

APPLICATION FILED JAN. 29, 1914. RENEWED MAY 8, 1915.

Patented Sept. 28, 1915.

2 SHEETS—SHEET 1.

Fig. 2.

2

1

26 21 c

3 9 12 20

13 14 13 19 22

g 15

23

25 24

27 29

a b d

γ

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BURGLAR ALARM.

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1,155,144.

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2 SHEETS—SHEET 2.

Fig. 3.

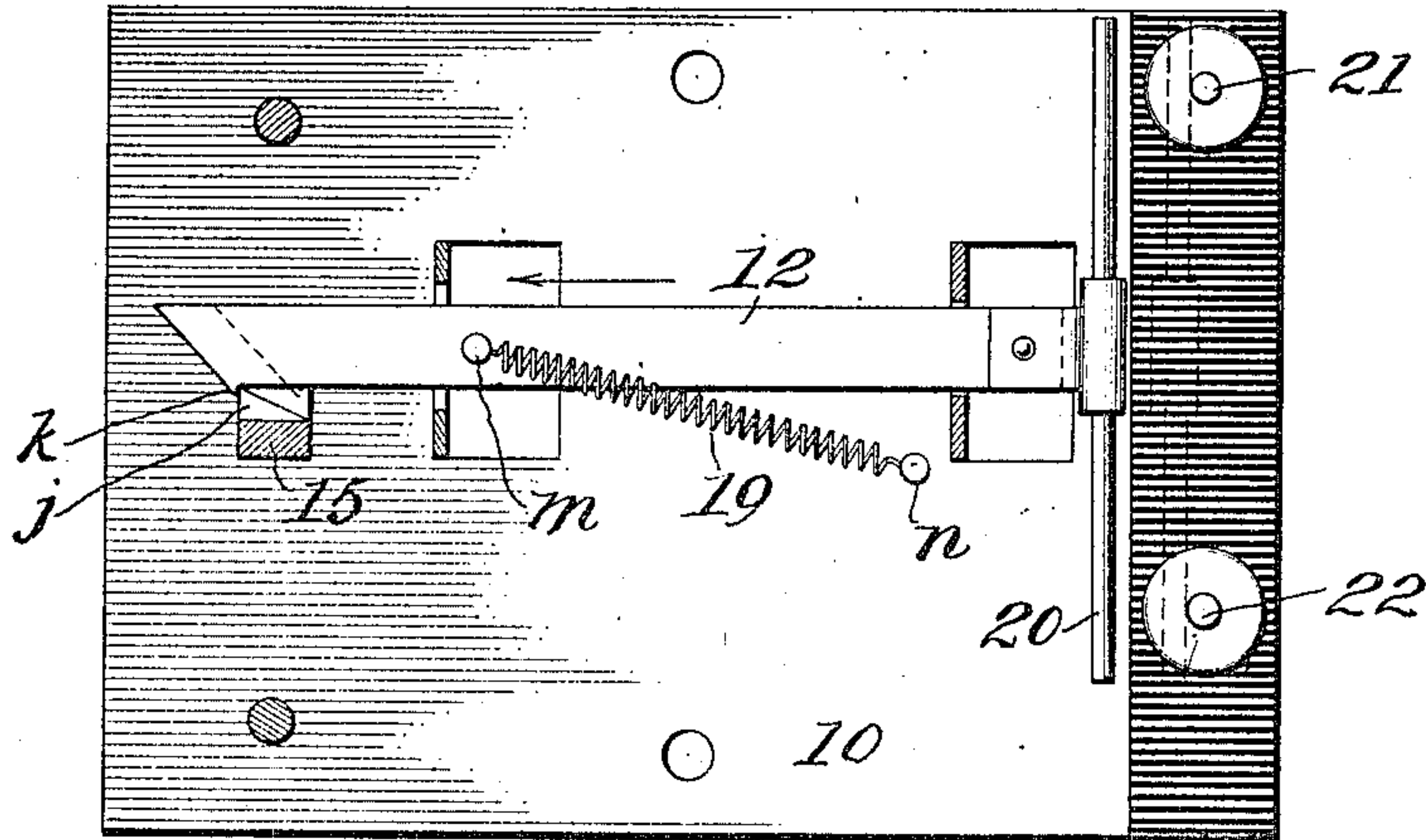


Fig. 4

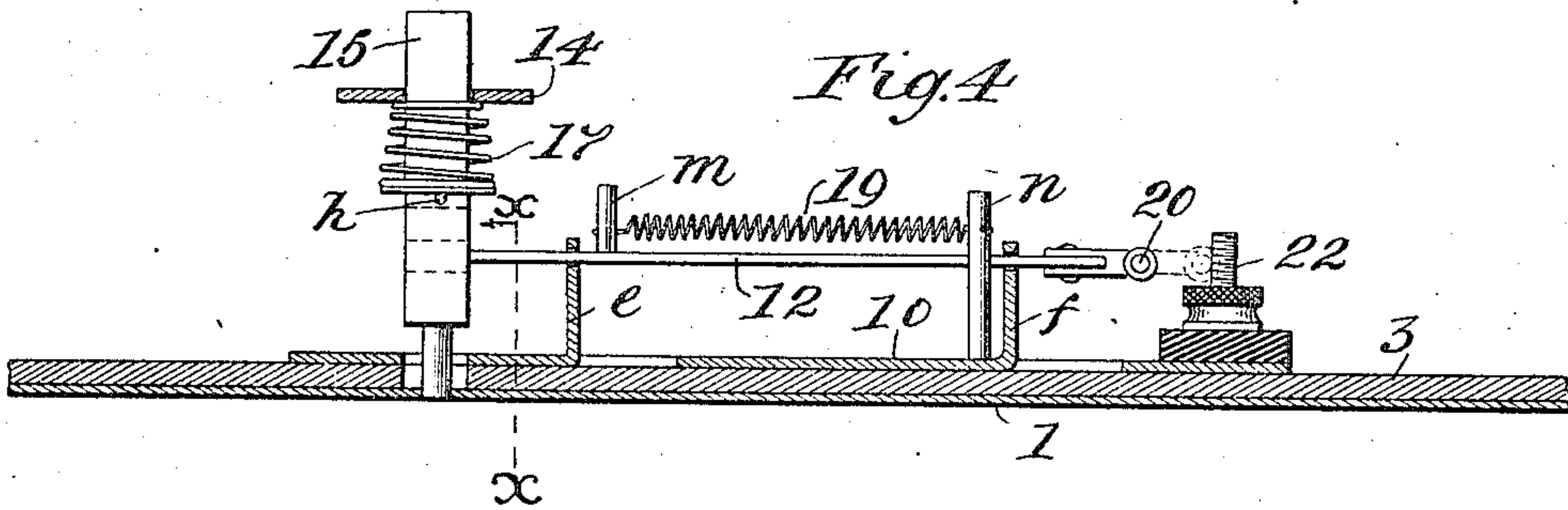


Fig. 6.

