June 12, 1923. 1,458,663

W. H. MORLEY

DRIP PAN SIGNAL

Filed Aug. 17, 1922 2 Sheets-Sheet 1

Fig. 1.

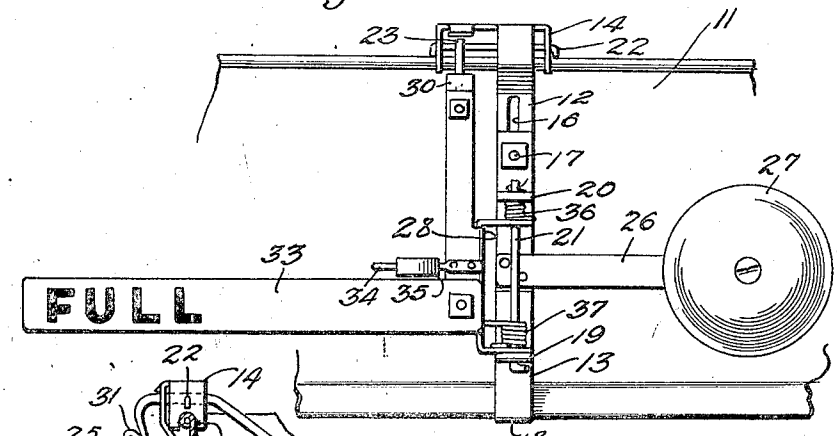


Fig. 2.

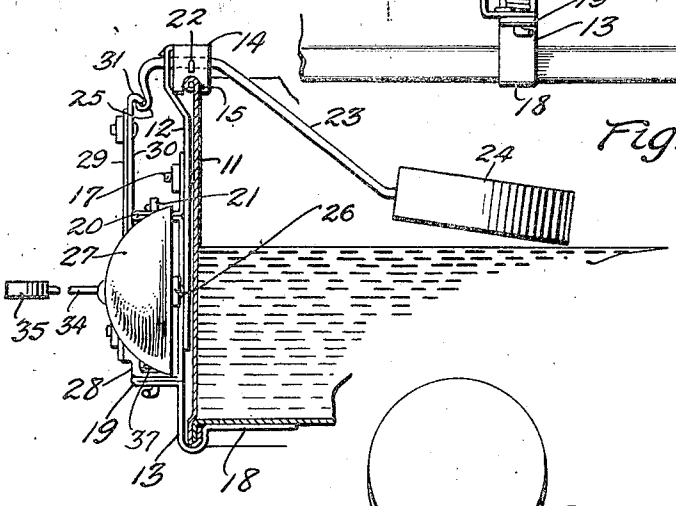
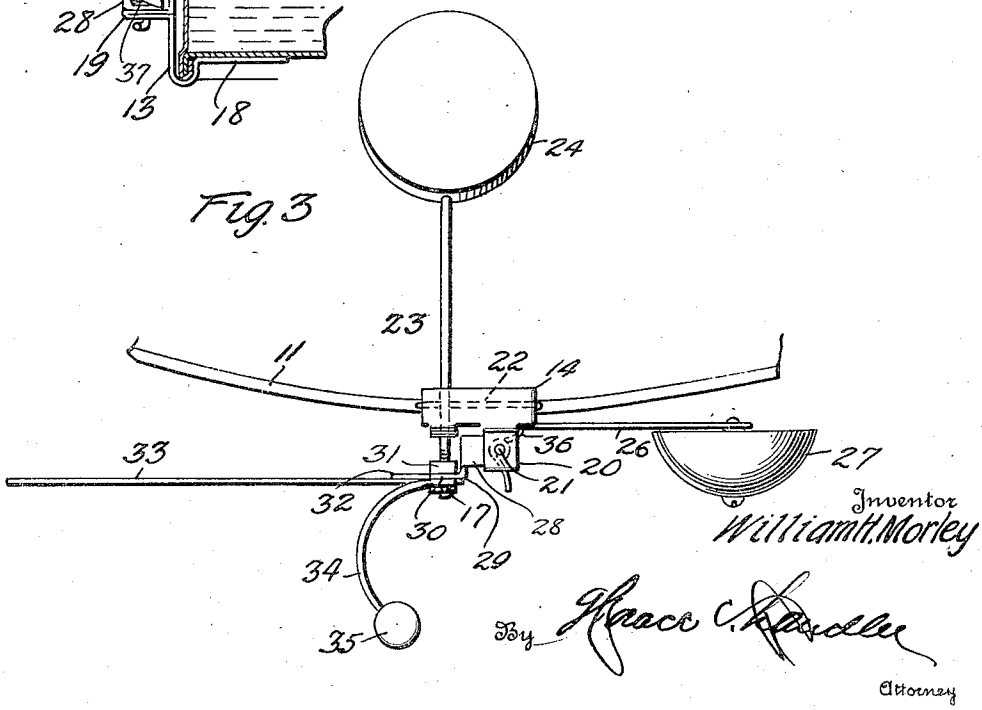


