

(No Model.)

B. T. TRIMMER.

BURGLAR ALARM.

No. 330,942.

Patented Nov. 24, 1885.

Fig. 1.

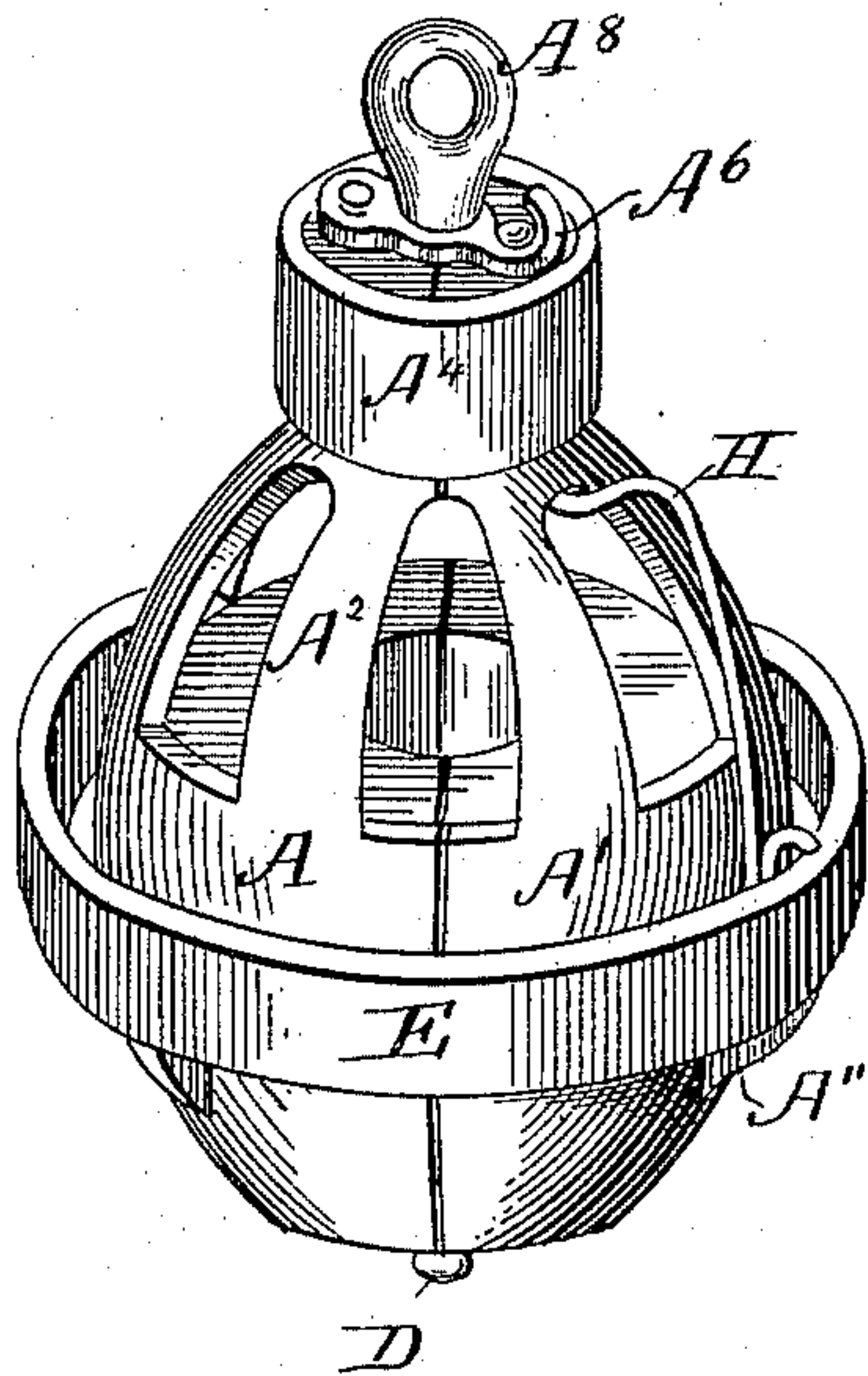


Fig. 2.

