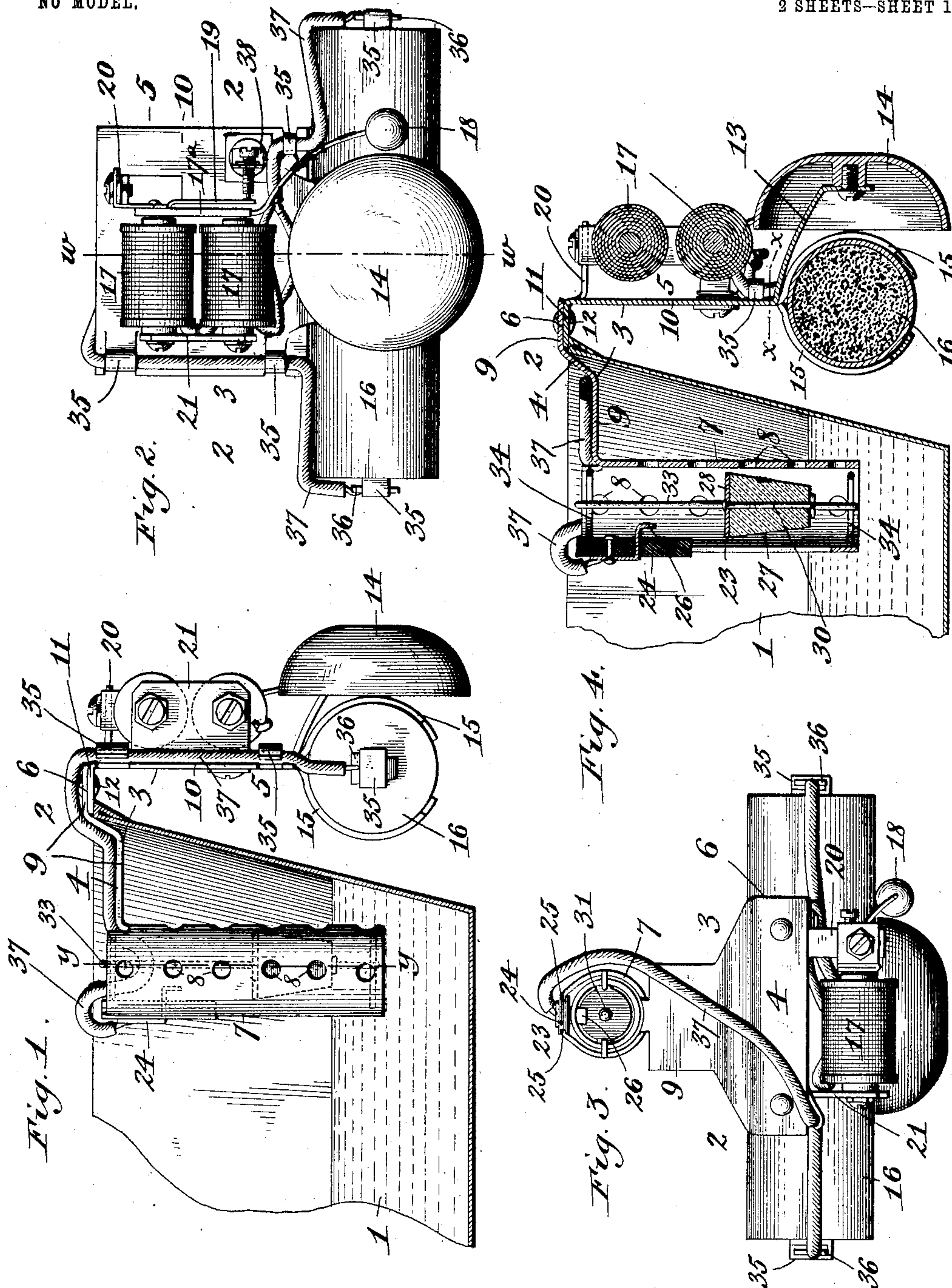


W. J. BISHOP.
OVERFLOW ALARM.

APPLICATION FILED JUNE 4, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

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2 SHEETS—SHEET 2.

