H. & E. BRUNELLE.

CIRCUIT CLOSER FOR DRIP PAN ALARMS.

APPLICATION FILED MAR. 21, 1916.

1,217,701.

Patented Feb. 27, 1917.

2 SHEETS—SHEET 1.

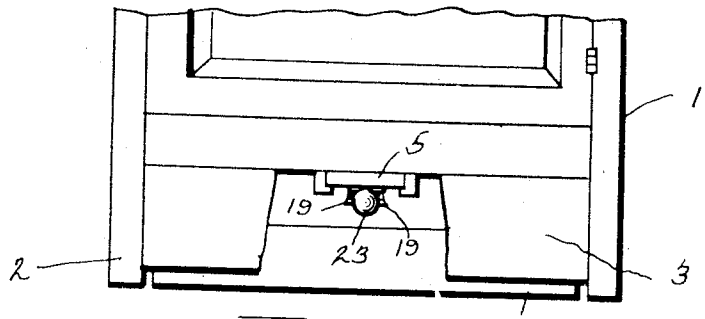


Fig. 1.

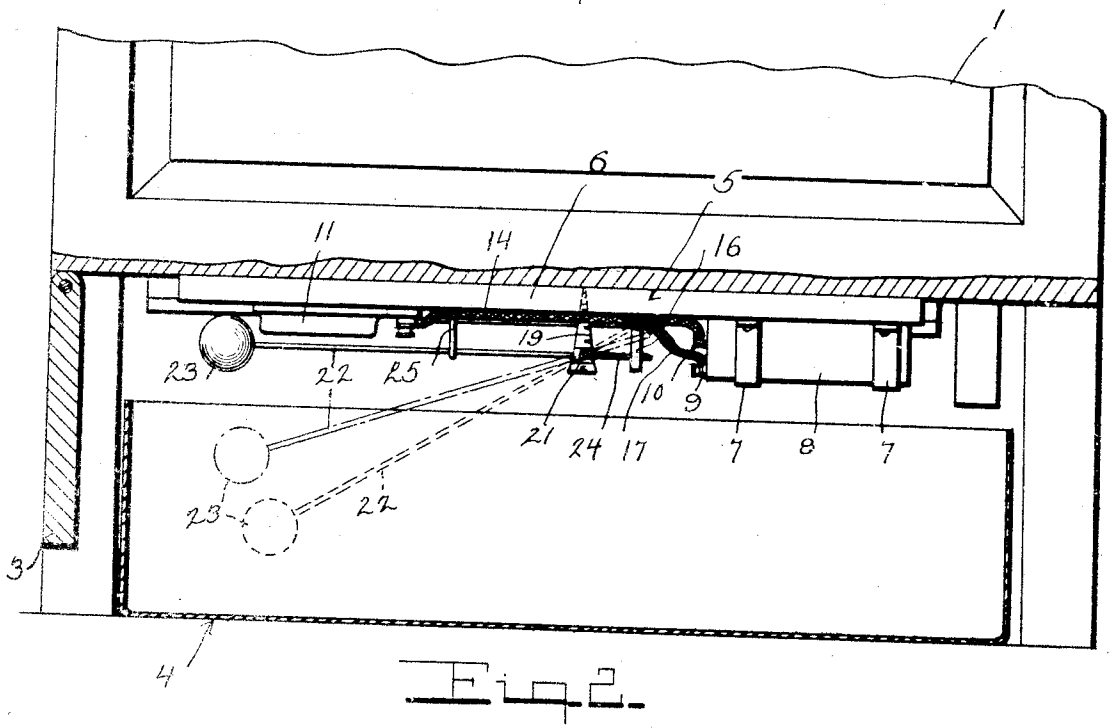


Fig. 2.

