

(No Model.)

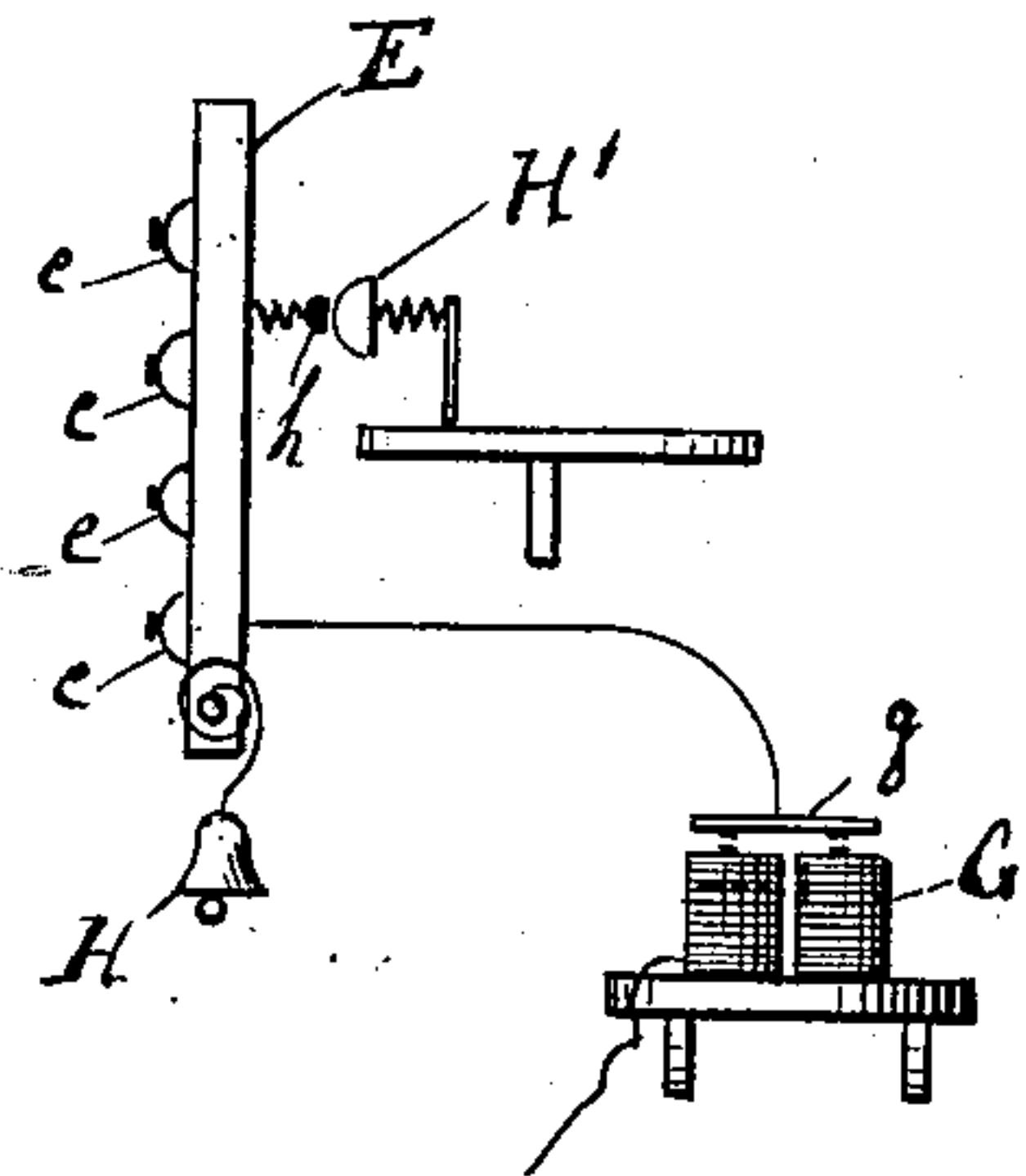