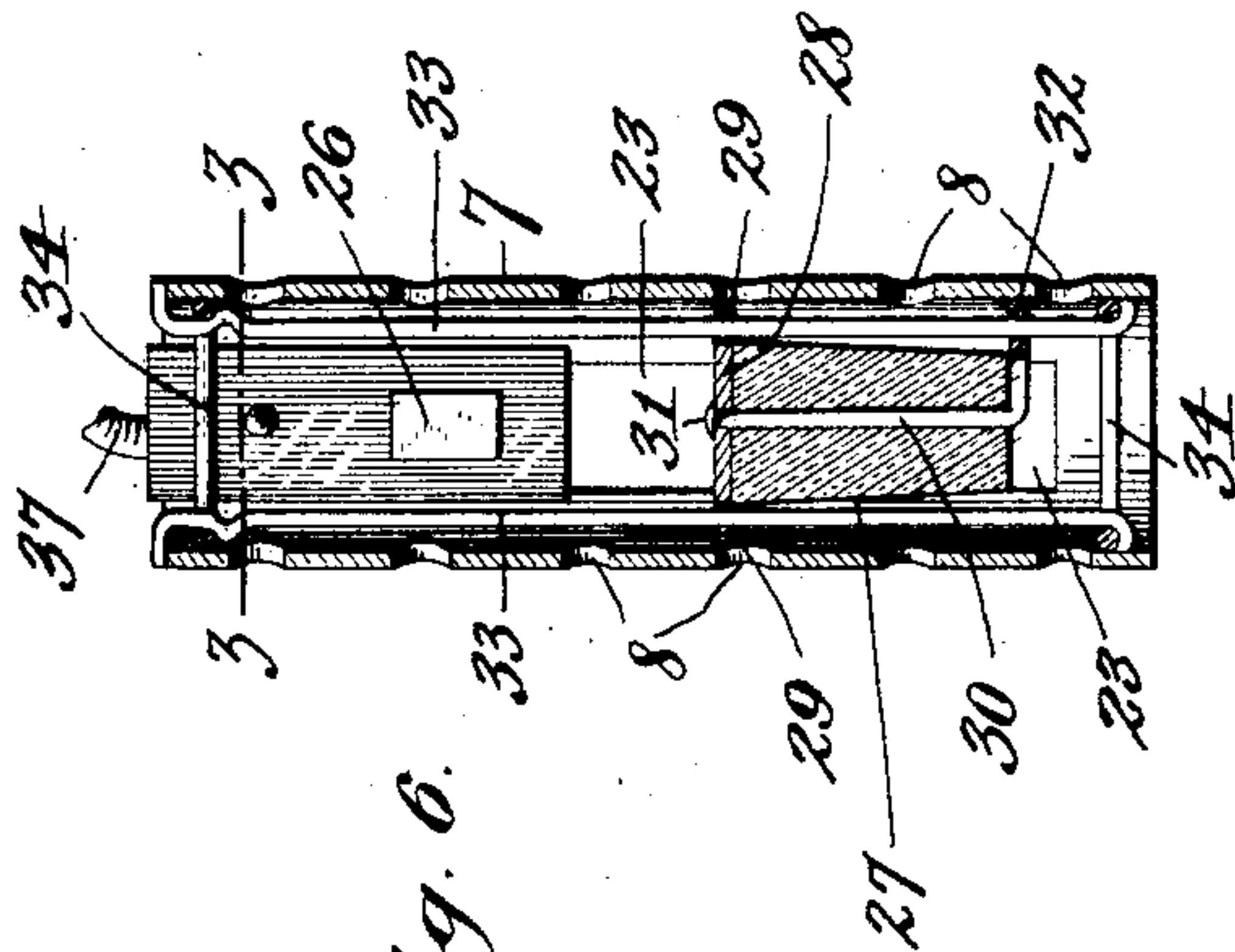


Fig. 6.

