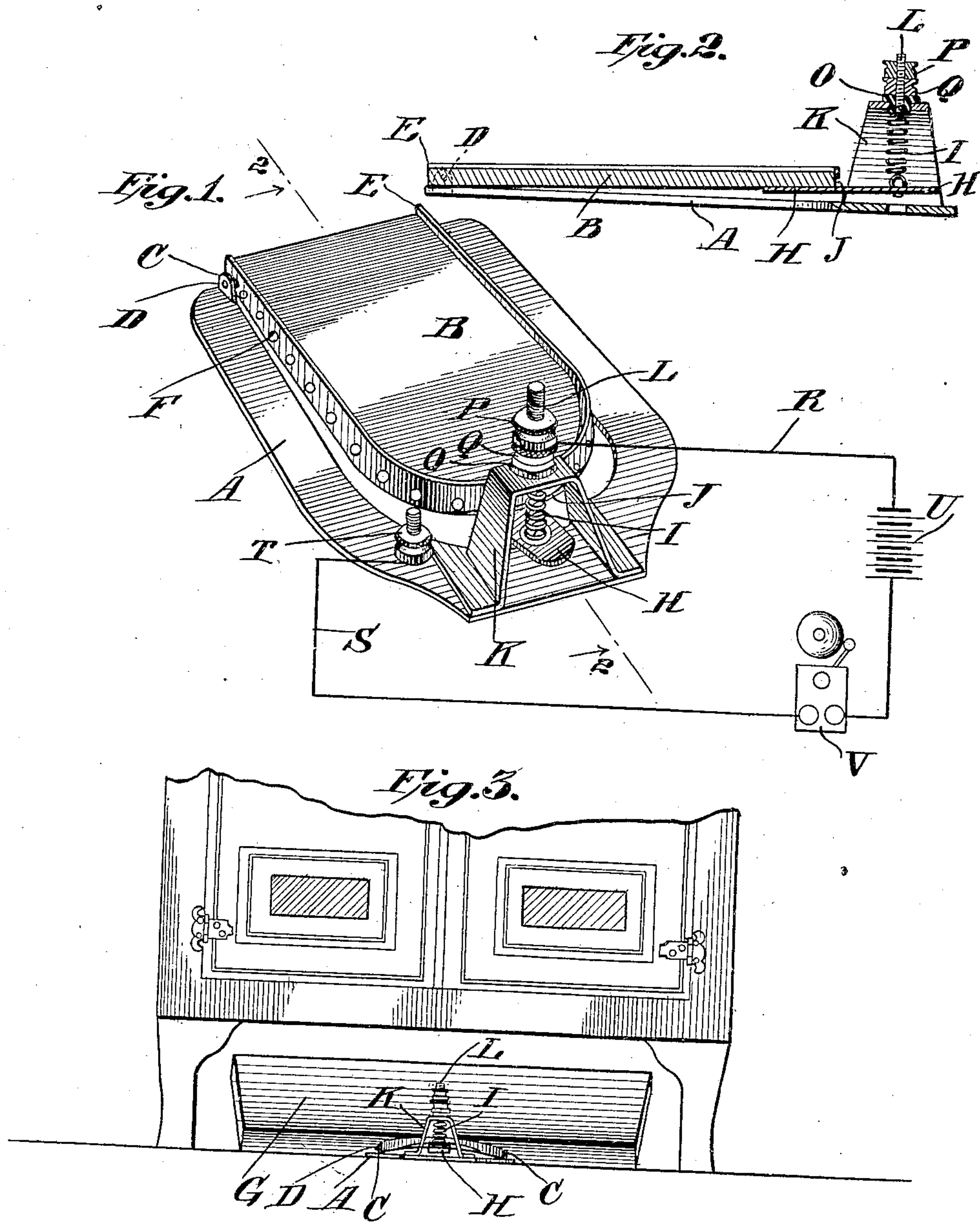


No. 840,582.

PATENTED JAN. 8, 1907.

J. F. O'NEILL.
ELECTRIC ALARM DEVICE.
APPLICATION FILED AUG. 4, 1906.



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UNITED STATES PATENT OFFICE.

JOHN F. O'NEILL, OF NEWBURGH, NEW YORK.

