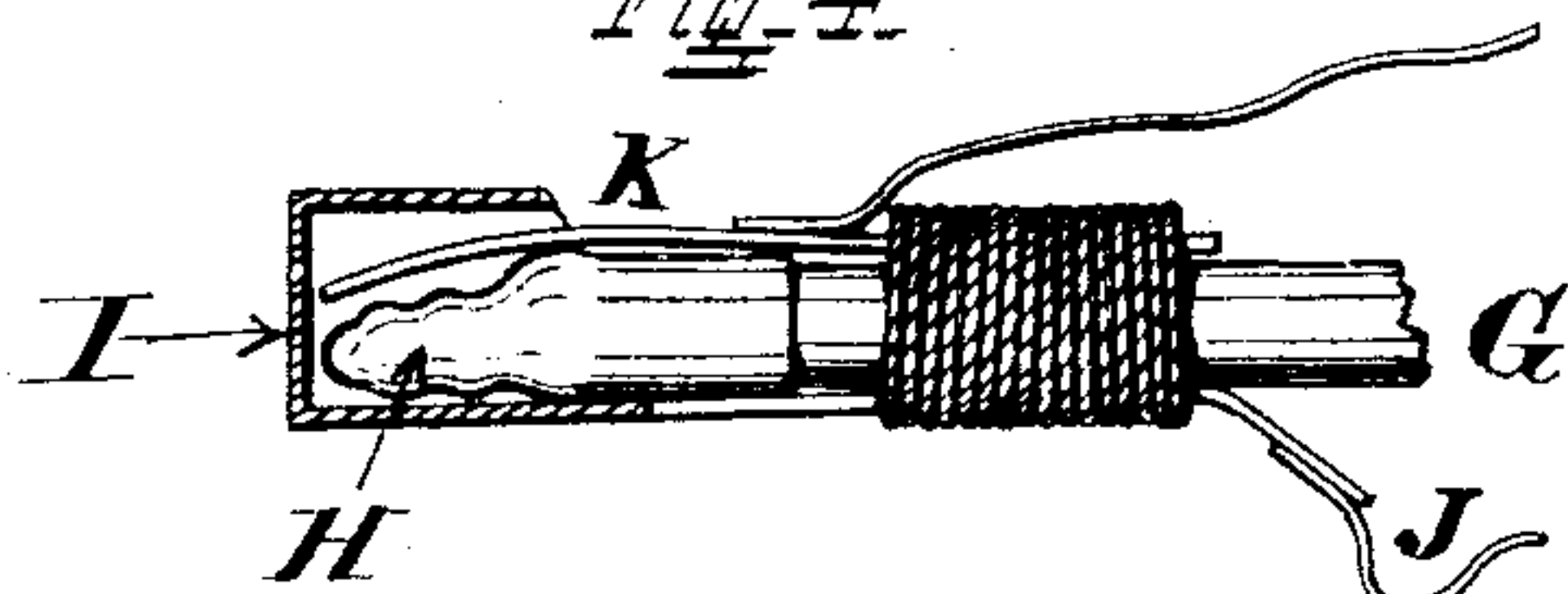


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALVAH WISWALL, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO
MATTHEW BRITTON, OF SAME PLACE.

ELECTRIC BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 285,334, dated September 18, 1883.

Application filed June 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALVAH WISWALL, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Electric Burglar-Alarm, of which the following is a specification.

My invention relates to the class of devices in which the act of alighting upon or walking across a particular spot is made known at a distant station by the sounding of an electric alarm.

Using any of the well-known electro-magnetic alarms and the ordinary or any approved means of electrical communication, my invention is directed to a novel mechanical device whereby the pressure of the passer's foot is made effective to close or to open the circuit, according to whether a normally-open or normally-closed circuit is employed.

This device consists, essentially, of a flattish bag or sack composed of two boards, plates, or sheets united at their edges, either directly or by a flexible membrane, and held apart at their middle portions either by the resilience of the upper plate or by springs introduced between them, as hereinafter described. This sack communicates by a suitable duct or tube with a sack, capsule, or bladder of thin rubber or other flexible and air-tight material, whose expansion by the air driven into it by pressure of the intruder's foot causes a contact of the terminals of the wires that communicate with the alarm, and, completing the circuit, causes the alarm to be sounded.

