

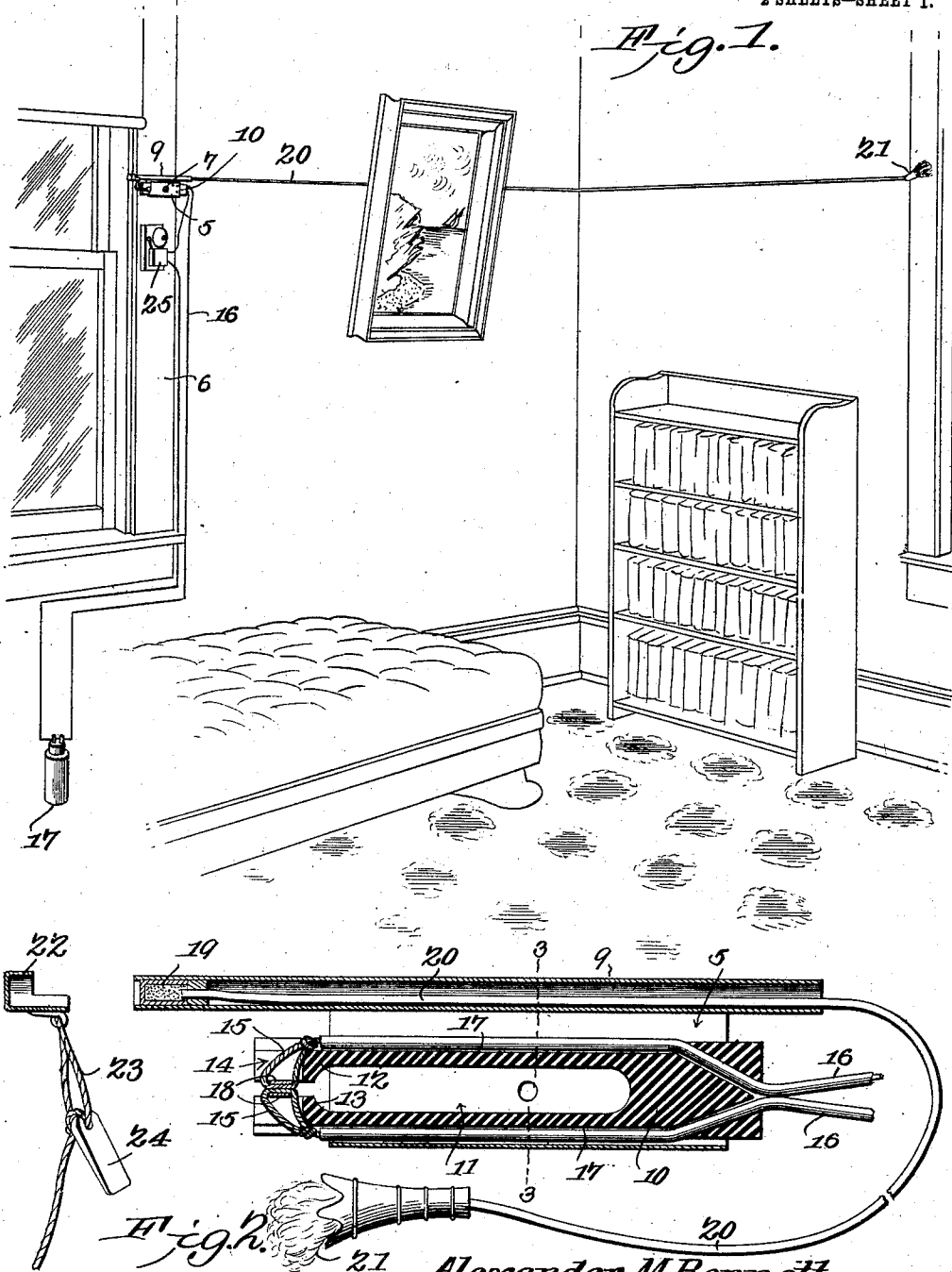
No. 850,287.

PATENTED APR. 16, 1907.

A. M. BENNETT.
COMBINED FIRE AND BURGLAR ALARM.

APPLICATION FILED APR. 18, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

E. J. Stewart
L. T. Parker

Alexander M. Bennett

INVENTOR

By *C. A. Snow & Co.*
ATTORNEYS.