ELECTRIC ALARM DEVICE.

No. 840,582.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed August 4, 1906. Serial No. 329,257.

To all whom it may concern:

Be it known that I, JOHN F. O'NEILL, a citizen of the United States, and a resident of Newburgh, in the county of Orange and State of New York, have invented certain new and useful Improvements in Electric Alarm Devices, of which the following is a specification accompanied by drawings.

This invention relates to electric alarm devices, and the object of the invention is to construct an automatic electric signaling device adapted to be used in the household in an ice-chest or ice-box for indicating when the drip-pan is full of water from the melted ice, thereby preventing the overflow of the water, which ordinarily causes much inconvenience and annoyance.

The device is so constructed that it is particularly adapted when in use to meet the conditions specified and insure that due notice shall be given the occupants of the household when the drip-pan is full of water.

The device is simple in construction and cheap to manufacture and may readily be placed in the bottom of the ice-chest underneath the drip-pan without interfering in any way with the ordinary use of the ice box or chest.

Further objects of the invention will hereinafter appear; and to these ends the invention consists of a device for carrying out the above objects embodying the features of construction, combinations of elements, and arrangement of parts having the general mode of operation substantially as hereinafter fully described and claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the device connected in circuit. Fig. 2 is a longitudinal sectional view on the line 2 2 of Fig. 1, and Fig. 3 is a front view of the lower portion of an ice-chest with the drip-pan and alarm device in position.

It is necessary that the mechanism of the device be so constructed that it will be simple in operation and at the same time will prevent short circuits, which would cause the alarm or signal to be prematurely sounded or indicated. The contact device is adapted to be placed either upon a stone, cement, or wooden floor or floor of other insulating material, or else it may be placed within a metal-lined box or chest, without danger in the latter case of short circuits occurring through the metal lining of the chest.

The base A of the apparatus is preferably of metal constructed in the form of a horse-shoe—that is, substantially U-shaped—in order to make the mechanism as cheap and light as possible and obviate the use of waste metal. The base A may be made of one continuous piece of metal stamped, cut, or otherwise formed in a desired shape. A movable member or platform B is suitably hinged or pivoted at one end, preferably to the open end of the base A, in this instance the base being provided with ears C, in which are pivoted studs or projections D on the platform B, thereby permitting the platform to swing at its pivotal points. The member B may be constructed of any suitable material, preferably wood or other insulating material, and, as shown, is substantially of the form of the interior portion of the base A, so that interference of movements of the platform is prevented. The platform B is preferably provided with an outer rim E of metal for strengthening purposes to prevent the wooden member from splitting or becoming warped from moisture. As shown, the metallic rim E is suitably secured to the member B by pins, nails, or other fastening devices F, and this rim preferably projects above the surface of the platform to take the weight of the drip-pan G, as shown in Fig. 3. The drip-pan is ordinarily larger than the alarm device and will rest partly on the bottom of the ice-chest or on the floor and partly on the rim E.

Projecting from the end of the platform B opposite the pivots is shown a metallic contact-tongue H, normally separated from the base A by means of the spring I, but adapted to make contact with the base and complete the circuit when the weight of the water in the drip-pan presses the platform down against the tension of the spring. Preferably the front portion of the rim E is cut away a sufficient distance at J to prevent electrical contact between the tongue H and the rim, which would otherwise short-circuit the apparatus.

The spring I is suitably supported from a bridge K, suitably secured to the base A over the tongue H and of sufficient height to permit a spring of any desired character to be suspended within the bridge. Means are also provided for adjusting the tension of the spring, so that the device may be adjusted for different-sized pans to hold different amounts of water. Furthermore, the ten-

sion of the spring should be adjusted to meet the required conditions—as, for instance, according to the amount of ice in the ice-chest, which will melt and fill the pan with water.

5 Any suitable adjusting means may be provided; but in this instance I have shown an adjusting-screw L, carried vertically in an insulating-sleeve O, which extends through an aperture in the top of the bridge K and
10 insulates the screw from the metal bridge. The spring I is shown in this instance in the form of a coiled spring, which is connected in any suitable manner to the tongue and to the
15 suitable lock-nuts P and Q on the screw L permit said screw to be adjusted up and down and locked in position, and these nuts also form a binding-post for one of the electric wires R. The other wire S, as shown, is connected to
20 the binding-post T, carried by the base A, and these wires in use should be connected with a suitable battery U and any form of alarm or indicating device—as, for instance, a bell V—although an electric light could be
25 used, if desired.

