

No. 761,572.

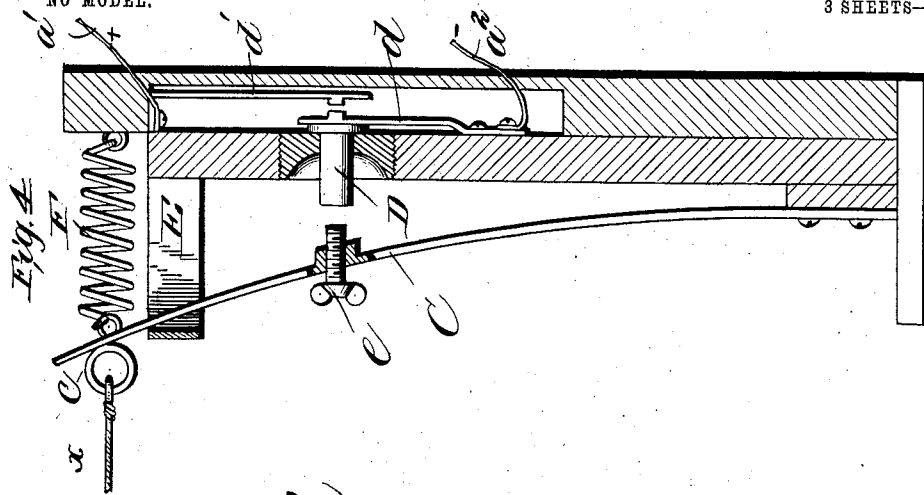
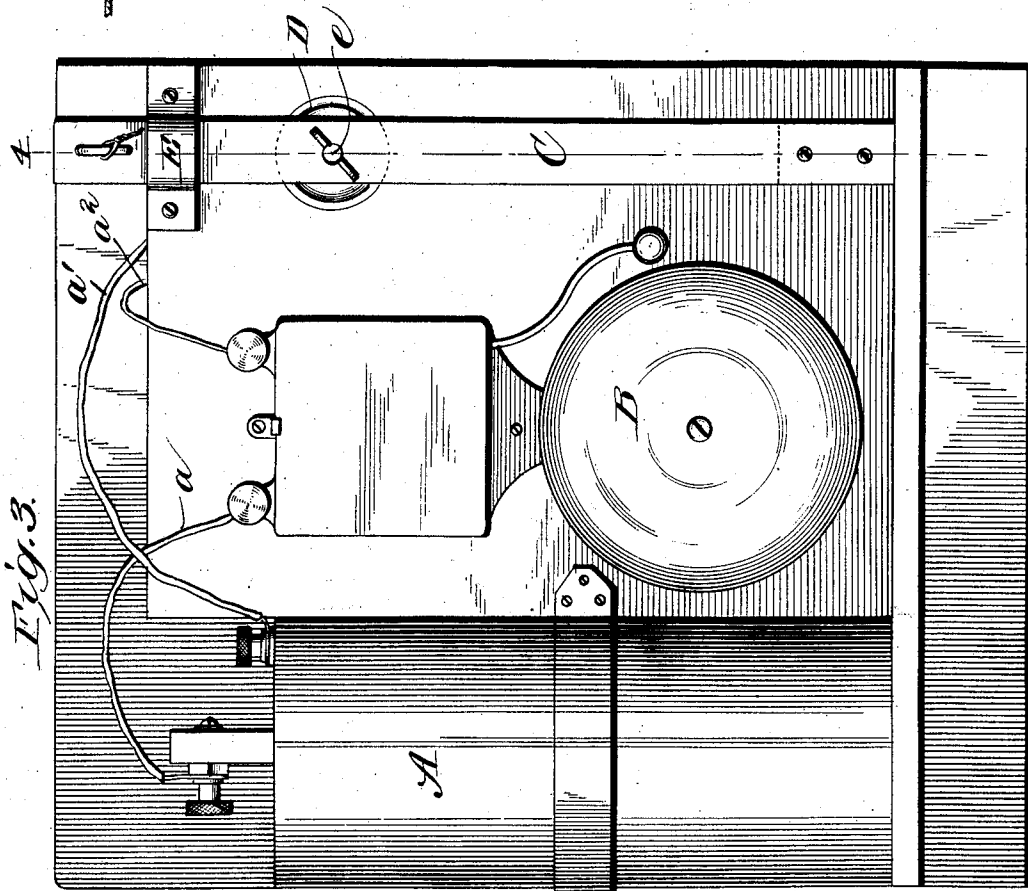
PATENTED MAY 31, 1904.