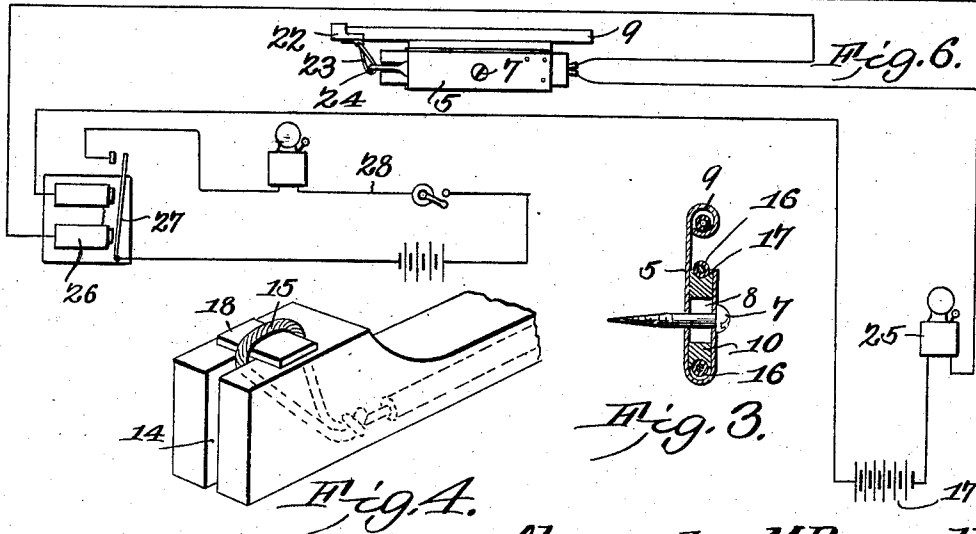
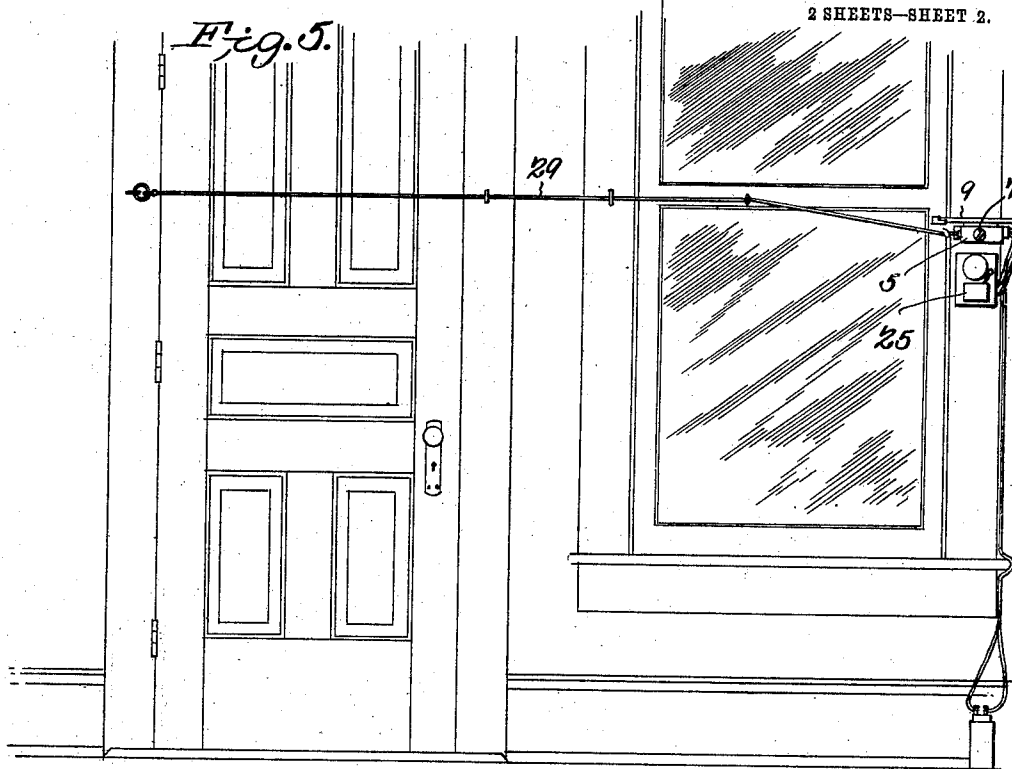
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UNITED STATES PATENT OFFICE.