In the accompanying drawings, Figure 1 is a perspective view of a burglar-alarm embodying my invention. Fig. 2 is a vertical section through the sack; Figs. 3 and 4, through the circuit-closing device proper in its effective and non-effective conditions, respectively.

A is a bag or sack composed of two boards of identical shape and dimensions, and of rigid or of semi-rigid and elastic material, such as tar-board, sheet-iron, or wood. Of these boards, one board, B, rests on the floor of the apartment to be protected, and the other board, C, is upheld a slight distance above the first-named by means of springs D. The edges of these boards are united by a membrane, E, of rubber or other flexible and air-tight material. The bag thus formed communicates by one or more ducts or tubes, F G, with a sack, cap-

sule, or bladder, H, of india-rubber, oil-silk, or like flexible and impervious substance. Secured also to the end of the tube G is a metallic sheath, I, which is in electrical connection with one of the alarm-wires J. Also secured to tube G, but insulated from the sheath I, is a metallic spring, K, whose resilience (except when said spring is pressed forcibly outward by the expansion of the bladder H) maintains it out of contact with the sheath I. A person treading upon the bag A expels a portion of its air through the passages F G into the bladder H, thus causing the latter to expand, and in so doing to press the spring K against the sheath I, so as to close the circuit and start the alarm.

Any of the electro-magnetic alarm devices in common use may be employed, and such alarm may be capable of sounding a momentary or a prolonged signal, as may be desired. For example, for merely giving notice of the entrance of a business or social visitor a single short note is sufficient, while for a burglar-alarm proper a prolonged and louder signal is wanted. The above-described embodiment of my invention is manifestly susceptible to various modifications. For example, my device is clearly applicable for use with closed circuits, the bladder in that case operating to separate instead of to unite the terminals. The lower and upper boards of the bag A may be composed of different materials and be of different thicknesses. When of resilient material—such as sheet-steel—the upper board or plate, being made slightly crowning, may be united edge to edge with the lower plate, and by its capacity of resuming the crowning form of its own accord may operate efficiently without the use or necessity of any extraneous springs. Where such springs are used, they may be either of metal plates, as here illustrated, or of helical wire, or of india-rubber.

I am aware that stationary circuit-closers of electric alarms employing compressed air have been used to give notice of approaching railway-trains, and that portable circuit-closers of electric alarms have employed mats or platforms to signify the fact of persons passing over them, and I therefore disclaim novelty in such expedients, broadly considered.

I claim herein as new and of my invention—

1. In an electric burglar-alarm, the combination of an air-bag composed of two boards connected together at their edges to form an air-chamber between them, a bladder, H, pipe
5 connecting air-bag to bladder, a wire terminal sheath surrounding the end of the bladder, and a wire terminal spring located between the bladder and the sheath, the expansion of the bladder pressing the spring in contact with
10 the sheath to produce an alarm.

2. The combination, with the terminals of an electric burglar-alarm, of the portable hollow mat or bag composed of two boards, B C, hermetically united at their edges, one or more
15 springs, D, to hold the boards normally apart to form an air chamber or space, an alarm-wire having a spring, K, constituting its terminus, a sack or bladder, H, in contact with

the spring, and a pipe or tube connecting the sack or bladder to the mat or bag, as set forth. 20

3. The combination, in an electric-alarm circuit-closer, of the self-expanding hollow mat A, air-tight capsule H, pipe or tube connecting capsule to mat, spring K, constituting
25 one of the alarm terminals in contact with the capsule, and sheath I, surrounding the capsule and constituting the other alarm terminal, the capsule being normally in contact with the spring and the spring normally out of contact with the sheath, as set forth.

In testimony of which invention I hereunto set my hand.

ALVAH WISWALL.

Attest:

GEO. H. KNIGHT,
SAML. S. CARPENTER.