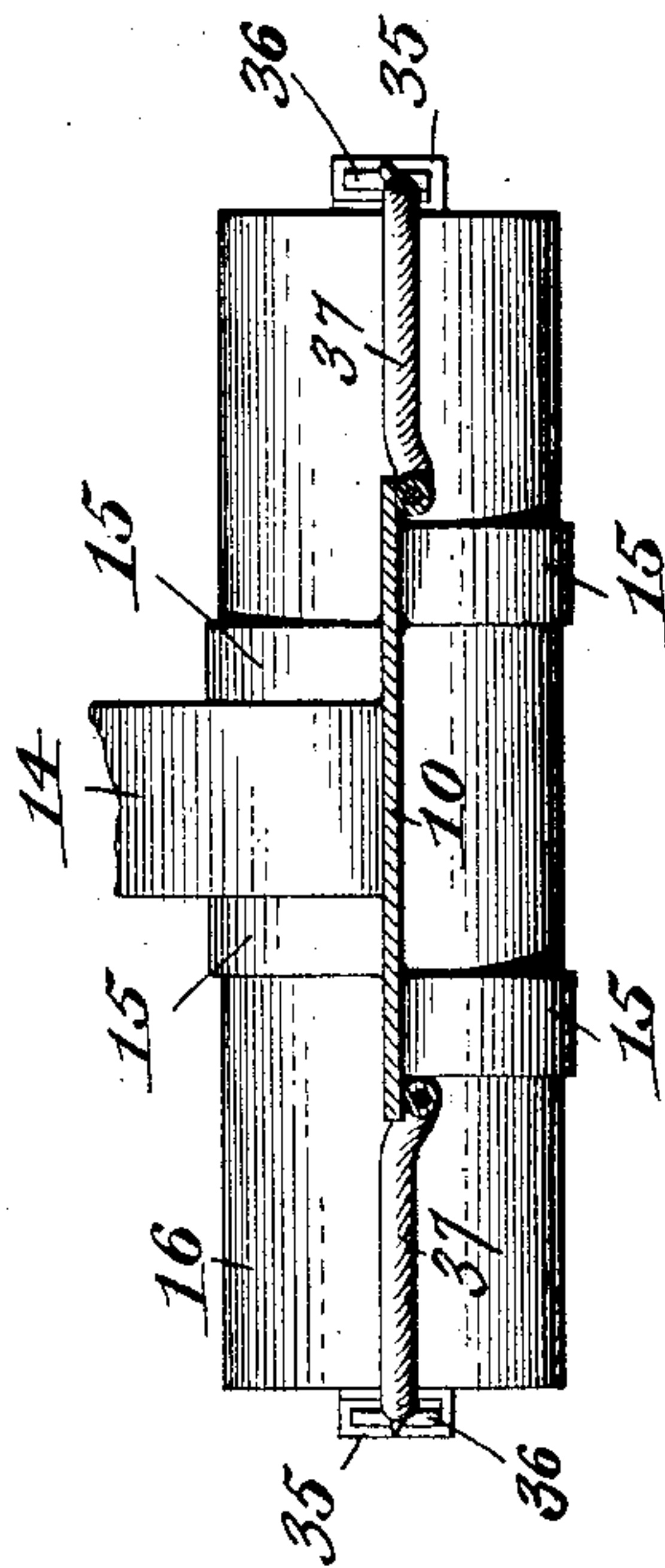


Fig. 5.