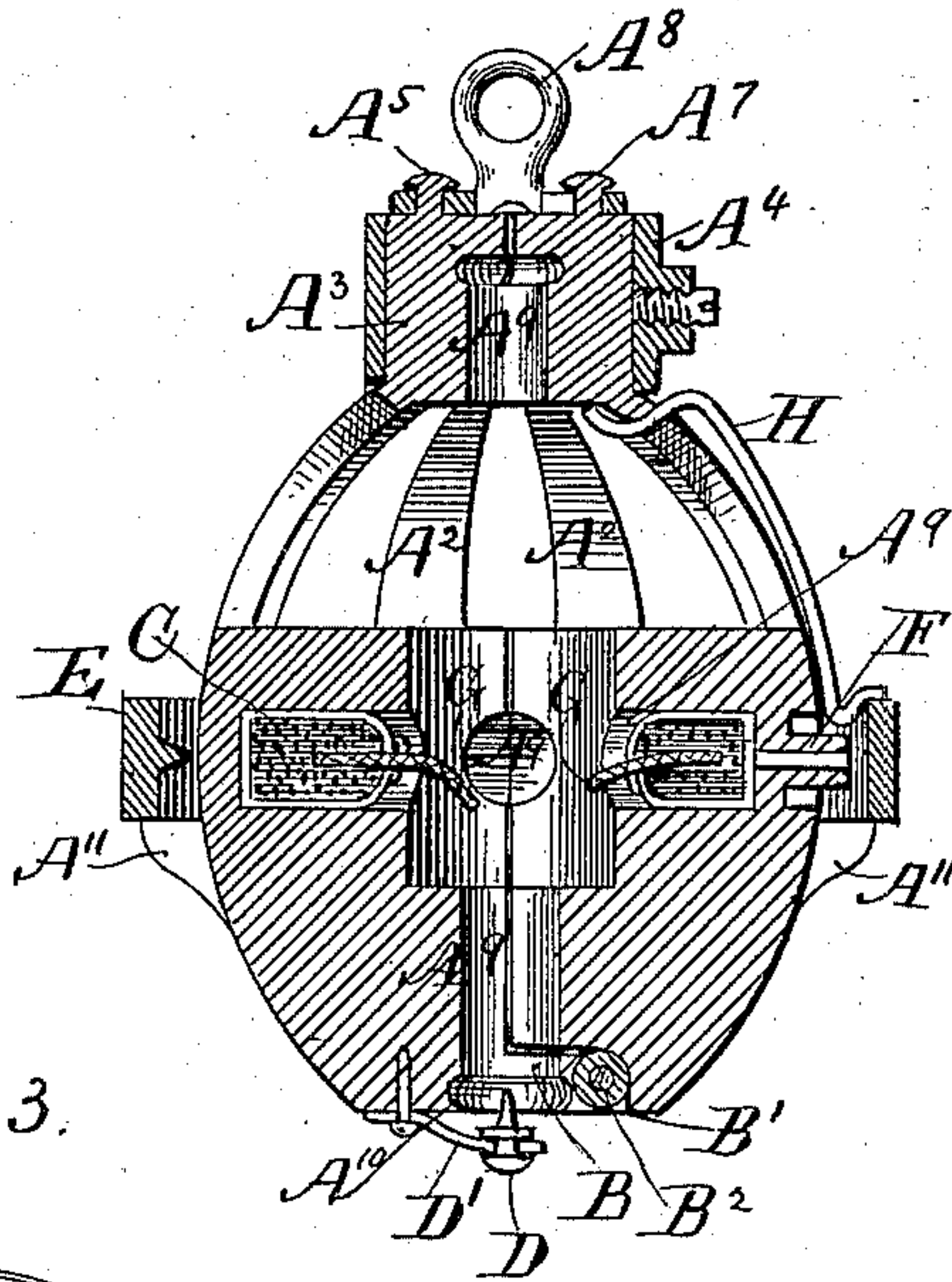


Fig. 3.

