

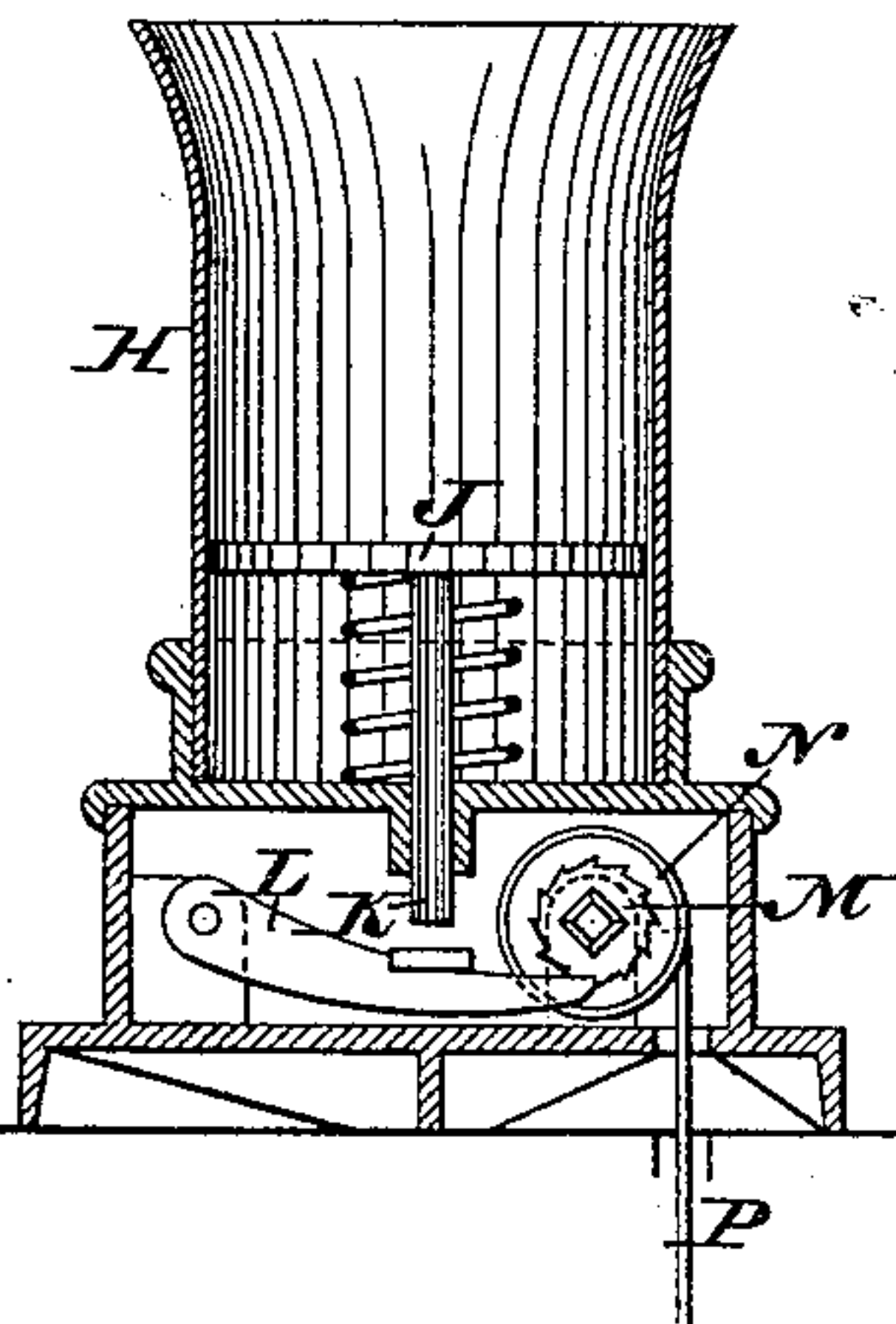
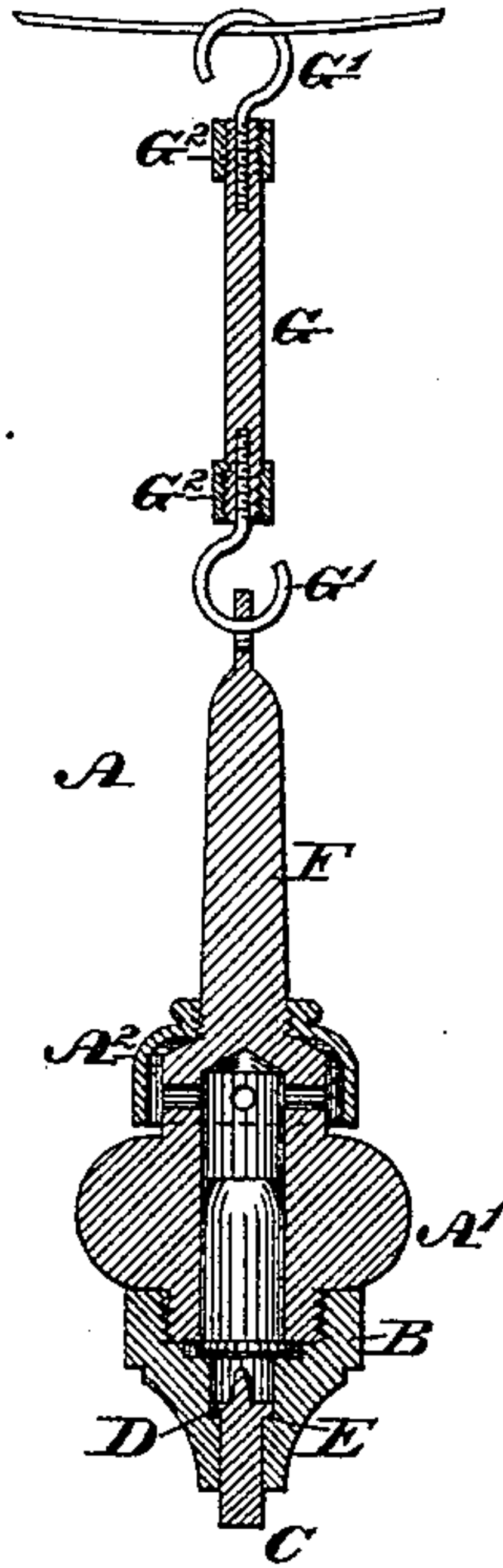
(No Model.)