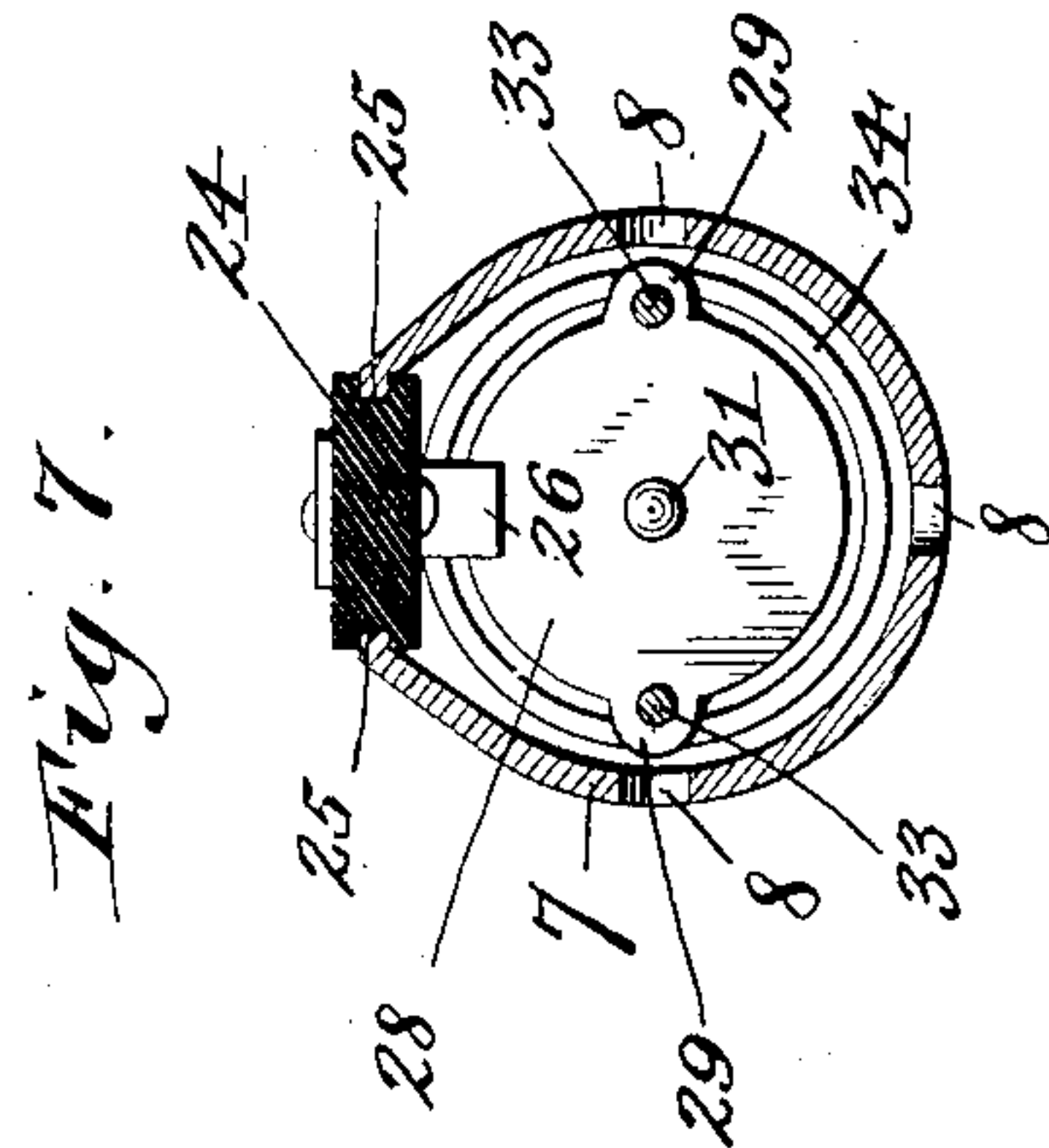


Fig. 7.

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UNITED STATES PATENT OFFICE.

WILBERT J. BISHOP, OF BUFFALO, NEW YORK.

OVERFLOW-ALARM.

SPECIFICATION forming part of Letters Patent No. 741,759, dated October 20, 1903.

Application filed June 4, 1903. Serial No. 160,062. (No model.)

To all whom it may concern:

Be it known that I, WILBERT J. BISHOP, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Overflow-Alarms; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to overflow-alarms, and more particularly to such as are used in connection with catch-basins or drip-pans of refrigerators or similar articles.

The object of my invention is the production of an automatic alarm for the purpose mentioned which is not only simple and inexpensive, but which can be conveniently attached to or removed from a catch-basin and which also affords a convenient means for replacing the battery when consumed. Other objects are to construct the alarm so that an electrical circuit can be established at different heights of the water-level and to improve the circuit-wire connection to the battery.