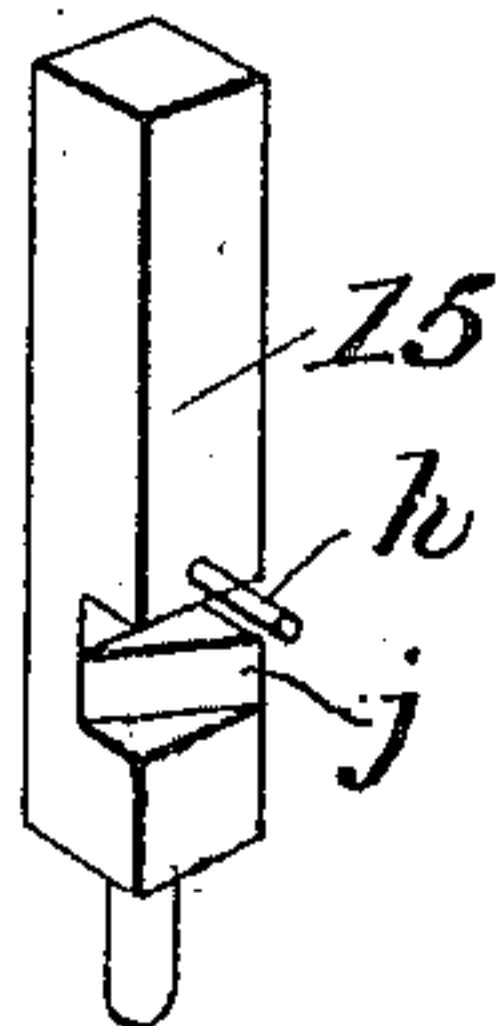
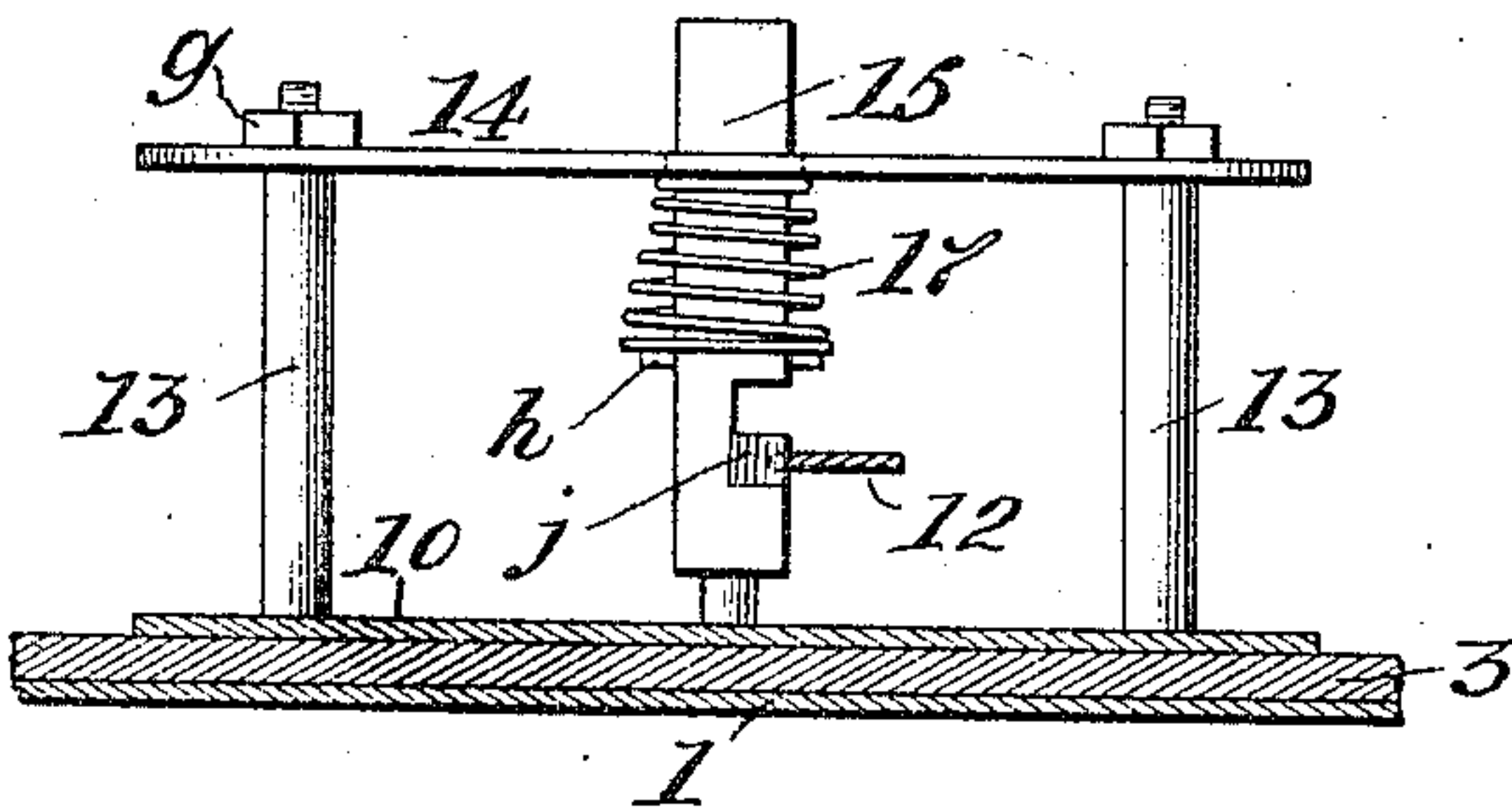


Fig. 5.



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BURGLAR-ALARM.

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To all whom it may concern:

Be it known that I, HERMAN T. GAY, a citizen of the United States, residing at Baltimore, Maryland, have invented certain Improvements in Burglar-Alarms, of which the following is a specification.

This invention relates to an apparatus adapted for insertion in a box containing valuable articles, such for instance as jewelry, which apparatus, upon the box being lifted from its support, will sound an alarm as will hereinafter fully appear.

