June 7, 1932. L. I. PARKHURST 1,861,547

CIRCUIT MAKER AND BREAKER FOR SAFE ALARMS

Filed March 13, 1929

Fig. 1.

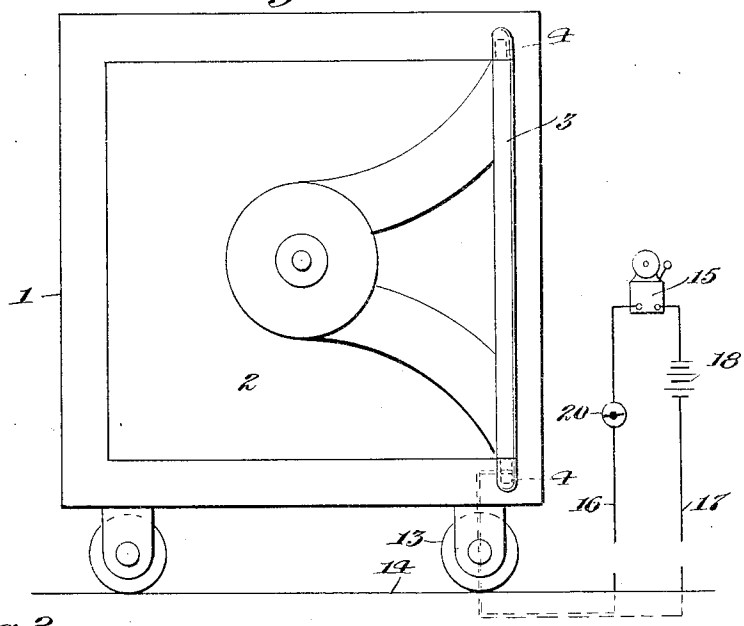


Fig. 2.

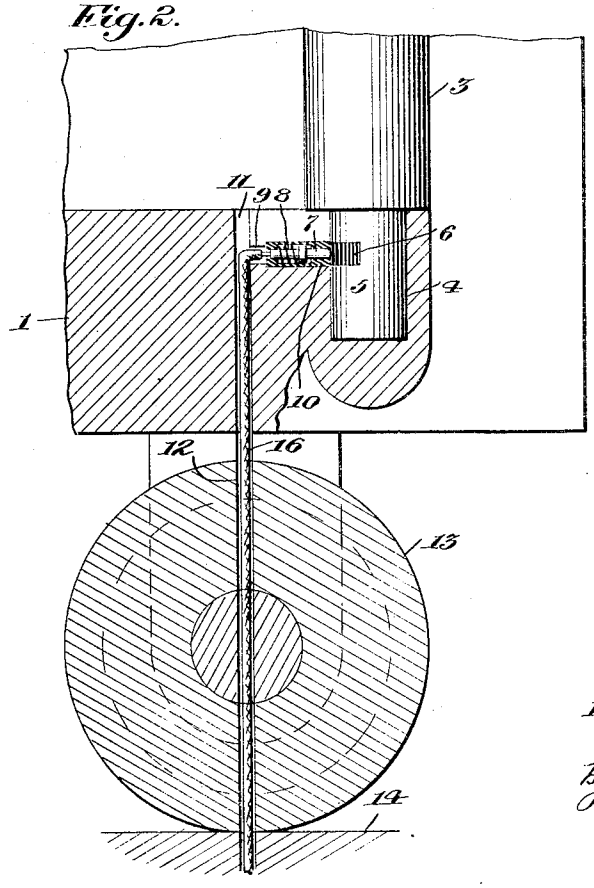
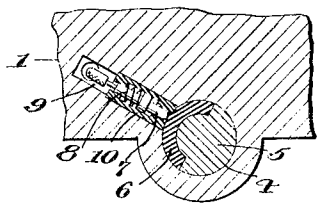


Fig. 3.



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CIRCUIT MAKER AND BREAKER FOR SAFE ALARMS

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This invention relates to burglar alarms, especially such as are designed to be used for the protection of money safes used by banks for the retention of their cash, such safes being usually installed in the bank vault.

The prime object of the invention is to provide simple, economical, durable, and efficient electrical means connected with a safe, said means being hidden, concealed and invisible for furnishing an alarm disposed at any suitable or desirable place, when the safe door shall have been opened by any unauthorized person.

A further object of the invention is to conceal the operable electrical contact for the electric circuit at the lower end portion of the hinge of the safe door, and lead the line wires through a hole bored through the lower solid portion of the safe and through its wheel support and the floor, and thence to the alarm.