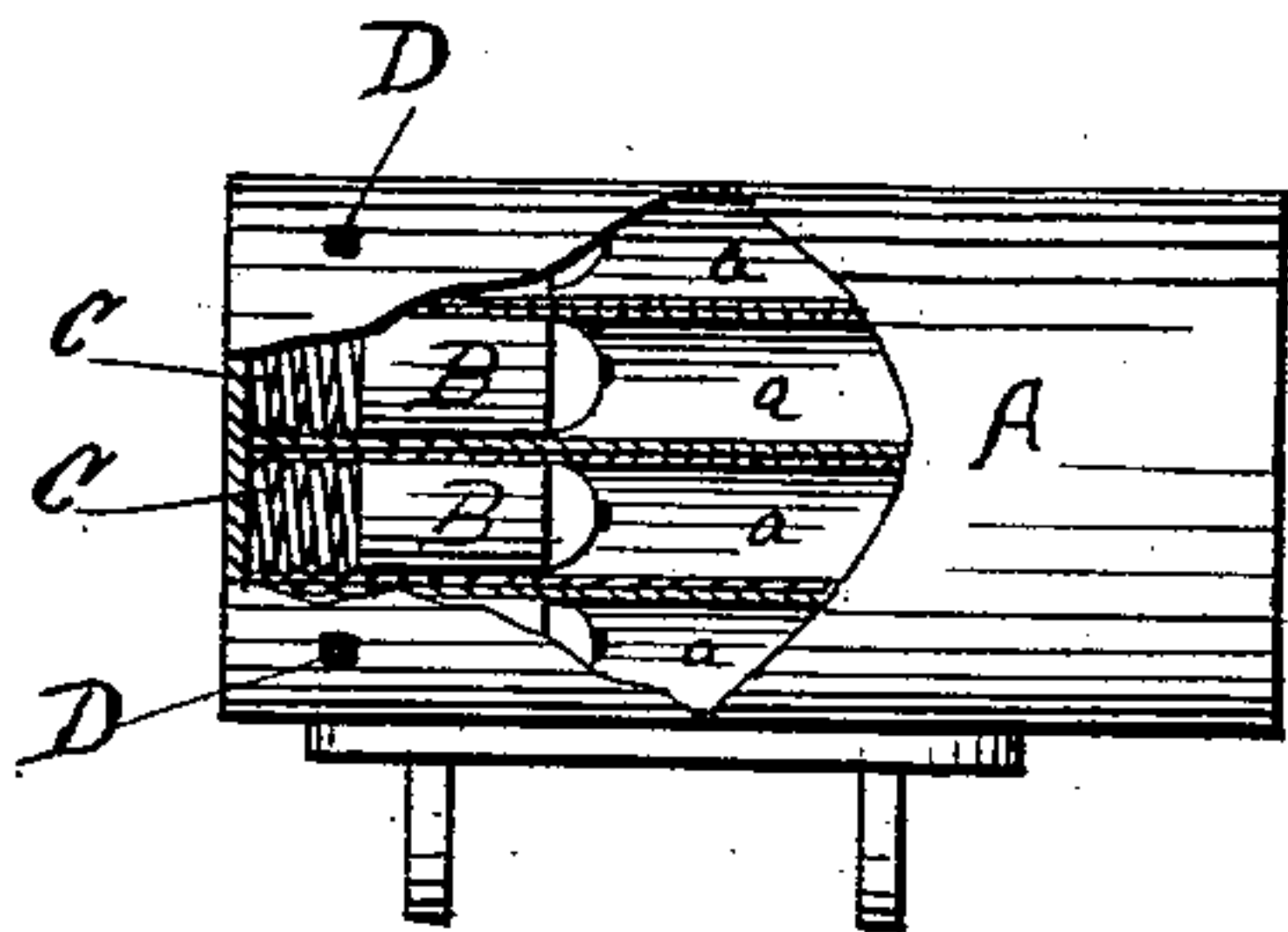
I. KITSEE.