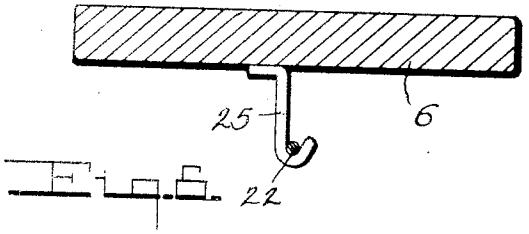


Fig. 6.

Witnesses

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2 SHEETS—SHEET 2.

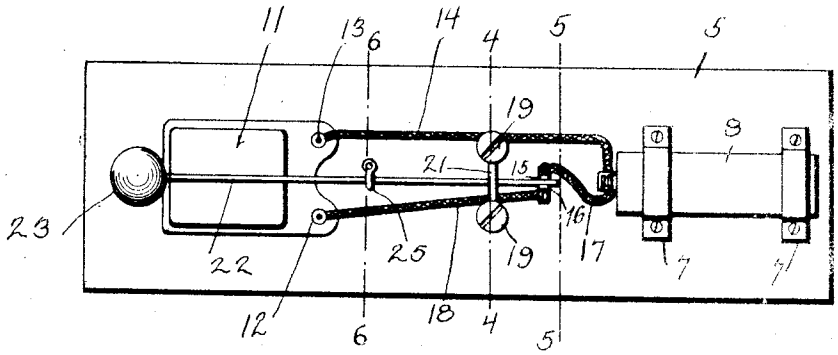


Fig. 3.

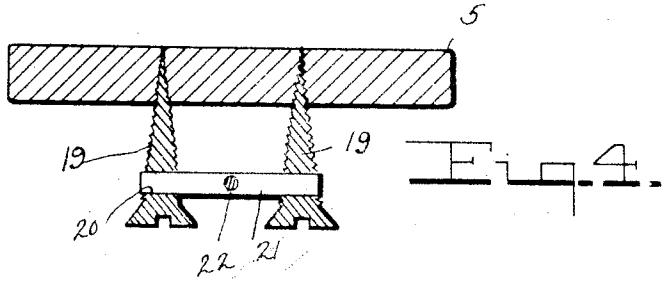


Fig. 4.

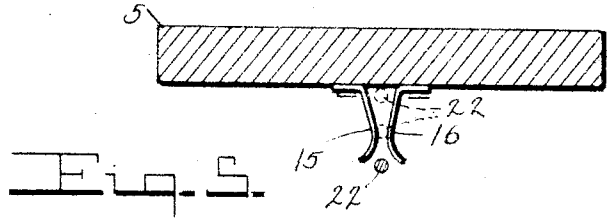


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

HENRY BRUNELLE AND EDWARD BRUNELLE, OF TURNERS FALLS, MASSACHUSETTS.

CIRCUIT-CLOSER FOR DRIP-PAN ALARMS.

1,217,701. Specification of Letters Patent. Patented Feb. 27, 1917.

Application filed March 21, 1916. Serial No. 85,696.

To all whom it may concern:

Be it known that we, HENRY BRUNELLE and EDWARD BRUNELLE, citizens of the United States, residing at Turners Falls, in the county of Franklin and State of Massachusetts, have invented certain new and useful Improvements in Circuit-Closers for Drip-Pan Alarms; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in drip pan alarms and is particularly adapted for use in connection with refrigerator drip pans to notify the user when the drip pan becomes full or when the height of the liquid within the pan has reached a predetermined level.

Another object of the invention is to provide a novel form of circuit closer for completing an electrical circuit through the signaling means.

With these and other objects in view, the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawings, in which:—

Figure 1 is a fragmentary view of a refrigerator illustrating this improved device applied thereto.

Fig. 2 is an enlarged sectional view taken at right angles to Fig. 1.

Fig. 3 is a bottom plan view of the alarm and supporting plate therefor.

Fig. 4 is a sectional view on line 4—4 of Fig. 3.

Fig. 5 is a sectional view on line 5—5 of Fig. 3, and

Fig. 6 is an enlarged transverse sectional view on line 6—6 of Fig. 3.