ALEXANDER M. BENNETT, OF ELLSWORTH, MICHIGAN, ASSIGNOR OF ONE-HALF TO CHARLES BENNETT, OF ELLSWORTH, MICHIGAN.

COMBINED FIRE AND BURGLAR ALARM.

No. 850,287.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed April 18, 1906. Serial No. 312,471.

To all whom it may concern:

Be it known that I, ALEXANDER M. BENNETT, a citizen of the United States, residing at Ellsworth, in the county of Antrim and State of Michigan, have invented a new and useful Combined Fire and Burglar Alarm, of which the following is a specification.

This invention relates to automatic fire and burglar alarms for private dwellings, banks, hotels, and other buildings, and has for its object to provide means for automatically sounding an alarm in case of fire or should an attempt be made by an unauthorized person to enter the building.

A further object of the invention is to provide a combined fire and burglar alarm arranged to be set into operation on the burning of a fuse or by the displacement of a wire or other flexible medium operatively connected with a circuit-breaker.

A still further object of the invention is to provide a pair of contact members normally separated or held in inoperative position by wedge or circuit-breaker, the latter being connected to the closure of an explosive-chamber, so that the burning of the fuse will explode the contents of the chamber, and thereby actuate the circuit-breaker to effect the sounding of the alarm.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions, and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of the interior portion of a building supplied with the improved automatic fire and burglar alarm. Fig. 2 is a longitudinal sectional view of the casing or housing, the detachable closure and circuit-breaker being also shown. Fig. 3 is a transverse sectional view taken on the line 3-3 of Fig. 2. Fig. 4 is a detail perspective view of one of the contact-arms. Fig. 5 is a side elevation showing the device used as a burglar-alarm. Fig. 6 is a diagrammatical view illustrating a modified form of the invention.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved device consists of a casing or housing 5, designed to be secured to a window-frame or other suitable support 6 by means of screws or similar fastening devices 7. The casing 5 is preferably stamped from a single sheet of metal, one end of which is bent to form a pocket 8 for the reception of a pair of contact members, while the opposite end thereof is curled or bent upon itself to form a tube or explosive-chamber 9, the opposite ends of which preferably project beyond the adjacent walls of the pocket 8, as shown.

Seated in the pocket 8 is a block of wood or other insulating material 10, having a longitudinal recess or opening 11 formed therein, defining a pair of spring contact-arms 12 and 13, the free ends of which are bifurcated, as indicated at 14, for the reception of the terminals 15 of an energized circuit 16, including a battery 17. The wires 16 are seated in grooves or channels 17, formed in the longitudinal edges of the contact-arms, and are provided with terminal loops which engage suitable blocks 18, extending transversely across the bifurcated ends of the contact-arms, as shown.

Arranged within the explosive-chamber 9 is an explosive charge, preferably in the form of a cap or cartridge 19, and connected with the cap 19 is a fuse 20, which extends to different portions of the building, so that in case of fire the fuse will be ignited, and thus explode the cap or cartridge. The free end of the fuse 20 is provided with a torch 21, capable of being readily ignited in case of fire in any portion of the room, and as many of these torches may be suspended from and connected with the fuse as are found necessary. Detachably secured to one end of the chamber or tube 9 is a cap or closure 22, connected, through the medium of a cord, chain, or other flexible connection 23, with a wedge or circuit-breaker 24, the latter being adapted to be interposed between the free ends of the contact-arms 12 and 13, so as to normally separate the arms, and thus interrupt the circuit.

