F. E. OVIEDO.

FIRE ALARM.

APPLICATION FILED JULY 2, 1909.

967,658. Patented Aug. 16, 1910.

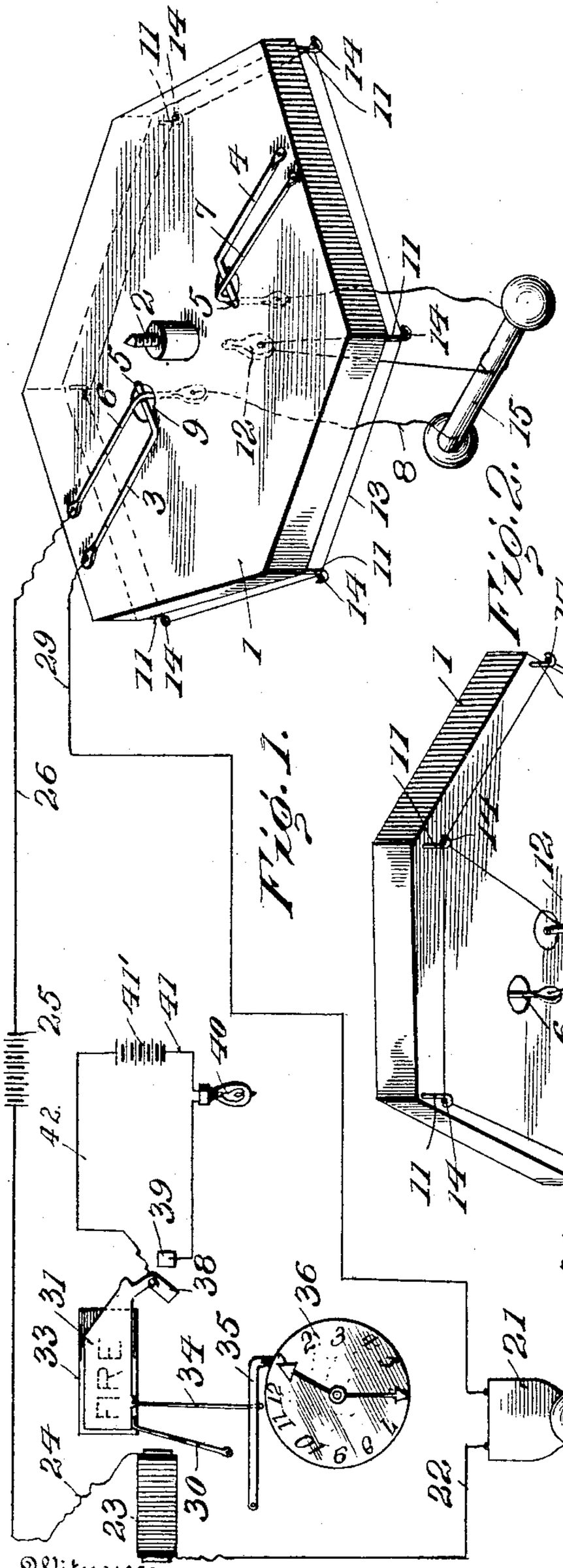

Fig. 1.