W. C. BARGER.
ELECTRIC FIRE AND BURGLAR ALARM.

APPLICATION FILED MAR. 31, 1904.

3 SHEETS—SHEET 2.

NO MODEL.



WITNESSES:

Frederick M. Ford
Edw. W. Byrn

INVENTOR

William C. Barger

BY *Munn & Co.*

ATTORNEYS

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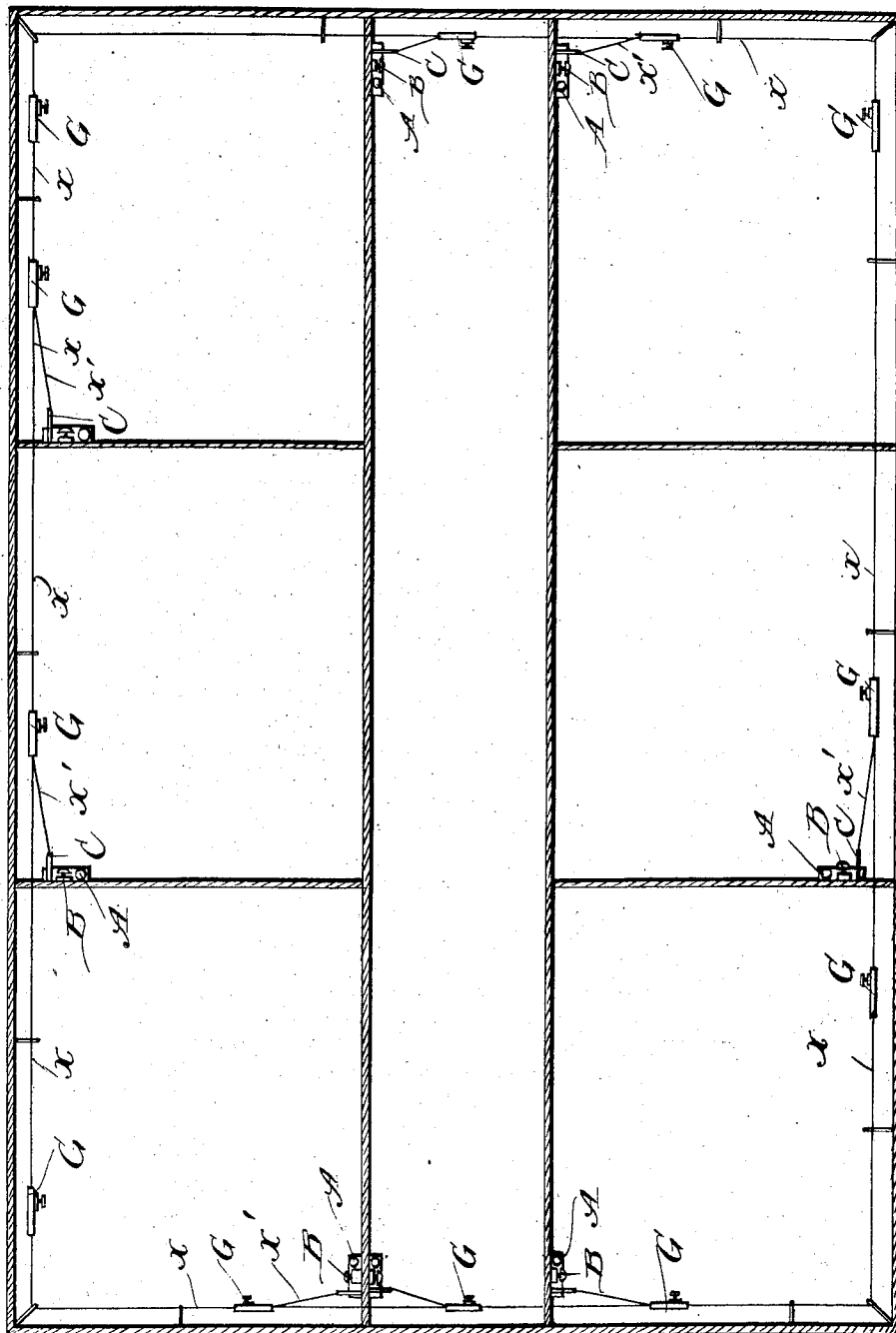
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3 SHEETS—SHEET 3.

Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM CALVIN BARGER, OF MAMMOTH, WEST VIRGINIA.

ELECTRIC FIRE AND BURGLAR ALARM.

SPECIFICATION forming part of Letters Patent No. 761,572, dated May 31, 1904.

Application filed March 31, 1904. Serial No. 200,903. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CALVIN BARGER, a citizen of the United States, residing at Mammoth, in the county of Kanawha and State of West Virginia, have invented a new and useful Improvement in Electric Fire and Burglar Alarms, of which the following is a specification.

My invention is in the nature of an improved electric fire and burglar alarm. It belongs to that class of alarms in which a cord maintained under tension holds an alarm-bell mechanism in an inoperative condition; but when the cord burns or is slackened the alarm mechanism operates and rings a bell.

My invention consists in the novel construction and arrangement of parts operating on this general principle, which I will now proceed to describe, with reference to the drawings, in which—

Figure 1 is an interior view of one side of a room, showing my alarm applied to a window and a door. Fig. 2 is a front view, and Fig. 2^a is a sectional view, of the cord-tightener forming a part of my alarm mechanism. Fig. 3 is a front view, and Fig. 4 a sectional view on line 4 4 of Fig. 3, showing the electrical alarm mechanism on a larger scale; and Fig. 5 is a diagram view of a series of rooms equipped with my alarm.

Referring to Figs. 3 and 4, A represents a dry battery, B is an electric bell, and C is an upright spring-bar rigidly connected to the framework at its lower end and extending up to the top of the alarm apparatus and there connected by a spiral spring F with the back board of the framework. The upper end of the spring-bar C is guided in a yoke E and has one or more screw-eyes *c*, to which cords may be attached, and also has projecting toward the back board a set-screw *e*, and immediately behind this screw in the back board is a push-button D, connected to a spring *d* and adapted to force the spring *d* against another one, *d'*, behind it. These two springs are terminal contacts of two circuit-wires *a'* *a''*, of which *a'* runs straight to one pole of the battery, while *a''* runs to the bell and then through the bell-magnets connects electrically with the wire *a*, leading from the bell to the other pole

of the battery, so that when the push-button is forced in to bring springs *d* *d'* into contact with each other the battery-circuit will be completed through the bell-magnets and the bell will ring. The spring-bar C is elastic throughout its length, and its resilience is further supplemented by the spiral spring F at its top. This spring-bar is designed to be normally pulled out and held under a strong tension by one or more cords connected with the screw-eye *c*, which cords run to various parts of the building to be protected. So long as this spring-bar is pulled out and held under this tension its screw *e* is away from the push-button D; but if the cord be slackened by being burned in two or by the opening of a door or window then the spring-bar C approaches the push-button and the screw *e* of the spring-bar, by pressing upon the push-button, sounds the alarm.

