

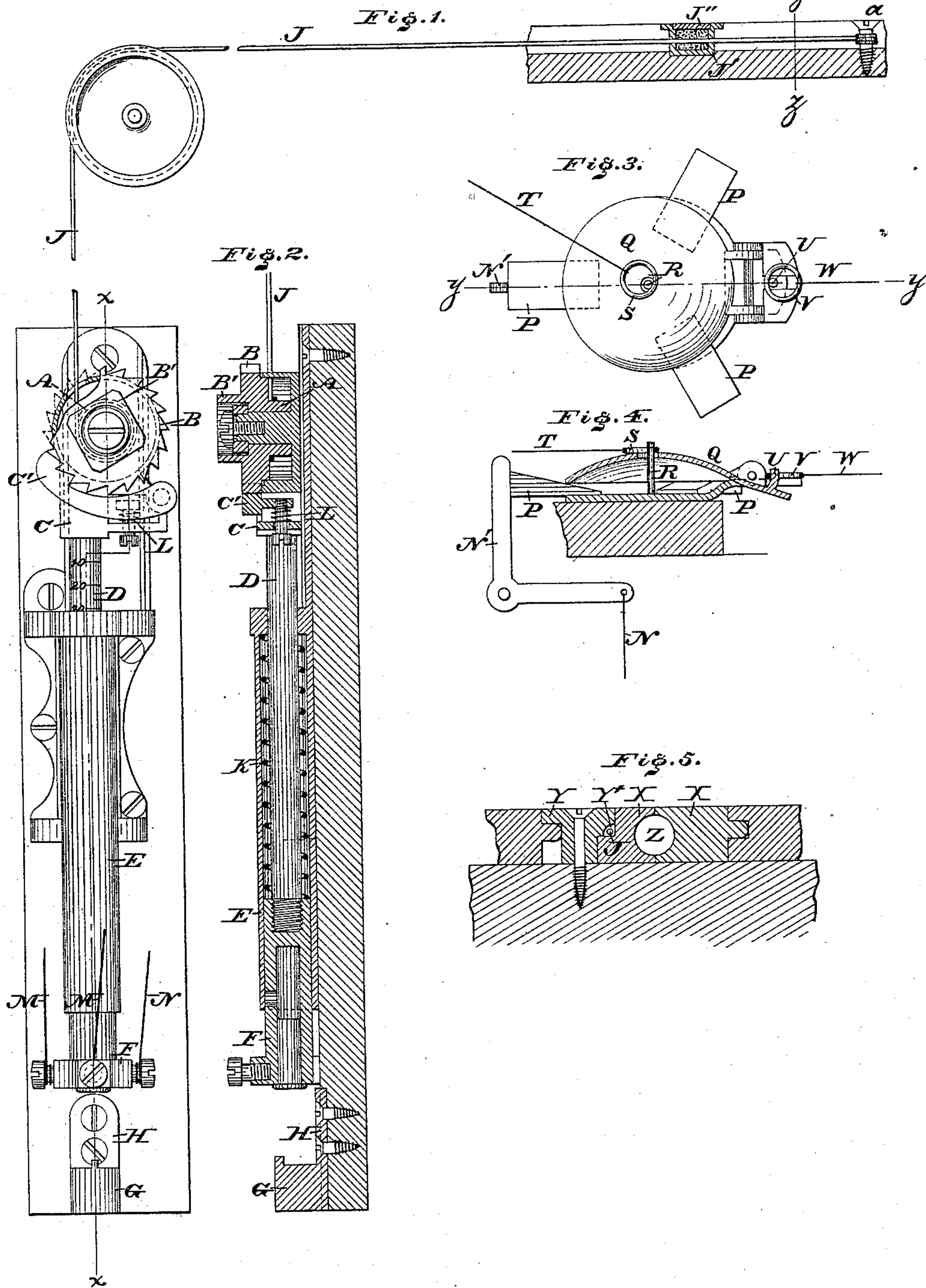
(No Model.)

B. J. ANTRIM.

FIRE ALARM.

No. 304,894.

Patented Sept. 9, 1884.



WITNESSES:

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FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 304,894, dated September 9, 1884.

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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 drawings, in which—

10 Figure 1 is a partial side elevation and partial vertical section of an alarm embodying my invention. Fig. 2 is a vertical section in line *x x*, Fig. 1. Fig. 3 is a top view of a form of tripping device which may be used. Fig. 4
15 is a section in line *y y*, Fig. 3. Fig. 5 is a section in line *z z*, Fig. 1, of a portion of the floor of an apartment having my invention applied to it.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of an alarm which is automatically and reliably operated in the event of fire, as will be hereinafter fully set forth.