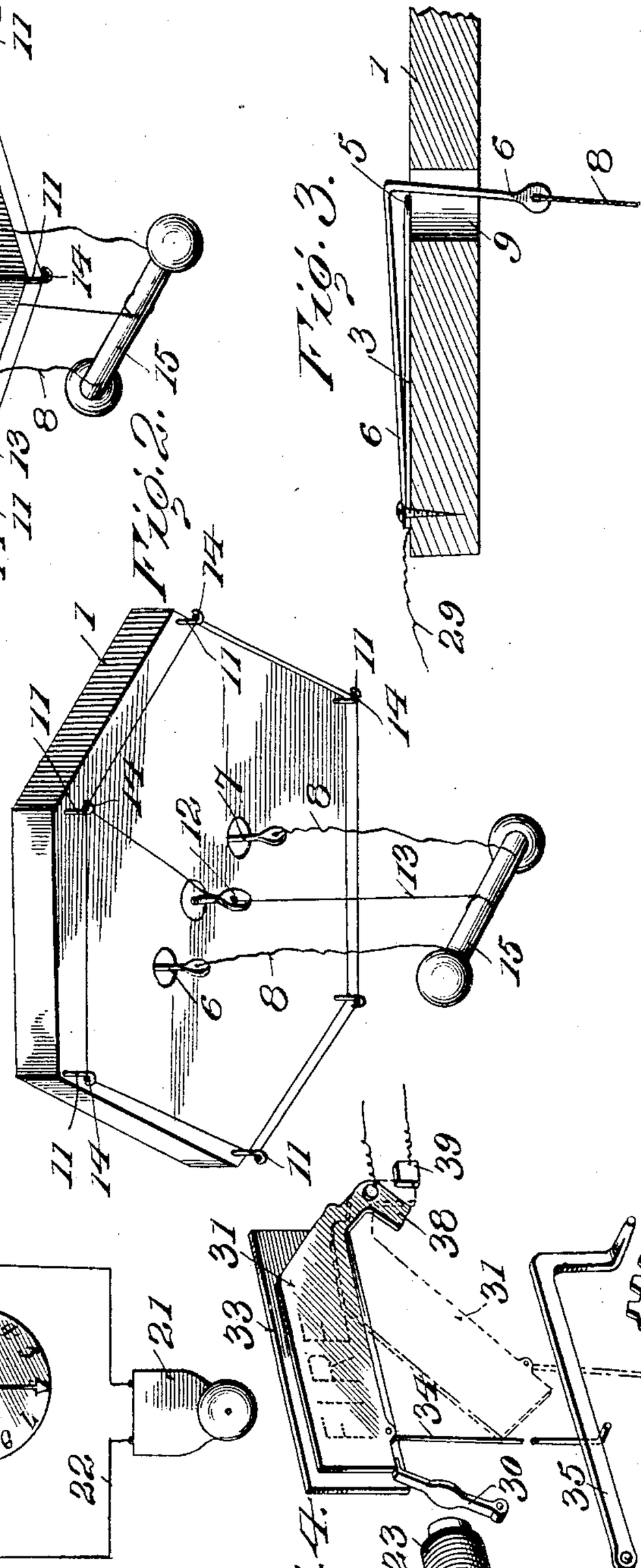

Fig. 2.

Fig. 3.

Fig. 4.

Witnesses

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FRANCISCO E. OVIEDO, OF MEXICO, MEXICO.

FIRE-ALARM.

967,658. Specification of Letters Patent. **Patented Aug. 16, 1910.**

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To all whom it may concern:

Be it known that I, FRANCISCO E. OVIEDO, a citizen of the United Mexican States, residing in the city of Mexico, Federal District, United Mexican States, have invented certain new and useful Improvements in Fire-Alarms, of which the following is a specification.

This invention relates to improvements in automatic fire alarms.

The object of the invention is to provide a weight suspended by cords or the like, held in position by suitable material, which when heated will melt and allow the weight to fall, whereby an electric circuit is closed to operate a signal, and indicate the location of the fire.

The invention also relates to the specific details of construction and arrangement to be hereinafter referred to and particularly pointed out in the claims.

In the drawings: Figure 1 is a perspective view of my invention, the wiring, etc., being conventionally indicated. Fig. 2 is a view of the underside of the invention; Fig. 3 is a detail section illustrating the position of the contact pieces. Fig. 4 is a detail perspective view in somewhat diagrammatic form illustrating one of the signals and its connections.

1 indicates a block or other base, provided with a screw 2, by means of which said block may be attached to a ceiling or other support. Located on the upper side of the base are two contact pieces 3 and 4, each having an angularly disposed end 5. Normally slightly spaced from the extensions 5 are two other yielding contact pieces 6 and 7 having bent ends which extend through openings 9. To the end of each yielding contact is secured a chain or cord 8. The lower end of each of the cords 8 is secured to a weight 15.