In the further description of the said invention, which follows, reference is made to the accompanying drawings, forming a part hereof, and in which:—

Figure 1 is a plan of a box containing the alarm apparatus, the lid of the box being shown as open, and Fig. 2 a similar view except that a covering plate for the alarm apparatus is removed to show the mechanism beneath. Fig. 3 is an enlarged top view partly in section, of certain parts of the apparatus; and Fig. 4 an enlarged longitudinal section of a part of Fig. 2. Fig. 5 is a section of Fig. 4 taken on the broken line $x-x$, and Fig. 6 a perspective view of a part of the apparatus.

Referring now to the drawings, 1 represents a box or similar receptacle formed preferably of sheet metal adapted to contain valuable articles, and 2 its hinged lid.

3 is a second box which can be of wood if desired, permanently secured in the box 1, and provided with a removable cover 4 held in place by the screws 5 shown only in Fig. 1.

7 is a dry cell battery which is placed in one corner of the inner box 3 and held in place by an ordinary downwardly curved spring 9 which is attached to the underside of the cover 4. This holder is shown only in dotted lines, and in Fig. 1.

The terminals a and b of the battery 7 are electrically connected to the insulated plates c and d as shown in Fig. 2.

10 is a base plate for the electrical apparatus, fastened in any suitable manner to the bottom of the inner box 3, having its parts e and f stamped upward to serve as supports and guides for the horizontally sliding bar 12. At one end of the base plate 10 are the fixed vertical posts 13 connected at their upper ends by the bar 14 and the nuts g .

15 is a non-rotatable vertically moving staff (shown in perspective in Fig. 6) of rectangular shape in cross-section, with its upper end extending loosely through the bar 14. Its lower end is made cylindrical and adapted to pass through a hole which extends through the base plate 10, and the bottom of the boxes 1 and 3, as shown in Fig. 4 for a purpose hereinafter described.

17 is a compressed spring coiled about the staff 15 and confined endwise between the underside of the bar 14, and a pin h which extends through the staff. The function of the coiled spring 17 is to force down the staff and cause its cylindrical end to normally project below the bottom of the outer box 1, and hold it yielding in that position under circumstances hereinafter described.

By reference to Figs. 3, 4 and 6 of the drawings, it will be seen that the staff 15 is in its elevated position; and at a point in horizontal alinement with the sliding bar 12 is cut away at one of its corners to produce the tooth j which is adapted to engage the hook k formed on the end of the said bar; and that above the tooth j the staff is cut back squarely to a depth corresponding with that of the tooth, so that when the staff is forced downward by means of the spring 17, the tooth will be brought below the hook k and the sliding bar 12 thereby released.

An extended coil spring 19 connected at one end to a pin m on the sliding bar 12, and at its other end to a fixed post n , serves to hold the said bar laterally in proper position for the engagement of its hook k with the tooth j should the staff 15 be raised and the bar 12 moved to the left as shown by the arrow in Fig. 3. The said spring also serves to draw the metallic crosshead 20 which is centrally pivoted to the bar 12, to electrical contact with the insulated metallic posts 21 and 22 upon the disengagement of the hook from the tooth.

23 is an ordinary electric bell mechanism the construction of which is well known and forms no part of the present invention. The striking arm 24 of the said mechanism when vibrating, causes the hammer 25 to beat against the side of the box 1, or against any other sonorous device adapted for the purpose, and give an alarm.

26, 27 and 29 are wires which place the apparatus in an open electric circuit when the

crosshead 20 is drawn from the posts 21 and 22; and it will be understood that when the crosshead is in contact with the said posts, the electric circuit is closed.

5 30 is a switch pivoted tightly to the under-
side of the covering plate 4 having the oper-
ating finger stem 31 which projects through
a curved slot 32 in the said plate. The
switch is so placed that its end *o* when
10 forced against the pin *m* on the sliding bar
12, the crosshead 20 will be held from con-
tact with the posts 21 and 22, and the disen-
gagement of the hook *k* of the bar 12 from
the tooth *j* cannot close the circuit.

15 The pivoting of the crosshead to the slid-
ing bar 12 is an important part of the pres-
ent invention for the reason that an effective
electric contact of the same with the posts
21 and 22 is insured without the nice adjust-
20 ment of the parts that would be required if
the crosshead were rigid with respect to the
said bar.

From the foregoing description it will be
understood that should the box with its con-
25 tained apparatus be placed on a table or
other support, the staff 15 will be forced up-
ward and its lower projecting end brought
level with the bottom of the box, and that
by moving the finger stem 31 to "Silent" the
30 hook of the sliding bar 12 will engage the
tooth *j* of staff and the electric circuit there-
by broken and the apparatus rendered in-
operative.