The operation of the device is as follows: Should the woodwork or other portion of the

room catch on fire, the fuse 20 will be ignited and in turn ignite the cap or cartridge 19, thereby causing the latter to explode and detach the closure 22. As the closure 22 is forcibly removed under the impulse of the explosive charge the wedge or circuit-breaker 27 is simultaneously withdrawn from between contact-arms 12 and 13, thus closing the circuit through the battery and sounding the alarm 25, so as to notify the inmates of the building of impending danger. In some cases, in addition to notifying the inmates of the building of the fire, it is also desirable to notify the fire department or central, so that the fire may be extinguished with the least possible delay, and in Fig. 6 of the drawings there is illustrated means whereby this result may be accomplished. In this form of the device the terminals of the local circuit are connected to a relay 26 at the central office, said relay being adapted to actuate the armature 27 to close the signal-circuit 28, and thus simultaneously sound the alarm at central. In Fig. 5 of the drawings the device is shown used as a burglar-alarm. In this form of the device a cord, chain, wire, or other flexible medium 29 is connected to the wedge or circuit-breaker 24 and the opposite end thereof extended across the windows and doors of the building, so that if an attempt is made by an unauthorized person to enter the building the wire 29 will be actuated to withdraw the circuit-breaker, and thus sound the alarm. The wire 29 may extend to different portions of the room and may be connected with a cash-drawer, trunk, and various articles of furniture, so that the occupants of the building may at once be notified should an attempt be made to burglarize the building.

From the foregoing description it is thought that the construction and operation of the device may be readily understood by those skilled in the art, and further description thereof is deemed unnecessary.

Having thus described the invention, what is claimed is—

1. In a combined fire and burglar alarm, a plurality of contacts, an energized circuit connected to the contacts and including an alarm, a chamber, a closure for one end of the chamber, a circuit-breaker interposed between the contacts for normally holding the same separated and operatively connected with the closure, said circuit-breaker being movable to inoperative position to sound the alarm when the closure is removed.

2. In a combined fire and burglar alarm, a plurality of contacts, an energized circuit connected to the contacts and including an alarm, a chamber, an explosive charge arranged within the chamber, a fuse communicating with the explosive charge, a closure for the chamber, a circuit-breaker interposed

between the contacts and operatively connected with the closure, said circuit-breaker being movable to inoperative position to sound the alarm under the impulse of the explosive charge.

3. In a combined fire and burglar alarm, a casing, a pair of contacts, an energized circuit connected to the contacts and including an alarm, a chamber, an explosive charge disposed within the chamber, a fuse communicating with the explosive charge and provided with a torch, a closure for the explosive-chamber, a circuit-breaker interposed between the contacts, and a connection between the circuit-breaker and closure, said circuit-breaker being movable to inoperative position under the impulse of the explosive charge.

4. In a combined fire and burglar alarm, a casing having one end thereof provided with a chamber and its opposite end formed with a pocket, a pair of contact members seated in the pocket, an energized circuit connected to the contacts and including an alarm, an explosive charge disposed within the chamber, a closure for said chamber, and a circuit-breaker interposed between the contacts and operatively connected with the closure, said circuit-breaker being moved to inoperative position to sound the alarm under the impulse of the explosive charge.

5. In a combined fire and burglar alarm, a pair of contact-arms having their ends bifurcated, an energized circuit the terminals of which are extended to form loops seated in the bifurcated ends of the contact-arms, strips interposed between the loops and the adjacent faces of said arms, an alarm included in the circuit, and a circuit-breaker interposed between the contact-arms and movable to inoperative position to sound the alarm.

6. In a combined fire and burglar alarm, a pair of contact-arms having their ends bifurcated and their opposite longitudinal edges formed with grooves, an energized circuit the terminals of which are seated in said grooves and provided with terminal loops engaging the bifurcated ends of the contact-arms, strips interposed between the loops and the adjacent faces of said contact-arms, an alarm included in the circuit, a circuit-breaker interposed between the contact-arms, and a flexible connection secured to the circuit-breaker for withdrawing the same from engagement with the contact-arms thereby to actuate the alarm.

7. In a combined fire and burglar alarm, a casing having one end thereof bent to form a pocket and its opposite end curved laterally to produce a tube the opposite ends of which extend beyond the adjacent walls of the pocket to form a chamber, a pair of spring-

contacts seated in the pocket, an energized circuit connected to the contacts and including an alarm, an explosive charge disposed within the chamber, a closure for one
5 end of the tube, a circuit-breaker interposed between the contacts, and a flexible connection between the circuit-breaker and closure.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALEXANDER M. BENNETT.

Witnesses:

CHAS. KINNER,
ISABEL U. HARRIS.