AUTOMATIC FIRE ALARM.

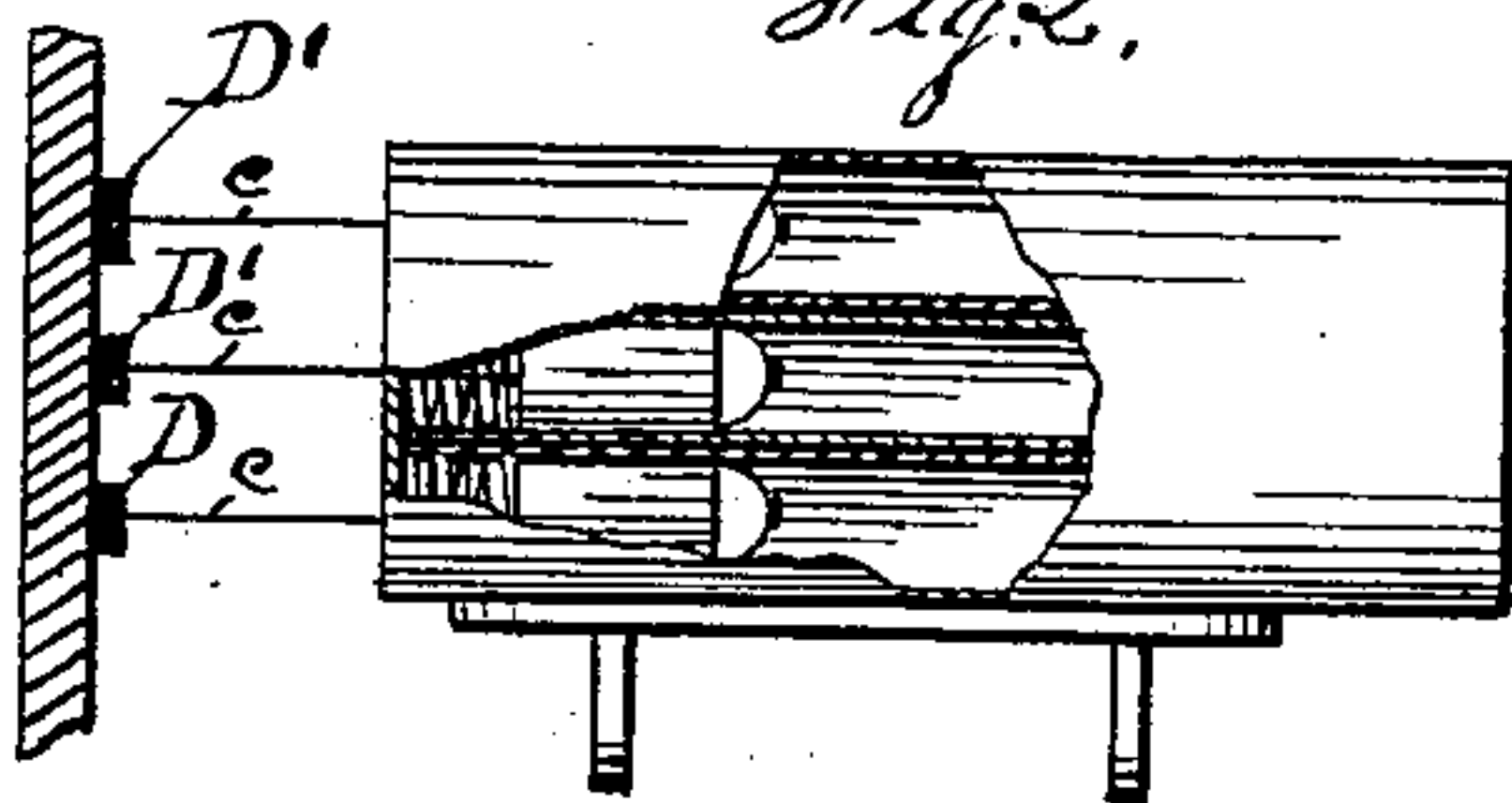
No. 254,553.

Patented Mar. 7, 1882.