Depending from the bottom of the base, near the edge thereof, are hooks 11, and at a point near the center is an eye or guide 12. The hooks 11 support a light cord or wire 13, secured thereto by wax, or some suitable substance, indicated at 14. From the hooks the wire or cord passes through eye 12, and at the lower end is attached the weight 15.

When the cord or wire 13 is properly secured to the hooks, its length from the guide 12 to the weight is less than the length of the chains or cords 8, hence the latter remain slack and the pull on the ends of the contact pieces 6 and 7 is relieved and the circuit remains broken. The yielding character of the contact pieces 6 and 7, is such as to cause them to spring upwardly from the angular ends 5 of the contact pieces 3 and 4, when the pull of the weight is relieved.

Connected to the end of contact 3, is a wire 29 leading to a bell 21. From the bell leads a wire 22, connected to a magnet 23, and from the magnet leads a wire 24, connected to a battery 25. From battery 25, leads a wire 26, connected to the terminal of the contact piece 6. A similar connection may lead from the complemental contact pieces 4 and 7, if desired.

The armature 30, which coöperates with the magnet 23, controls a drop 31, located over an indicating sign 33, having the word "Fire" thereon. To the end of the drop is a short connection 34, supporting a trip 35, to engage a clock mechanism 36, to indicate the time of the fire. The drop also has a contact piece 38, designed to contact with a contact piece 39, when a fire occurs. To the contact 39, is attached a wire leading to an electric lamp 40. From the lamp leads a wire 41, connected to a battery 41′, and from said battery leads a wire 42, connected to the contact piece 38.

If a fire should occur in the room where the block or base 1 is located, the wax or other substance 14 holding the cord 13 to the hooks 11, will melt and immediately the cords will be free to be drawn from the hooks and the guide 12, by the weight 15. When the weight falls, the chains or cords 8, attached to the contact pieces 6 and 7, will draw the latter down into contact with the angular portions 5 of the contact pieces 3 and 4, and thereby establish the circuit through the wiring described. When the circuit is closed, the bell 21, not only rings, but the shield 31, drops and exposes the sign with the word "Fire" thereon. The dropping of the shield completes the circuit through the contacts 38 and 39, and the electric lamp 40, is lighted. The dropping of the shield allows the trip 35 to drop and thereby indicates through the clock mechanism just the time the fire occurred.

It will of course be obvious the various alarms, and signals may be located in various rooms, or places according to the conditions and circumstances.

It may be found convenient to use a single cord 13, around the hooks 11, or several such

cords may be employed, according to the circumstances.

The essential feature of the invention resides in the particular manner of arranging the contacts, and the means for holding the cords so that the weight will under normal conditions keep the circuit broken, but will, when released by the melting of the substance holding the cords, close the circuit and announce through the various signals the time and place of the fire.

Claims—

1. In a fire alarm signal, the combination with a base, a guide on the base, hooks supported by the base, a cord supported by the hooks and extending through the guide on the base, a fusible substance for holding the cord on the hooks, a weight supported on the said cord, a pair of normally spaced contacts mounted on the base, a flexible connection between one of the contacts and the weight, a circuit leading from the contacts, and a signal in the circuit, whereby when a fire occurs the fusible substance holding the cord on the hooks will melt and the weight will drop by gravity and will bring the contacts together and close the circuit and operate the signal.

2. In a fire-alarm signal, the combination with a base formed with an opening, a cord secured to the base by a fusible substance which will melt and release said cord under the influence of heat, a weight secured to the cord, a contact secured to the base and having one end extended across the opening, a second contact secured to the base and extending over and spaced from the part of the first mentioned contact which extends across the opening, the end of the second mentioned contact being bent and extending through the opening in the base, a flexible connection between the bent end of the second contact and the weight, a signal and wiring between the contacts and the signal, whereby when a fire occurs the fusible substance will melt and release the cord and weight and the contacts will close the circuit and operate the signal.

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Witnesses:

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