

1,062,137.

Patented May 20, 1913.

Fig. 1.

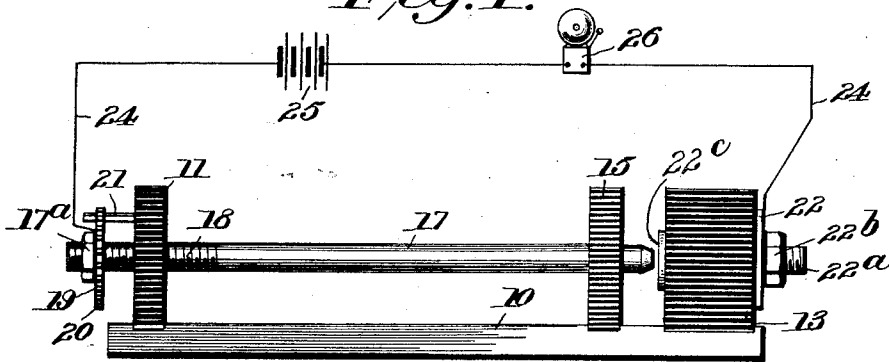


Fig. 2.

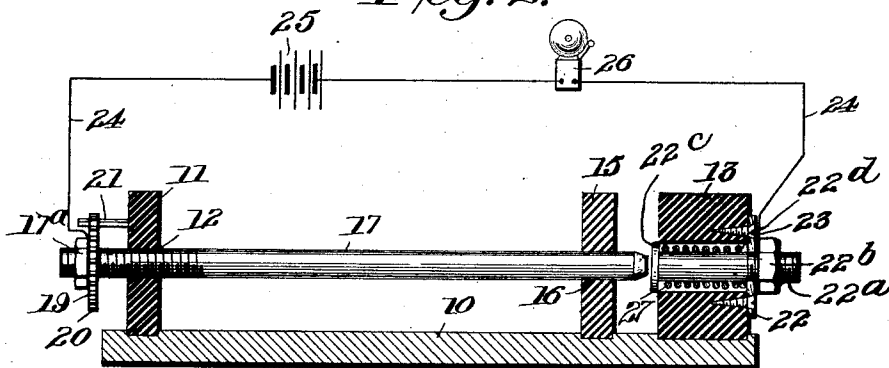


Fig. 3.

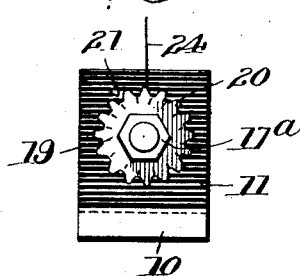
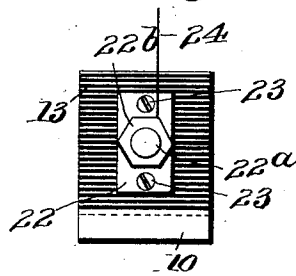


Fig. 4.



WITNESSES

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ELECTRIC FIRE-ALARM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERMAN BARDITZKY, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Electric Fire-Alarms, of which the following is a specification.

This invention relates to fire alarms and particularly to electric fire alarms, the object being to provide an alarm of this description which will be economical to manufacture, simple in structure, not liable to breakage or disarrangement, and adjustable readily and easily whereby it will operate at any desired degree of heat.

With these objects in view, the invention consists in the improved construction, arrangement and combination of parts hereinafter fully described and afterward specifically claimed.

In order that the construction and operation of my invention may be readily understood, I will now proceed to fully describe a preferred embodiment illustrated in the accompanying drawings, in which—

Figure 1 represents a view of my invention in elevation, the circuit, battery and bell being shown diagrammatically. Fig. 2 represents a view of the same with the contact mechanism in longitudinal vertical section. Fig. 3 represents a view of one end, in elevation, and Fig. 4 represents a similar view of the opposite end.

Like reference characters mark the same parts wherever they occur in the several figures of the drawings.