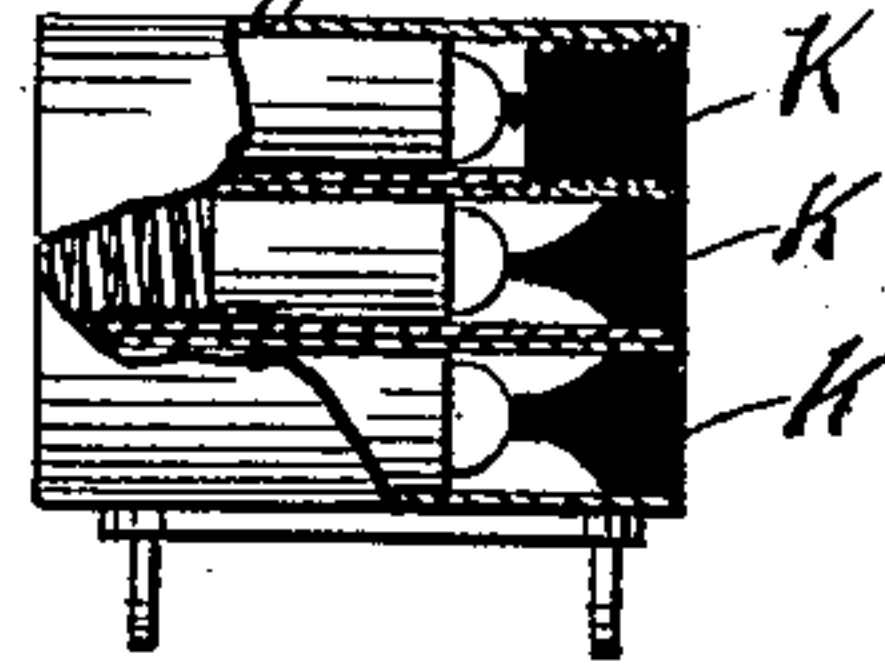
*Fig. 1.*



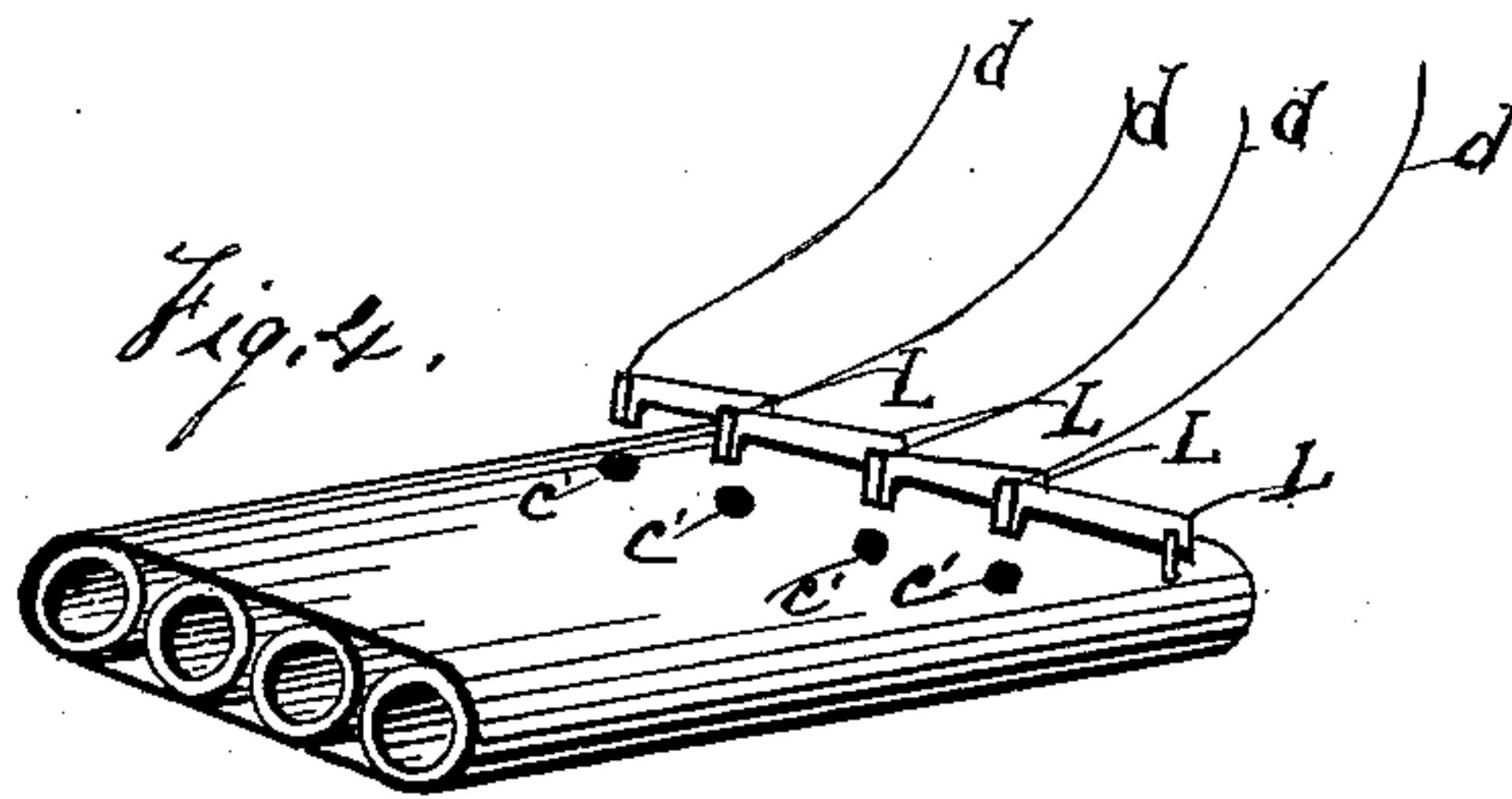
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Attest