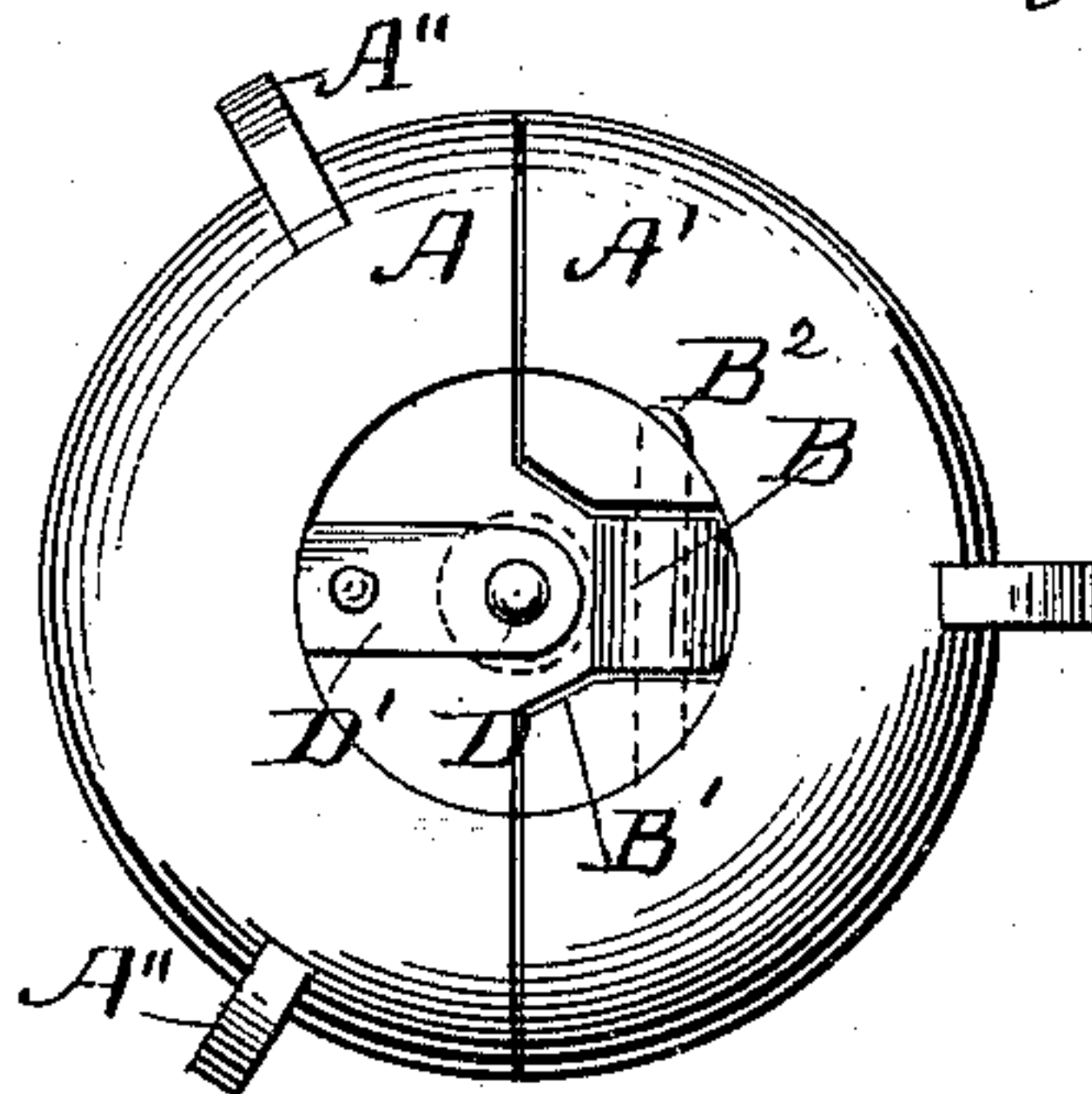
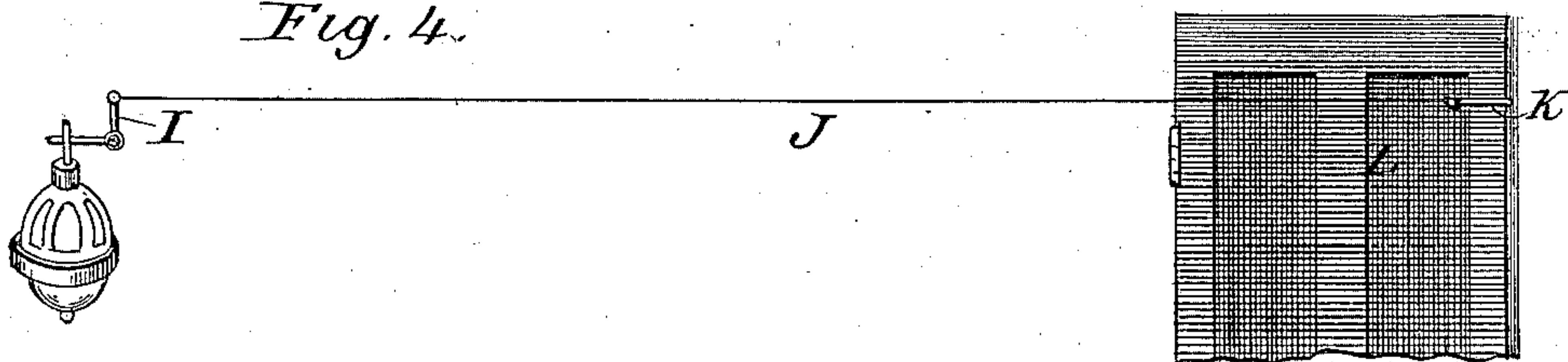