25 Referring to the drawings, A represents a drum or reel, which is formed with or has secured to it a ratchet, B, and mounted on a sliding head, C.

D represents a plunger, which is connected
30 with the head C and fitted in a tube, E, the latter being located in any desirable apartment or place. The end of the plunger opposite to the head C is formed with or has secured to it a cartridge-holder, F, and adjacent thereto is an
35 anvil, G, which is secured to a bracket, H, or other support, and so located that the head of the cartridge fitted in the holder F may strike the anvil G when the plunger is released, and be thereby discharged, said plunger having
40 bearing against it a spring, K, the object whereof is to force the plunger in the direction toward the anvil G.

Connected with the reel A is a wire, J, which, held firmly at its distant end, as at *a*, extends
45 through the floor or other portion of an apartment to be protected, and is tightened by rotating the reel, a portion of the wire thus winding thereon.

In order to prevent unwinding of the reel,
50 the ratchet has engaged with it a pawl or dog, C', which is held in contact therewith by the action of a spring, L, said pawl and spring be-

ing connected with the head C. The ratchet is formed with a nut, B', whereby, by the application of a suitable wrench, the ratchet, and
55 consequently the head, may be rotated, the pawl C' riding freely over the teeth of the ratchet, and locking therewith when the rotation of the ratchet is stopped.

Secured to the plunger are wires or cords
60 M, which are connected with the cocks of water-pipes, alarms in other apartments and localities, &c., or may have a cutting device attached to it, so as to sever wires or cords
65 which are connected with the cocks of water-pipes, alarms, or other apartments and localities, &c. The plunger has also connected with it a wire, N, which is attached to an elbow-lever, N', for operating the hinged plate Q of tripping mechanism, that shown in Figs. 3 and
70 4 being simply an example of what may be used. The wire J passes through a box, J', located on or in the floor of an apartment or place to be guarded, and containing chloride
75 of potassium, charcoal, and sulphur, or other inflammable substances, which, when ignited, will burn or destroy the wire J. The cover J'
of the box is celluloid or other inflammable material, so that should burning matches,
80 pieces of paper, &c., be thrown on the floor on or adjacent to the celluloid cover without being extinguished, and the same continue to burn sufficiently to ignite the cover of the box,
the fire is communicated to the contents of the box. The same result is occasioned when the
85 apartment or room is on fire, so as to burn the floor and the top of the box J'. As soon as the portion of the wire J in the box is burned or destroyed the wire is released, and the plunger
D no longer controlled by the same, whereby
90 the spring K is operative and the plunger moves under the impulse thereof, so that the cartridge is discharged and an alarm thereby sounded. The connections M are also moved
or operated so as to cause the discharge of
95 water into the apartment or place of the existing fire, or sound the alarm in said apartment. The connection N also moves the elbow-lever N', whereby the wedge P raises the plate Q, so that the ring S is stripped from the pin R and
100 the ring V from the pin U. This liberates the wires or cords T W, and the alarms, cocks, &c., connected therewith are operated.

It is evident that some of the alarms may be

located in fire-houses, clerks' and watchmen's rooms, rooms of a hotel, dwelling, &c., and any other desirable locality. It is also evident that in the event of other danger than fire—such as
5 burglary—a party may sound an alarm by setting fire to the lid of the box J', or the contents thereof, the effect of which on the wire J is similar to that above stated. Fig. 5 is an example showing how the flooring X may be used as a
10 conduit, Y', for the wire J, and a conduit, Z, for water turned on when the plunger D is operated.

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

1. A plunger having a cartridge-holder, an anvil for the cartridge, both connected with a proper support, a winding-reel mounted on the plunger, a ratchet connected with said
20 reel, and a pawl hung on the plunger engaging with said ratchet, in combination with a wire which is attached at one end to said reel and sustains the same and connected parts, and has the other end fixed in an apartment, substantially as and for the purpose set forth.
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2. In a fire-alarm, a box having a wire of the alarm mechanism passed through it, and containing an inflammable material capable of burning or destroying the wire, said box having a lid which is of inflammable material, substantially as and for the purpose set forth. 30

3. A plunger having a cartridge-holder, an anvil for the cartridge, located adjacent to said plunger, a winding-reel mounted on the head of said plunger, a ratchet connected with said
35 reel, and a pawl hung on the head of the plunger, engaging with said ratchet, in combination with a wire which is attached at one end to said reel and sustains the same and connected parts, and has its other end fixed in
40 an apartment, and an automatic releasing device for said wire, substantially as and for the purpose set forth.

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Witnesses:

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