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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 254,553, dated March 7, 1882.

Application filed December 12, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, ISIDOR KITSEE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Automatic Fire-Alarms, of which the following is a specification.

My invention relates to that class of fire-alarms that are normally closed and inactive, but are brought into operation automatically during an incipient fire by the melting of fusible connections.

Referring to the drawings that accompany this specification, Figure 1 represents a chambered gun, partly in section, provided with spring-pressed cartridges, and a target provided with detonating nipples and having attached bell and electric armature. Fig. 2 represents a form of holding the cartridges within the gun-chambers by means of a spring held retracted by wires anchored in fusible blocks. Figs. 3 and 4 represent modified forms of controlling the cartridges.

Similar letters of reference indicate like parts on each figure.

The object of my invention is in case of a fire in a building to give automatically audible notice thereof.

Either form of my device may be used separately, or any or all of them may be united, and one or more of my devices can be arranged in the separate chambers of a building so as to be actuated simultaneously or successively.

A is a gun having chambers *a*, in each of which is placed a cartridge, B, preferably fulminated, held to the rear of the chamber by spring C, kept retracted by a fusible key, D, located in touch-holes or in any suitable position.

E is a target provided with detonating nipples *e*, one of which is located directly opposite the several chambers, *a*, of the gun A. To the rear of the target is an electro-magnet, G, which is operated by an armature, *g*, fastened by any suitable connection to the target. The target is further provided with a bell, H, or spring-borne clapper, *h'*, located so as to strike a gong, H', all as fully illustrated in Fig. 1.

When one of the fusible keys D melts it releases the spring C, which immediately expands, and the cartridge B is projected against the coincident nipple on the target, causing the cartridge B to strike and explode the detonating nipple *e* and at the same time to actu-

ate any sounding alarm attached to the target E.

The blocks or keys D, or whatever form of fusible connections I may use in my devices, I make fusible at different degrees of heat, so that as the temperature rises a continuous bombardment of the target will be maintained and repeated alarms given.

In the form shown in Fig. 2 the springs that control the cartridges B are held by fusible wires *c*, or wires anchored in fusible blocks D', as shown in detail in the drawings.

Other forms of operating my device are shown in Figs. 3 and 4. In the former the cartridges are kept backward pressed against the retracted spring C by means of forward fusible plugs, K, driven or screwed into the muzzles of the several chambers *a*. Fig. 4 represents a form of my device, wherein the springs C are kept retracted by a pin or plug, *c'*, driven through an ordinary touch-hole. In this form of construction each chamber has an independent trigger, L, each kept elevated by means of a fusible wire, *d*. When a wire that holds the trigger is melted the trigger falls, drives in the pin or plug *c'*, and releases the spring; it controls.

Having now fully described my invention, what I claim, is—

1. In an automatic fire-alarm, a chambered gun provided with cartridges held retracted by springs compressed by fusible keys, in combination with a target provided with detonating nipples, substantially as described.

2. In an automatic fire-alarm operated by melting of fusible connections, the target, having fulminating nipples *e*, in combination with a sounding alarm, substantially as described.

3. In an automatic fire-alarm, the chambered gun A, provided with retracted ejectible cartridge B and spring C, anchored in fusible keys, substantially as described.

4. An operating mechanism for fire-alarms, having a series of fusible connections composed of substances which melt at different degrees of temperature, whereby a succession of alarms is given, as and for the purpose intended, substantially as described.

ISIDOR KITSEE.

Witnesses:

VICTOR ABRAHAM,  
W. C. FIEDELDEY.