Fig. 4.



Witnesses:

L. H. Hills,
E. B. Gregory.

Inventor:

Benjamin T. Trimmer
by E. E. Masson
att'y.

UNITED STATES PATENT OFFICE.

BENJAMIN T. TRIMMER, OF WEST BLOOMFIELD, NEW YORK.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 330,942, dated November 24, 1885.

Application filed June 21, 1884. Serial No. 135,611. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN T. TRIMMER, a citizen of the United States, residing at West Bloomfield, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has relation to burglar-alarms of that class known as "detonating;" and it consists in certain features of construction hereinafter described, and specifically set forth in the claims.

15 Referring to the drawings, Figure 1 is a perspective, Fig. 2 is a central vertical section, and Fig. 3 a bottom plan, of a burglar-alarm constructed in accordance with my invention. Fig. 4 illustrates one manner of using the same.

20 Like letters refer to like parts in all the figures.

25 The principal object in view, and the principal result attained by my invention, is a succession of detonations or reports, in order that in case the first should fail to waken the occupants of the house the succeeding ones will do so, and the repetition of reports will also resemble successive shots of a revolver, and thus serve to intimidate intruders.

30 Although the objects and advantages of my invention are as set forth, still certain features of construction hereinafter described may be employed in alarms where but one explosion occurs when it is brought into action, and I therefore, so far as regards said features, do not limit myself to an alarm adapted to give a succession of reports.

35 A main case or shell is employed, and is constructed in two sections, A A', each being like the other, excepting in the construction of the hinge-joint uniting the two, which comprises a projecting lug, B, upon one of the sections, and a recess, B', formed in the other to receive said lug, so that a pintle, B², when
45 passed through the lugs and the walls of the recess, serves to pivotally connect the two sections together. The upper half of the case is formed with ribs A², and with a neck, A³, substantially cylindrical, about which is secured
50 a ring, A⁴. Upon the neck is pivoted at A⁵ a

closing-hook, A⁶, which is adapted to embrace a pin, A⁷, upon the opposite section of the case, and which is provided with a suspension-ring, A⁸, whereby the two sections are secured
55 in a closed position, and at the same time adapted to be suspended, and so far as the closing of the sections is concerned the suspension-hook may be relied upon, and in that case the ring A⁴ may be dispensed with. 6c

The lower half of the case is thicker and heavier than the upper half, and is provided with a series of chambers, A⁹, adapted to receive cartridges or shells C. A similar recess or chamber, A⁹, may be formed in the neck
65 portion A³—that is, one-half of the chamber being formed in each section of the case, as is the chamber located in the lower portion thereof. In this instance six chambers are formed in the case, one at the top, one at the
70 bottom, and four at the central portion of the case, all of the chambers opening inwardly, and provided with means for exploding cartridges arranged therein.