B. J. ANTRIM.

FIRE ALARM.

No. 354,006.

Patented Dec. 7, 1886.



WITNESSES:

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UNITED STATES PATENT OFFICE.

B. JAY ANTRIM, OF PHILADELPHIA, PENNSYLVANIA.

FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 354,006, dated December 7, 1886.

Application filed June 11, 1885. Serial No. 168,404. (No model.)

To all whom it may concern:

Be it known that I, B. JAY ANTRIM, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Fire-Alarms, which improvement is fully set forth in the following specification and accompanying drawing, in which the figure represents a vertical section of a fire-alarm embodying my invention.

The invention consists of a detonator, as hereinafter set forth, which is held suspended by a piece of material which yields and separates or fuses at a temperature higher than that of the normal temperature of the apartment in which the detonator is placed, whereby said detonator falls and causes the explosion of the cartridge, &c.

It also consists of means, substantially as hereinafter described, for communicating the alarm to another apartment or locality.

Referring to the drawings, A represents a detonator consisting of a cartridge, torpedo, or cap holder, A', a holder, B, at the bottom thereof for a central firing-pin, C, which is adapted to strike the head or fulminate of the cartridge and discharge the same, said pin being prevented from downward displacement by means of its head D, resting on a shoulder, E, of the holder B. The upper part of the holder A' has secured to it a cap, A², which encircles the outlet-vents of said holder, and acts as a guard, preventing the fire of the cartridge from passing out beyond said cap.

The upper stem, F, of the holder B is connected with a piece, G, of india-rubber, caoutchouc, or fusible metal or other material or substance that is sufficiently strong to sustain the detonator under the normal temperature of the apartment in which the alarm is located, said piece being suspended from the ceiling or elsewhere.

It will be seen that in the event of fire the piece G yields, stretches, or fuses, and thus separates or breaks, whereby the detonator is no longer held, and as it drops the pin C strikes the floor or some object in its path, whereby the cartridge is exploded and an alarm accordingly sounded, it being noticed that the

detonator is weighted at the bottom, and the pin, centrally arranged, strikes the floor, &c., true, and unfailingly discharges the cartridge.

Below the detonator is a case or guide, H, which contains a plunger, J, the depending stem K of which is adapted to strike a dog or pawl, L, the latter engaging with a ratchet, M, on a drum or reel, N, said case being supported on the floor or elsewhere in the apartment. A cord, P, is wound on the drum N, and connected with a distant alarm or an alarm in another apartment, said cord being held taut, and when released permitting or causing said distant alarm to be operated. The said separate alarm may be of any ordinary construction wherein the action of the cord will operate the same, and, not being claimed independently, is not shown in the drawing.

When the detonator loses its support, it drops and strikes the plunger J, thus discharging the cartridge, &c. Simultaneously therewith the stem K strikes the dog L, and the drum N rotates, thus permitting the cord P to unwind, and causing the distant alarm to be sounded.

The piece G has a hook or eyes, G', at each end, the same being screwed into said end, and held firmly therein by the compressing action of ferrules G² G², previously applied, the upper hook or eye being adapted for attachment to a place of support on the ceiling, &c., and the lower hook or eye having the detonator hung thereon, as shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A detonator composed of the cap-holder A', having outlet-vents, the holder B, having the shoulder E and secured to the cap-holder A', the stem F, and cap A², said parts being arranged and combined as described.

2. A detonator having a fusible support, in combination with a guide, a spring-plunger, a pawl-and-ratchet mechanism operated by said plunger, a drum actuated by said pawl and ratchet, and a cord connected to said drum and arranged for connection with a separate alarm, substantially as described.

3. A suspended separable detonator, in

combination with the guide H, the spring-plunger J within said guide, the pivoted pawl L, the ratchet M, the drum N, and cord P, for connection with a separate alarm, substantially as and for the purpose set forth.

4. A detonator having a fusible support, in combination with a spring-plunger having a guide, and mechanism, substantially as de-

scribed, connected with the plunger for operating an alarm, substantially as and for the purpose set forth.

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Witnesses:

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