In the operation of the apparatus when the weight of the water is sufficient to depress the platform B and tongue H, so that the tongue is in contact with the base A, a circuit
30 will be completed from the battery U by means of the wire R to and through the screw L, down through the spring to the tongue H, which is in contact with the base A, and the circuit will then pass through the
35 base and out by the wire S, through the bell V, back to the battery U, thereby sounding the bell and notifying the occupants of the household that the ice is melted and the pan is full of water. When the pan is emptied,
40 the platform B and tongue H resume their normal position.

It will be seen that owing to the arrangement of the insulation the device may be resting directly on a metallic surface; but
45 short circuits will not occur even if a metallic pan is placed partly on the platform B and partly on the metallic surface upon which the device rests, because the tongue H is entirely insulated from the metallic rim E and
50 from the base A.

Obviously some features of this invention may be used without others and the invention may be embodied in widely-varying forms.

55 Therefore, without limiting myself to the construction shown and described, I claim, and desire to obtain by Letters Patent, the following:

1. An electric overflow-alarm or indicating device for ice-boxes and other uses comprising a metallic base, a bridge at one end, a
60 movable member or platform pivoted at the other end of the base and adapted to support a pan or other receptacle, a contact connected
65 to said platform and insulated therefrom,

means connected to the bridge for resisting downward pressure on said pivoted base, and electrical indicating means adapted to be set in operation when the said contact touches the base due to the weight of the material in
70 the pan.

2. An electric overflow-alarm or indicating device for ice-boxes and other uses comprising a metallic base, a bridge at one end, a
75 movable member or platform pivoted at the other end of the base and adapted to support a pan or other receptacle, a contact connected to said platform and insulated therefrom, adjustable means connected to the
80 bridge for resisting downward pressure on said pivoted base, and electrical indicating means adapted to be set in operation when the said contact touches the base due to the weight of the material in the pan.

3. An electric overflow-alarm or indicating device for ice-boxes and other uses comprising a metallic base, a bridge at one end, a
85 movable member pivoted at the other end of the base and adapted to support a pan or other receptacle, an insulated contact-tongue
90 projecting from said base and extending underneath said bridge, a spring connecting the tongue with the bridge, and electrical indicating means adapted to be set in operation when the said tongue comes in contact
95 with the base due to the weight of the water or other material in the pan.

4. An electric overflow-alarm or indicating device for ice-boxes and other uses comprising a base, a bridge connected thereto, a
100 movable member or platform pivoted at one end of the said base, a contact-tongue secured to said member and insulated therefrom, and an adjustable spring connecting said bridge to said tongue and adapted to
105 yield to pressure on the movable member, and an electric alarm included in the circuit of the base, the contact-tongue and said spring.

5. An electric overflow-alarm or indicating device for ice-boxes and other uses comprising a metallic base, a metallic bridge secured thereto, a wooden member or platform
110 provided with a reinforcing metallic edge, one end of said member being pivoted to the base, a metallic contact-tongue secured to the wooden portion of said platform and insulated from the metallic rim, an adjustable
115 spring connecting said bridge to said tongue, and an electric alarm device included in the circuit of the base, the contact-tongue and the spring.

6. An electric overflow-alarm or indicating device for ice-boxes and other uses comprising a metallic base, a platform of insulating material pivoted at one end to the base
125 and provided at the other end with a contact adapted to cooperate with the base, a bridge over said contact, an adjusting-screw carried by said bridge and insulated there-
130

from, a retracting-spring connecting said
contact with the screw, adjusting-nuts on
said screw, and an electric alarm or indicat-
ing device included in the circuit of the
5 screw, the spring, the contact and the base,
whereby a circuit will be completed when the
tongue is brought into contact with the base
due to pressure upon the platform.

In testimony whereof I have signed this
specification in the presence of two subscrib- 10
ing witnesses.

JOHN F. O'NEILL.

Witnesses:

PETER CANTLINE,
HARRY McDOWELL.