75 The cartridge employed may be either a center or a rim fire cartridge, or such as are fired by means of fuses projecting therefrom. When a central-fire cartridge is used, the firing-pin D is suspended opposite the center of the cartridge-chamber, either upon a spring, D'
80 or upon a ring, E, the former construction being preferably employed in connection with the lower chamber in the case, each half of the case being grooved, as at A¹⁰, to receive the flange of the cartridge. The same construction is employed in the neck portion of
85 the case. The recesses or chambers at the central portion of the case are arranged radially, and may be provided with nipples, as F, upon which a percussion-cap may be placed,
90 by which to explode a cartridge in the chamber; or a firing-pin may be carried mounted in the bore of said nipple in order to explode a cartridge; or the fuse, as G, may be arranged in the cartridge to project toward the center
95 of the case and to be ignited by the explosion of the first cartridge in the case. In case a nipple is used, the ring E is employed to explode the cartridge, said ring being supported upon brackets A¹¹, cast upon the case and re-
100 tained upon the brackets by means of wire spring or springs H, extending from the top

of the ring through oppositely-arranged openings between the ribs A^2 , and from thence to the upper surface of the ring at an opposite side of the case, when by simply removing the spring H the ring may be removed upwardly from the brackets for the purpose of applying caps to the nipples. The ring E is of larger diameter than the case, and is simply held upon the brackets by the wire spring H, so that the ring is capable of movement to and from the outer walls of the case upon the brackets.

This being the construction, the operation is as follows: The alarm may be suspended by means of a cord or wire attached directly to the suspension-hook A^8 , and detachably connected with a door or window of the apartment or building, which may be either a barn, smoke-house, hen-house, or any other building, so that when said door or window is opened the alarm will fall to the floor and, the lower portion of its case being the heaviest, in falling it will maintain an upright position and bring the firing-pin D suddenly and forcibly in contact with the floor, whereby the cartridge in the lower chamber will be exploded. Now, in case fuses G are employed the flame from the first cartridge will ignite said fuses, and the length of the same will determine the order of succession in the explosion of the remaining cartridges. When percussion-caps are employed in exploding the cartridges, then as the alarm comes in contact with the floor the first explosion is caused by said contact directly, the firing-pin coming in contact with the cap in the lower cartridge and the explosion of said cartridge in reacting against the case will throw it about the apartment and cause it to fall so as to strike the ring E in such a manner that one or the other of the centrally-arranged cartridges would be exploded by reason of the lateral movement of the ring upon the brackets, and the explosion of said cartridges would in a like manner probably explode the others. As there is undoubtedly possibility of a failure to explode some of the centrally-arranged cartridges by means of the ring, fuses G would perhaps be the preferable means for causing their explosion, and therefore I do not limit myself to the employment of the ring E for such purpose.

By reference to Fig. 4 a preferred form of suspension will be seen, which is to support the alarm upon a bell-crank lever, I, pivoted

to any suitable part of the building, one arm of the lever being connected by a cord, J, to a strap, peg, or any other suitable device, K, which can be inserted between a door, L, and its casting in such a manner that when a door, or it may be a window, is opened the device K will be released, and the weight of the alarm will cause the bell-crank lever to oscillate and permit the alarm to fall to the floor.

Having described my invention and its operation, what I claim is—

1. A burglar-alarm consisting of a spherical casing provided with a series of radial chambers and a surrounding ring with means, substantially as specified, for successively exploding the cartridges therein.

2. A burglar-alarm of the class described, comprising a shell or case formed in two sections, each of which has formed therein one-half of a cartridge-chamber, substantially as specified.

3. A burglar-alarm of the class described, comprising a case formed in two sections, pivotally secured to each other at their lower ends, and provided at their upper ends with a uniting-hook having a suspension-ring, substantially as specified.

4. The alarm-case consisting of the sections A A', provided with the hinge B B' B², and with a suspension-hook, A⁶, having the eye A⁸, and the firing-pin D, mounted upon spring D', and provided with the cartridge-chambers A⁹, arranged as described.

5. The combination of the section A, provided with the lug B, the spring and pin D D', and the half-chambers, with the section A', provided with the pintle B² and lug B', substantially as shown and described.

6. The case A A', provided with a central radial series of cartridge-chambers, A⁹, and with the lower chamber A⁹ the spring-supported firing-pin D, and the ring E, mounted upon the brackets A¹¹, substantially as shown and described.

7. The combination of the case A A', having the brackets A¹¹, and central radial cartridge-chambers, with the ring E and spring H, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN T. TRIMMER.

Witnesses:

E. E. MASSON,
L. C. HILLS.