Fig. 3



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June 12, 1923. 1,458,663

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Filed Aug. 17, 1922 2 Sheets-Sheet 2

Fig. 4.

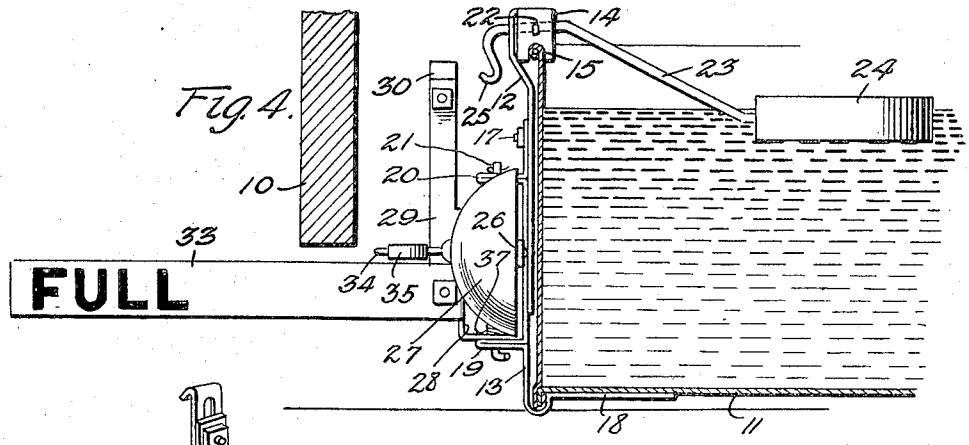


Fig. 5

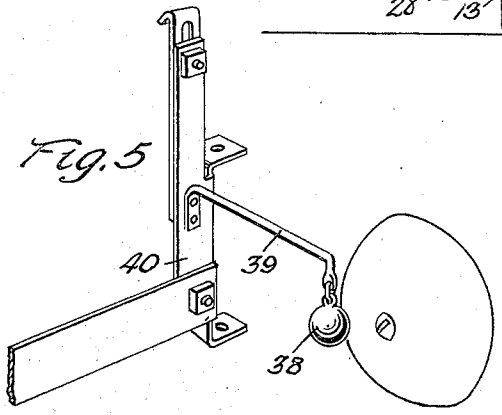


Fig. 6.