In setting up my alarm (see Fig. 1) the alarm mechanism is put, preferably, in some elevated out-of-the-way place, and the screw-eye of the spring-bar C is connected to the cord *x*. This cord in one application of the invention is carried over pulley *b* down to the lower sash of a window and then up again to and over the pulley *b'*. Thence it passes to pulley *b''* and around pulley *b'''* on the door and then back to pulley *b''* and thence to a stationary hook *y* and thence to a cord-tightener G. This cord-tightener is constructed, as herein-after described, to take up any amount of slack and hold the whole length of cord *x* under a strong tension that pulls the spring-bar C back from the push-button. If now the cord *x* should be slackened by the raising of the window, the opening of the door, or the burning of the cord, it will be seen that the alarm is sounded, as hereinbefore described.

The cord-tightener G is an important feature of my alarm and is shown in detail in Figs. 2 and 2^a. It consists in a main body portion having a recessed side and serrated side in which fits a movable clamp-section G', adjustably held by set-screw *g*. At one end of the body portion G there is a hole *g'*, through which the cord *x* is passed, and thence it is extended between and clamped by the serrated faces of G and G'. Thence it passes

through a hole g^2 , then extends to the anchor-
age-point and comes back again to the tight-
ener and passing through a hole in the end g^4
and is connected to a helical spring g^3 , which
5 is disposed in a slot formed at this end of the
cord-tightener and is protected thereby. The
tension of the spring g^3 makes the cord-tight-
ener to take up any slack that may get into
the cord from changes of weather or other
10 causes, and by loosening the clamp-screw and
sliding the cord-tightener along the cord w
the length of cord may be adjusted to the par-
ticular application or size of room.

When my invention is applied to a series of
15 rooms, as in a hotel, the cord is run through
all of the rooms, as seen in Fig. 5, and is main-
tained under a strong tension by my cord-
tighteners, and a separate alarm mechanism,
such as is shown in Figs. 3 and 4, is placed in
20 each room and connected by branch cords w'
with cord-tighteners to the main cord w , so
that in case the main cord is slackened by a
fire in any room the alarms in all of the other
rooms will be set off.

25 In making use of my invention I would have
it understood that I may apply it to the ex-
terior of a building as well as the interior.

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

1. An alarm mechanism, comprising a source
of electric current, an electric bell, a push-
button having contacts forming terminals of
an electric circuit through the bell and a
35 spring-bar having connections for a cord, and
a screw connected to the spring-bar and ar-
ranged in line with the push-button to depress
it when tension on the spring-bar is released
substantially as described.

40 2. An alarm mechanism, comprising a source
of electric current, an electric bell, a push-

button having contacts forming terminals of
an electric circuit through the bell, a spring-
bar rigidly connected to the framework at one
end, a yoke-shaped guide embracing the other 45
end of the spring-bar, a push-button arranged
behind the spring-bar, and having contacts
forming terminals of the electric circuit, a
supplemental spring connected to the free end
50 of the spring-bar, and a screw attached to the
spring-bar and adapted to depress the push-
button when tension on the spring-bar is re-
leased.

3. The combination with an alarm mechan-
ism having a spring-bar; of a cord holding 55
said spring-bar under tension, said cord being
extended throughout the rooms to be protect-
ed, and a cord-tightener consisting of two
separable clamp-sections arranged adjustably 60
on the cord to take up the slack and maintain
tension on the cord substantially as shown and
described.

4. The combination with an alarm mechan-
ism; of a cord for holding the alarm mechan- 65
ism under tension, said cord being extended
throughout the rooms to be protected, and a
cord-tightener having both an adjustable take-
up clamp and a tension-spring for taking up
slack, the cord being attached at one end to
70 the tension-spring and adjustably secured be-
tween the clamps substantially as described.

5. The combination of a tension-cord ex-
tending through a series of rooms and main-
tained taut; of a series of supplemental ten- 75
sion-cords in each room connected to the main
cord and provided with a cord-tightener and
alarm mechanism for each room substantially
as described.

WILLIAM CALVIN BARGER.

Witnesses:

S. P. KENNEDY,
C. H. MATICS.