Referring specifically to the drawings, 10 indicates a base made of metal which is of very slight expansibility under the influence of heat, upon which is erected near one end a block, wall or standard 11 of a nonelectric conducting material, having a central threaded opening, as at 12, and at the other end a similar wall, standard or block 13 having a smooth central opening 14 in line with the threaded opening 12. Intermediate the standards 11 and 13, is a guide block 15, also of non-conducting material having a smooth central opening 16 in line with the openings 12 and 14. Slidably fitted in the guide block 15 is a rod 17 of a metal highly expansive under the influence of heat, the end of said rod being threaded as at 18 to engage in the threaded opening 12 in the standard 11. On the threaded portion of

the rod 17 is secured a dial 19 graduated and numbered to indicate degrees, and having notches 20 in its periphery to receive a pawl 21 secured to the standard 11. On the outside of the standard 13 is a plate 22 of a conductive metal secured over the opening 14 by any suitable means, such, for instance, as screws 23. A rod 22^a of conductive material is fitted in a central opening in the upright 13, in line with the rod 17 and passes outward beyond the outside of the standard, through and closely fitting in an opening in the plate 22 beyond which it further extends and is threaded as shown to receive a nut 22^b. The inner end of the rod 22^a is headed at 22^c, and an expanding spring 27, coiled around the rod 22^a between said head and the plate 22, presses against said head and holds the rod 22^a yieldingly inward, as far as is permitted by the nut 22^b and plate 22.

24 indicates the wire of an electric circuit, one end being twisted around the threaded end of the rod 17 and the other around the rod 22^a of the plate 22, said circuit including a source of electric current, as a battery 25 and an alarm, as a bell 26. The ends of the wire are secured by the nuts 17^a and 22^b, the first nut clamping one end of the wire against the dial 19 and the second nut clamping the other end against the plate 22.

By turning the rod 17, its threaded end is moved longitudinally in the threaded opening 12 and its opposite end projecting beyond the guide block 15 brought nearer to or farther from the rod 22^a, and the dial 19 being also turned, the degree of heat at which the alarm will be sounded, will be indicated on the dial by the pawl 21 which, engaging in the notches 20, will also hold the dial against turning, and thus preserve the adjusted position of the rod 17. Normally the end of the rod 17 will be out of contact with the rod 22^a and the circuit will be broken, but as soon as the temperature rises to a sufficient degree, the rod 17 will be expanded, and its end will contact with the rod 22^a and close the circuit through the plate 22, the wire 24, alarm 26, the battery 25 and the rod 17, thus sounding the alarm. The rod 22^a being yieldingly held by the spring, no injury can result from over-expansion of the rod 17 due to excessive heat.

From the foregoing, the construction and operation of the invention will be readily understood, and it will be observed that the

construction is simple, and the parts few and not liable to displacement and breakage.

It will be obvious to those skilled in the art to which the invention appertains, that 5 changes and variations in the specific construction and arrangement of the parts described, may be made without departing from the spirit and scope of the invention.

Having thus fully described my invention, 10 what I claim as new, and desire to secure by Letters Patent of the United States is:—

1. A fire alarm comprising a base, two standards composed of materials which are non conductors of electricity, a rod secured 15 in one standard and terminating near the second standard which standard is provided with an opening in line with the rod, a non-conducting guide block in which said rod is slidable, a contact plate secured on the outside 20 of the second standard having an opening in line with the opening of said standard, a second rod of conducting material slidably mounted in the opening of the second standard, having a headed inner end, 25 and a threaded outer end projecting through the opening in the contact plate, an expanding spring in the opening of the second standard around the second rod therein, between its headed inner end and the contact 30 plate, and an electric circuit containing a battery and alarm and having its terminals in the ends of the two rods.

2. A fire alarm comprising a base of ma-

terial but slightly expansible under the influence of heat, a standard of material which 35 is a non-conductor of electricity erected at one end of the base and having a central threaded opening, a second standard of non-conducting material erected at the opposite end 40 of the base and provided with a smooth central opening, a rod of conducting material more expansive than the base under influence of heat having one end threaded and engaged in the threaded opening of the first 45 standard and the other end smooth and terminating near the second standard, a contact plate on the outside of the second standard having an opening in line with the highly expansive rod, a contact rod slidably fitted 50 in the opening of the second standard and the contact plate and having a threaded end, a nut on said threaded end outside of the contact plate, a graduated dial secured on the threaded end of the highly expansive 55 rod and having notches in its periphery, a pawl secured to the first standard and engaging said notches, and an electric circuit containing a battery and alarm and having its terminals in the threaded ends of the 60 two rods.

In testimony whereof I affix my signature in presence of two witnesses.

HERMAN BARDITZKY.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."