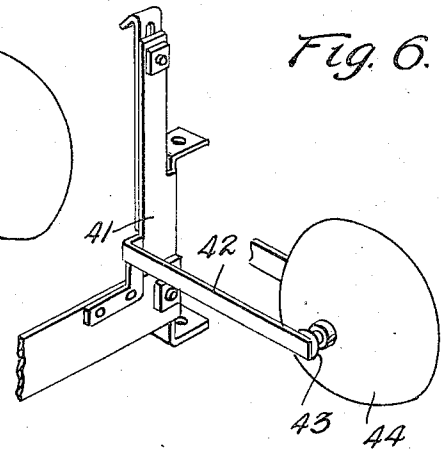
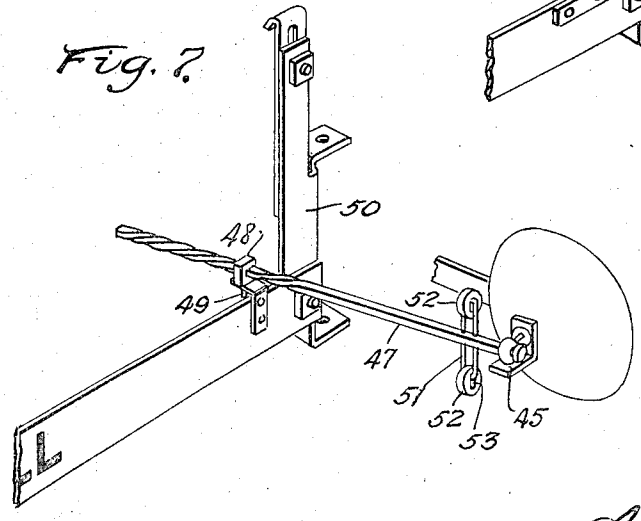


Fig. 7.



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Patented June 12, 1923. 1,458,663

UNITED STATES PATENT OFFICE.

WILLIAM H. MORLEY, OF MANCHESTER, NEW HAMPSHIRE.

DRIP-PAN SIGNAL.

Application filed August 17, 1922. Serial No. 582,430.

To all whom it may concern:

Be it known that I, WILLIAM H. MORLEY, a citizen of the United States, residing at Manchester, in the county of Hillsboro, State of New Hampshire, have invented certain new and useful Improvements in Drip-Pan Signals; and I 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 alarms or signals, and particularly to alarms for use in connection with drip-pans of refrigerators, to give warning that the pan is about to overflow.

One object of the invention is to provide a device of this character which is readily capable of being attached to the edge of a drip-pan, and which will be effective in sounding a warning signal in time to permit the pan to be removed and emptied, before overflowing.

Another object is to provide a device of this character which is readily adjustable for attachment to pans of different sizes, and by means of which a signal will be given audibly, several times in succession, and then display a visual signal, which will project from beneath the refrigerator.

Another object is to provide novel means for sounding the alarm a number of times in quick succession.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawings.

In the drawings:

Figure 1 is a front elevation of the signal device, attached to a drip-pan, and in position ready to be operated.

Figure 2 is a side elevation of the same, a portion of a refrigerator being shown associated therewith.

Figure 3 is a top plan view of the same.

Figure 4 is a side elevation of the device, showing the signal arm extended from beneath the edge of the refrigerator.

Figure 5 is a perspective view of a portion of the device showing a modification of the means for sounding the audible alarm in which is provided a pendant weight.

Figure 6 is a similar view to that of Fig. 5, showing means for operating a tap-bell.

Figure 7 is a similar view showing a further form of bell striking means in which the clapper is driven by a worm or screw shaft.

Referring particularly to the accompanying drawings, 10 represents a portion of a refrigerator casing, and 11 the drip-pan placed therebeneath.

The clamp for attaching the alarm or signal device to the pan includes the metal strips 12 and 13, the former of which has a T-shaped head 14 with the opposite ends turned downwardly and formed with notches 15, which receive the rolled rim of the drip-pan, the stem of the T extending downwardly on the outside of the pan. This stem is provided with a longitudinal slot 16 and receives the bolt 17 of the other strip 13, for longitudinal adjustment of the strips. The lower end of the strip 13 is extended horizontally inwardly beneath the drip-pan, as shown at 18, so that when the strips are properly drawn and clamped by means of the bolt 17, the clamp will be firmly retained on the pan. The lower end of the strip 13 is also formed with a horizontal and outwardly extending arm 19, while a similar arm 20 extends from the upper end. The arms 19 and 20 are provided with perforations in which are rotatably retained the upper and lower ends of the vertical shaft 21. Rotatably supported in the downturned ends of the arms of the head 14 is a shaft 22, and mounted for rocking movement on this shaft is the float arm 23, said arm having the float body 24 on one end, which extends into the pan and rests on the water, while the other end of the arm is formed with a hook 25, disposed outwardly of the edge of the pan, as will be explained later herein. Secured to the intermediate portion of the strip 13, and extending horizontally therefrom, is an arm 26, and fixed on the outer end of this arm is a bell 27. An angular yoke 28 has its apertured arms disposed between the arms 19 and 20, and receives the vertical shaft 21 therethrough. Secured to the intermediate portion of this yoke, by means of the tab 29, is the vertical strip 30, the same having a hook 31 formed on its upper end for engagement with the hook 25, of the float arm. Adjustable longitudinally on the strip 30 is a strip 32, and carried by the lower end of this strip 32 is a horizontally extending arm 33, on which is formed the word "Full." Also secured to the strip 30, and extending in the opposite direction from the arm 33, is an arm 34 having on its outer end a knob