To these ends the invention consists of the novel arrangement and combination of parts, as will be hereinafter described, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of my improved overflow-alarm, showing the manner of attaching the same to a drip-pan. Fig. 2 is a front elevation of the alarm. Fig. 3 is a top plan view of the same. Fig. 4 is a vertical section taken on line *ww*, Fig. 2, showing the alarm attached to a drip-pan. Fig. 5 is a horizontal section taken on line *xx*, Fig. 4. Fig. 6 is a vertical section taken on line *yy*, Fig. 1. Fig. 7 is an enlarged horizontal section taken on line *zz*, Fig. 6.

Referring to the drawings in detail, like numerals of reference refer to like parts in the several figures.

The numeral 1 designates a catch-basin or drip-pan to which my improved overflow-alarm 2, considered as a whole, is attached.

The alarm comprises a supporting-frame 3, formed in two sections 4 5, suitably connected together, as at 6, each section being preferably stamped from a single sheet of metal. The inner section 4 comprises a tube 7, preferably provided with perforations 8 and open

at both ends, and a connecting member 9, projecting outward from the upper end of said tube. The outer member 5 comprises a vertical member 10 and an inwardly-projecting connecting member 11, which is connected to the outwardly-projecting connecting member 9 of the inner section, both connecting members 9 and 11 forming a bridge portion 12, connecting the vertical member of the outer section with the tube 7 of the inner member and serving as a means of supporting the alarm on the catch-basin. The lower end of the outer member is provided with an outwardly and downwardly extending arm 13, to which the gong 14 is secured, and with four segmental arms 15, arranged in sets of two disposed in opposite directions to form substantially circular clips in which the battery, preferably a dry battery 16, is confined.

In connection with the gong and battery I use electromagnets 17 of any common construction, an armature 17^a, a hammer 18, and a flexible contact 19, supporting said armature, all of which may be of any common construction and constitute an ordinary electrical annunciator. The flexible contact 19, supporting the armature 17^a, I secure to an outwardly-extending lip 20, stamped from the vertical member 10 of the outer section, and the electromagnets are also secured to a forward extension or flange 21, stamped from said vertical member.

The tube 7 extends into the catch-basin and is provided with a vertical slot 23, in which a plate or block 24 of non-conducting material is adjustably held, the side of said plate or block having vertical grooves 25, which fit the bounding edges of the metal on opposite sides of said slot, thus permitting said plate or block to be adjusted to any desired position. A contact 26 is connected or affixed to said plate and is designed for coaction with a buoyant contact or float 27, movable vertically in the tube 7 and controlled by the rise of the water in the drip-pan. The said buoyant contact is preferably constructed of cork, having a metal contact-plate 28 secured to its upper face, which plate is provided with opposite lateral apertured extensions 29. The contact-plate 28 is secured to the float by means of a wire 30 passing through the latter and having its upper end upset, as at

31, and its lower end bent laterally underneath the float and terminating in a loop 32. Two opposite vertical guides 33 extend the full length of the tube 7 and are secured with their upper ends to the upper edge of said tube, and with their lower ends they are wound around a ring 34, whereby they are held in proper position. The said guides are passed through the apertured extensions on the contact-plate 28, and one of said guides is also passed through the loop 32. The buoyant contact is therefore guided properly in its movement when elevated by the water and assures perfect coaction with the adjustable contact at all times. The opposite poles of the battery are each provided with a spring-loop contact 35, in each of which a tapered contact 36 is removably held, which latter are soldered or otherwise secured to the circuit-wires 37 connect the poles of battery with adjustable contact on the tube 7, and with the electromagnets, which latter are connected with a binding-post 38 on the outer section 5 of the supporting-frame.

When an electrical circuit is established by the rise of the water in the catch-basin, elevating the buoyant contact 27, so as to engage the adjustable contact 26, the current passes from one pole of the battery through the wire to the adjustable contact, the buoyant contact, guides, and supporting-frame to the binding-post 38 on the latter, thence through the wire to the electromagnets, and thence through the wire to the other pole of the battery, thus forming a complete circuit. If desired, however, any other arrangement of wiring may be resorted to.