The foregoing and such other objects as may appear from the ensuing description are attained by the combination, location, arrangement and construction of the several parts hereinafter described, illustrated by the accompanying drawing, and more particularly pointed out in the claims appended hereto, it being understood that slight changes in the precise construction and minor details may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming a part of this specification it will be seen that:—

Figure 1 is a front elevation of the means embodying our invention.

Figure 2 is an enlarged sectional elevation, showing the lower portion of the safe broken away and the operable contact means disposed therein, and

Figure 3 is a cross sectional detail showing the operable contact means.

In the embodiment of our invention as illustrated, it will be seen by reference to Fig. 1, that the numeral 1 designates a safe of any desirable construction, provided with a door 2, having a hinge member 3 formed from a single piece of any suitable metal, and a bearing 4 formed at both the upper and lower portion of the safe for the reception and retention of each reduced end portion 5 of the said hinge member.

In the lower reduced end portion 5 of the hinge member is formed a recess extending partly around the portion 5, said recess being filled with any suitable or desirable fibrous insulating material 6, and resting in contact with said material 6, when the safe door is in closed position, is a metallic contact pin 7 which is partly surrounded by a coiled spring 8 and surrounding said pin and spring, and disposed within a recessed formation 9, in the lower solid portion of the safe is suitably secured a piece of suitable film insulating material 10, and leading from said recessed formation 9 and pin 7 are the electrical circuit line wires, said wires being passed through a hole or opening 11 formed through the lower solid end portion of the safe, thence through an opening 12 formed through the central portion of one of the safe supporting wheels or rollers 13, thence through the flooring or other safe supporting medium 14, as is clearly shown in Fig. 3, and thence to a suitable alarm 15, located at any suitable or desirable distance or place where it is advisable to sound the alarm, when the safe door shall have been opened for access to the contents thereof by any one unauthorized to open said door.

The line circuit wires 16 and 17 are suitably connected with an electric battery 18 and any desirable type of alarm 15, respectively, and a suitable switch 20 is disposed in the electric circuit for the purpose of making and breaking the circuit by any one authorized to operate the said switch.

The operation of the means hereinbefore described may be briefly described as follows:

When the safe door shall have been opened sufficiently wide to gain access to its contents, the opening of said door will cause the lower portion 5 of the hinge member to rotate until the insulating material shall have passed out of contact with the pin 7, when said pin will immediately contact with the metal portion of said portion 5, thereby completing the

electric circuit, and causing the alarm to be audibly sounded, which alarm will be continued as long as the electrical circuit is completed, or until the safe door shall have been closed, or the circuit is broken by the operation of the switch by the proper authorized person having access thereto.

It will be readily perceived that the precise means hereinbefore referred to may be readily installed and utilized in connection with safes disposed or located in any commercial or mercantile business houses, or departments, and may be successfully employed by individuals in connection with their homes, and business offices, for furnishing an alarm or audible signal when the door of their safe, or container of their valuables, shall have been unduly opened by any one unauthorized to open the container.

It will be understood the alarm device hereinbefore referred to may be utilized in connection with the safe lock, or other portions of the safe, and may be employed with various constructions of money safes.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a burglar alarm for safes, a circuit closer comprising a safe door formed with a hinge having a reduced lower end portion, a recess formed in the lower end portion of the safe for the reception of said reduced portion, a recess formed in one side of the reduced portion, filled with insulating material, a recess formed in the lower portion of the safe adjacent to and in horizontal alinement with the second-named recess, and a metallic contact pin disposed in the last-named recess adapted to contact with said reduced end portion and the insulating material disposed in the end portion.

2. In a burglar alarm for safes, a circuit maker and breaker comprising a safe door formed with a hinge having a reduced lower end portion, a recess formed in the lower end of the safe for the reception of the end portion, a recess formed in said end portion at one side thereof filled with insulating material, a recess formed in the lower end of the safe adjacent to and in horizontal alinement with the second-named recess a contact pin disposed within the last named recess, a coiled spring surrounding a portion of said pin in operative contact with the pin, and insulating material surrounding the pin and spring, said contact pin being adapted to contact with the reduced portion and the insulating material disposed within said portion.

3. In a burglar alarm for safes, a circuit maker and breaker, comprising a safe door having a hinge formed with a reduced lower end portion of a single piece of metal, a semicircular recess formed in said end portion filled with insulating material, a recessed formation disposed in the lower portion of the safe adjacent to said recess and in horizontal alinement therewith, a contact pin, a metallic spring disposed within the recessed formation in operative contact with said pin also disposed within said formation, and insulating material disposed within the formation and embracing the pin, said pin being adapted to contact with the reduced portion and the insulating material within said portion.

LESTER I. PARKHURST.