

(No Model.)

E. WIDER.
AUTOMATIC FIRE ALARM.

No. 419,902.

Patented Jan. 21, 1890.

Fig. 1.

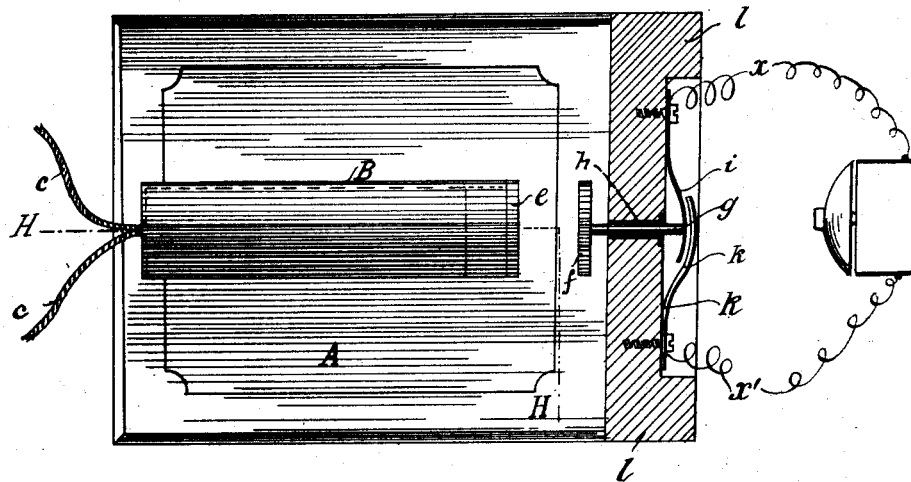
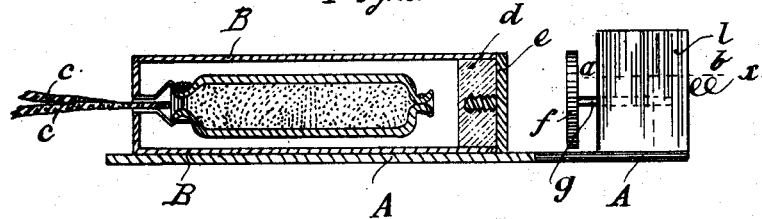


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

EUGEN WIDER, OF STUTTGART, WÜRTEMBERG, GERMANY.

AUTOMATIC FIRE-ALARM.

SPECIFICATION forming part of Letters Patent No. 419,902, dated January 21, 1890.

Application filed July 10, 1889. Serial No. 317,059. (No model.)

To all whom it may concern:

Be it known that I, EUGEN WIDER, of Stuttgart, in the Kingdom of Würtemberg and German Empire, have invented new and useful
5 Improvements in Automatic Fire-Alarms, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an automatic fire-
10 alarm for dwellings, warehouses, factories, barns, &c.; and it consists of an apparatus placed in such premises and operated at the outbreak of a fire, by means of one or more
fuses, so as to effect a strong detonation and
15 to operate, by the closing of an electric circuit, one or more electric gongs or bells in suitable localities.

Figure 1 is a plan of the apparatus, showing several parts in section on the line *ab*, Fig. 2.
20 Fig. 2 is a side view showing the apparatus in section on the line *HH*, Fig. 1.

This fire-alarm apparatus is constructed, essentially, as follows:

A is a metallic plate about ten centimeters
25 long and eight centimeters wide, which is screwed to the wall, floor, or ceiling of the room at any convenient part. On this plate A is fixed a metallic chamber B, closed at one end by means of a tightly-fitting cork plug *d*,
30 with a pin or screw, to which is attached a metal plate *e*. The other end of this chamber has an opening for the reception of the fuses *c c*, which are connected to a detonating-cartridge within the chamber B. Opposite
35 to the plugged end of the chamber B is placed a block *l l*, through which moves a pin *g*, having the head *f*. This pin *g* slides in a suitable guide *h*, and its free end is opposite to one end of a contact-spring *i*, the other end
40 of such spring being fixed to the block and connected by means of the wire *x* with the electrical signaling apparatus. The other wire *x'* is connected to the finger *k*, which is likewise fastened at one end to the block.

45 The fuses *c c*, which are well prepared with saltpeter and phosphorus, are laid along the

walls or in other suitable places in the different rooms, and their ends are placed, preferably near the floor.

The action of the apparatus is as follows: 50
At the outbreak of fire in a room or building supplied with fuses the fire cannot spread beyond the fuses without being noticed. If one of the fuses has caught fire, the latter will be transmitted in a few seconds to the metal 55
chamber B, where it explodes the detonating-cartridge contained therein. According to the composition of the cartridge the detonation will be more or less loud, and will attract the attention of persons near it. At the same 60
time the cork plug *d* is blown out of the chamber against the head *f* of the pin *g*, which thus pushes the spring *i* into contact with the finger *k*, closing the circuit and operating the gongs or bells or other annunciator, which continues until the circuit is again broken. 65

The signaling apparatus may be at the fire-station or at any other convenient point.

It is desirable to adopt fuses and cartridges which are not readily affected by moisture or 70
change of temperature to an objectionable degree.

What I claim, and desire to secure by Letters Patent of the United States, is—

In an automatic fire-alarm apparatus, the 75
combination of the annunciator in circuit, a spring-actuated circuit-closer *i*, a block *l*, carrying the circuit-closer, a pin in line with and operating the circuit-closer and supported in the block, a detonating-cartridge carrying 80
fuses at one end, and a plug at the other end of the cartridge and capable of being expelled with force by the explosion of the cartridge against the pin to operate the circuit-closer, substantially as described. 85

In witness whereof I have hereunto set my hand in presence of two witnesses.

EUGEN WIDER.

Witnesses:

RICHARD MORITZ,
ADOLF F. STERLEE.