The circuit-wires are held in position on the frame by clips 35, which are stamped from the vertical member of the outer section, and embrace the said wires.

Having thus described my invention, what I claim is--

1. In an overflow-alarm, the combination of a supporting-frame having an open tube adapted to be held in a catch-basin and provided with a vertical slot formed in the wall thereof, and a vertical member located outside of said catch-basin and being connected with said tube by a bridge portion whereby the alarm is supported on the upper edge of said basin, a battery and an electrically-operated annunciator carried by said vertical member, a contact held adjustably in the said vertical slot, a buoyant contact movably held in said tube and being adapted for coaction with said adjustable contact when elevated by the water in the basin and circuit-wires whereby an electrical circuit is established when the buoyant contact is elevated to coact with said adjustable contact.

2. In an overflow-alarm, the combination of a supporting-frame having an open tube adapted to be held in a catch-basin, said tube having a vertical slot formed in the wall thereof, a contact adjustably held in said slot, a buoyant contact held movably in said tube

and being adapted for coaction with the adjustable contact when elevated by the water in the basin, a battery and an annunciator supported on said supporting-frame, and circuit-wire suitably connected to the various parts whereby an electrical circuit is established when the buoyant contact is elevated against said adjustable contact.

3. In an overflow-alarm, the combination of a supporting-frame having an open tube provided with vertical guides and a slot formed in the wall thereof and being adapted to be held in a catch-basin, a buoyant contact movable on said guides and controlled in its movements by the rise of the water in the basin, a second contact adjustable in said slot and with which said buoyant contact is adapted to coact when elevated, a battery, an electrical annunciator, and circuit-wires suitably connecting the various parts.

4. In an overflow-alarm, the combination of a supporting-frame having a vertical member adapted to be suspended outside of a catch-basin and having opposite segmental extensions at its lower end forming a circular retaining-clip, a battery confined in said retaining-clip, an electrical annunciator, circuit-wires suitably connecting the various parts and means for establishing an electrical circuit by the rise of the water in the catch-basin.

5. In an overflow-alarm, the combination of a supporting-frame comprising an open tube, a vertical member and a bridge portion connecting the two, the latter serving to support the frame on the basin, a supporting-flange stamped from said vertical member, and opposite segmental extensions at the lower end of said vertical member, a battery confined in said segmental extensions, electromagnets secured to said supporting-flange, a hammer actuated by said electromagnets, a gong supported on the frame in operative relation to said hammer, a set of coacting contacts carried by the open tube of the frame and being controlled by the rise of the water in the basin, and circuit-wires connecting the various parts whereby an electrical circuit is established when contact is made by the rise of the water in the basin.

6. In an overflow-alarm, the combination of a supporting-frame adapted to be secured to a catch-basin, a buoyant contact carried by said frame, a second contact with which said buoyant contact is adapted to coact, an electrical annunciator and a battery carried by said frame, circuit-wire connecting the various parts whereby an electrical circuit is established when the said two contacts coact, and clips stamped from the supporting-frame and embracing said circuit-wires to hold the same properly to the frame.

7. In an overflow-alarm, the combination of a supporting-frame adapted to be secured to a catch-basin and having a vertical slot formed therein, a buoyant contact carried by said frame, an adjustable contact held in said slot and being adapted for coaction with said

buoyant contact, an electrical annunciator, a battery, opposite segmental extensions formed on said supporting-frame between which the battery is held, and circuit-wires
5 connecting the various parts whereby an electrical circuit is established when the said two contacts coact.

8. In an overflow-alarm, the combination of a supporting-frame having an open tube provided with opposite vertical guides, a buoyant contact comprising a buoyant body and a contact-plate secured to said buoyant body, a
10 securing-wire passing through said plate and

said buoyant body and terminating in a loop for connection with one of said vertical guides, 15 a second contact carried on said open tube, a battery, an electrical annunciator, and circuit-wires suitably connecting the various parts.

In witness whereof I have affixed my signature in the presence of two subscribing witnesses. 20

WILBERT J. BISHOP.

Witnesses:

CHAS. F. BURKHART,
M. SEWERT.