35, which is arranged to strike the bell 27, as will be explained later herein. Encircling the vertical shaft 21, between the upper arm 19 and the upper arm of the yoke 28, is a coil spring, the ends of the spring being secured to said arms in such position that the tendency of the spring 36 is to swing the signal arm 33 away from the bell, while a similar spring 37 is mounted on the lower end of the shaft, and is connected to the shaft and lower end of the arm of the yoke so that it will exert force to swing the signal arm toward the right and cause the knob 35 to strike the bell. Immediately upon striking the bell, the rebound will be assisted by the first spring 36, to move the arm 33 away from the bell, after which the arm will again swing to cause the knob to strike the bell. This will continue until the springs have brought the arm to a position extending outwardly beneath the lower edge of the refrigerator casing, within full view. Thus an audible as well as a visual signal is produced, so that the householder will be advised of the fact that the drip-pan is in danger of running over.

In the form of the device shown in Figure 5, the striker of the bell consists of a ball weight 38 suspended from the arm 39, carried by the swinging frame 40.

In the form of the device shown in Figure 6, the swinging arm 33 has the angularly extending arm 42, which is arranged to engage with the stem 43 of the call or tap bell 44.

In the form shown in Figure 7, a bracket 45 is carried by the bell 46, and rotatably supported in the bracket is one end of a spiral or screw shaft 47, the other end extending through an angular opening 48 in an angular plate 49 fixed on the swinging frame 50. Secured to the first-named end of the shaft 47 is a transversely extending wire frame 51, and loosely mounted on the opposite ends of the frame are the disks 52, each having an elongated opening 53, which permits the disks to swing outwardly into striking engagement with the bell. Thus, as the swinging frame 50 moves in the direction of the bell, the apertured angle plate 49 will move along the screw shaft 27, causing the same to rotate and swing the disks 52 into striking engagement with the bell.

The method of attaching the device to the drip-pan, and the details of construction of the swinging frame, and other parts, except for the particular means for striking the bell, are the same in Figures 5, 6, and 7, as that disclosed in Figures 1 to 5.

What is claimed is:

1. A drip-pan alarm comprising a means for attachment to a drip-pan, a movable frame, means for resiliently moving the frame in an oscillatory manner, an audible signal, means on the movable frame for sounding the signal, means for releasably holding the movable frame, and a float for releasing the movable frame.

2. A drip-pan alarm comprising a drip-pan attaching means, a swingable frame mounted on the attaching means, a bell carried by the attaching means, and means on the swingable frame for striking the bell.

3. A drip-pan alarm including a support, an audible signal carried by the support, means on the support for sounding the audible signal, a float carried detent for the sounding means, and resilient means for moving the sounding means into and out of sounding position.

4. A drip-pan alarm including a support, an audible signal carried by the support, a frame movably carried by the support and spring urged toward and away from the audible signal, and sounding means on the frame.

5. A drip-pan alarm including means for attachment to a drip-pan, a frame mounted for swinging movement on the attaching means, a bell carried by the attaching means, a striker carried by the frame, a float carried by the attaching means and provided with means for releasably holding the frame in one position, and spring means for moving the frame toward and away from the bell a plurality of times.

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

WILLIAM H. MORLEY.

Witnesses:

MICHAEL F. SHEA,

CHARLES S. DAVIS.