To adjust the apparatus so that an alarm
35 will be sounded should the box be lifted
from its support, the switch 30 is moved to
"Alarm" and the box then closed and locked.
It will be understood that this movement of
the switch, does not release the sliding bar
40 12, as the tooth *j* is still in engagement with
the hook *k*, and no alarm can possibly be
sounded while the box is resting upon its
support; but upon lifting the box, the spring
17 will cause the downward movement of
45 the staff 15, and its tooth *j* to pass below
the hook *k* and the sliding bar 12 will be
released and its crosshead 20 by contacting
with the posts *c* and *d*, the electric circuit
will be closed and an alarm sounded; and
50 the alarm cannot be stopped until the switch
is again moved to "Silent" and this cannot
be accomplished until the box is unlocked
and opened which gives access to the switch-
ing device.

55 I claim as my invention:—

1. In a burglar alarm of the character de-
scribed, a box adapted for closure, an elec-
tric sounding mechanism which is situated
in the box, a spring backed vertically-mov-
60 ing staff adapted to project loosely through
the bottom of the box, and two contact posts
in an electric circuit the closing of which
operates the sounding mechanism, combined
with a spring-drawn sliding bar one end of
65 which carries a circuit closer, and the other

end adapted to engage and be held by the
said staff when the same is forced inward
by the seating of the box, and to be released
therefrom upon the projection of the said
staff below the box.

2. In a burglar alarm of the character de-
scribed, a box adapted for closure, an elec-
tric sounding mechanism which is situated
in the box, a spring-backed vertically-mov-
ing staff adapted to project loosely through
75 the bottom of the box, and two contact posts
in an electric circuit the closing of which op-
erates the sounding mechanism, combined
with a spring-drawn sliding bar one end of
which carries a circuit closer, and the other
80 end adapted to engage and be held by the
said staff when the same is forced inward by
the seating of the box, and to be released
therefrom upon the projection of the said
staff below the box, and means whereby the
85 said sliding bar can be held in an inopera-
tive condition.

3. In a burglar alarm of the character de-
scribed, a box adapted for closure, an elec-
tric sounding mechanism which is situated
90 in the box and embraces two contact posts, a
pivoted sliding hooked bar carrying a cir-
cuit-closing pivoted crosshead, a spring sup-
ported and vertically moving staff adapted
to project below the bottom of the box, the
95 same having a tooth adapted to engage the
hooked bar when the staff is forced inward
by the seating of the box, and the electric
circuit opened, and to be disengaged from
the said hooked bar and the circuit closed,
100 upon the lifting of the box from its seat.

4. In a burglar alarm of the character de-
scribed, a box adapted for closure, an elec-
tric sounding mechanism which is contained
in the box and embraces two contact posts,
105 a pivoted spring-actuated sliding hooked
bar carrying a circuit-closing pivoted cross-
head, a spring-supported and vertically
moving staff adapted to project below the
bottom of the box, the same having a tooth
110 to engage the hooked bar when the staff is
forced inward by the seating of the box and
the electric circuit opened, and to be disen-
gaged from the said hooked bar and the cir-
cuit is closed by the lifting of the box from
115 its seat.

5. In a burglar alarm of the character de-
scribed, a box adapted for closure, an elec-
tric sounding mechanism which is situated
in the box and embraces two contact posts,
120 a pivoted sliding hooked bar carrying a cir-
cuit-closing pivoted crosshead, a spring-sup-
ported vertically moving staff adapted to
project below the bottom of the box, the
same having a tooth to engage the hooked
125 bar when the staff is forced inward by the
seating of the box and the electric circuit
thereby opened, and to be disengaged from
the said hooked bar and the circuit closed
upon the lifting of the box from its seat, 130

combined with a switch situated within the box whereby the operation of the apparatus can be suspended.

6. In a burglar alarm of the character described, a box adapted for closure, an electric sounding mechanism which is contained in the box and embraces two contact posts, a pivoted spring-actuated sliding hooked-bar carrying a circuit-closing pivoted cross-head, a spring-supported and vertically moving staff adapted to project below the bottom of the box, the same having a tooth

to engage the hooked bar when the staff is forced inward by the seating of the box and the electric circuit thereby opened, and to be disengaged from the said hooked bar and the circuit closed by the lifting of the box from its seat, combined with a switch situated within the box whereby the circuit closing devices can be held apart or released.

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Witnesses:

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