Referring to the drawings, the numeral 1 designates as an entirety, a refrigerator of the ordinary construction provided with the usual supporting legs 2 between which is pivoted the usual apron or flap 3. The drip pan is designated by the numeral 4 and is adapted to be positioned beneath the refrigerator or ice box 1 by the upward swinging of the panel 3. The alarm is designated generally by the numeral 5 and will be described in detail in the following paragraphs.

The alarm above referred to and which is designated by the numeral 5 comprises a base 6 having secured near one end a pair of straps 7 for removably attaching a battery 8 thereto. This battery is provided with the usual positive and negative contacts 9 and 10 respectively and suitable wires connect the contacts 9 and 10 with the alarm and circuit closer which will be more fully hereinafter described.

The alarm is designated generally by the numeral 11 and consists of a buzzer, bell or any other suitable type of signal provided with the contacts 12 and 13 and the contact 9 of the battery is connected by means of the wire 14 to the contact 13 of the signal. The contact 12 of the signal and the contact 10 of the battery are also connected by suitable wires to the contact springs of the circuit closer which will be more fully hereinafter described.

The circuit closer above referred to consists essentially of two separate parts namely the contact springs and the circuit closing lever. The contact springs above referred to are designated by the characters 15 and 16 and the spring 15 is connected by a wire 17 to the contact 10 of the battery, while the spring 16 is connected by a wire 18 to the contact 12 of the alarm.

Secured to the base and extending therefrom are a pair of supports 19 each of which is provided with an opening 20, which openings are arranged in alinement and adapted to form bearings for the ends of the shaft 21.

A suitable central transverse opening is formed in the shaft and is adapted for the reception of the float arm 22 which extends forwardly therefrom and carries a float 23 which is adapted to be positioned so as to rest on the surface of water within the drip pan 4. The float arm extends beneath the signal as shown in Fig. 2 and the rear end thereof is extended to form the contact lever 24 which is operable between the contact springs 15 and 16 hereinbefore referred to.

It will be apparent from the foregoing that in use as the liquid level within the pan 4 rises, the float will be moved upwardly until the contact lever 24 bridges the contact spring 16 thereby completing the circuit through the signal and notifying the user that the drip pan is nearly full. In order to throw the device out of operation so that the drip pan may be removed without interference a suitable hook 25 is secured to the under side of the base 6 and is adapted to engage the float arm when the

same is moved upwardly beyond a predetermined point.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arrangement of parts as will fall within the spirit and scope of the appended claims.

What is claimed is:—

1. In a device of the class described the combination with a drip pan, a base, a pair of spaced depending supports secured to the base, a shaft journaled in the supports, a float arm rigidly secured to the shaft intermediate one end thereof, a float on the longer end of said arm and arranged to seat on the surface of the liquid within the drip pan, contacts carried by the base, the shorter end of said float arm defining a contact lever and arranged to extend between and beyond the contacts, said contacts converging toward the lower terminals, whereby upon the upward movement of the arm, the lever end of the float arm will be moved downwardly toward the converging ends of the contacts.

2. In a device of the class described the combination with a drip pan, a base, a pair of spaced depending supports secured to the base, a shaft journaled in the supports, a float arm rigidly secured to the shaft for rotation therewith, a float on one end of said arm, the opposite end of said arm defining a contact lever said float adapted to engage the upper surface of the liquid within the drip pan, contacts carried by the base, the lever end of the float arm arranged to extend between and beyond the contacts whereby upon the upward movement of the arm, the lever end of the float arm will be moved downwardly toward the converging ends of the contact, and means depending from the base and adapted to support the float arm when it is raised at above a predetermined point moving its contact lever out from between the converging ends of the contacts as and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

HENRY BRUNELLE.
EDWARD BRUNELLE.

Witnesses:
JOSEPH COLLETTE,
JOSEPH FAUST.