Oct. 20, 1925. 1,558,276

L. H. PETERSON

AUTOMATIC DRAIN

Filed Dec. 31, 1924 2 Sheets-Sheet 1

Fig. 1.

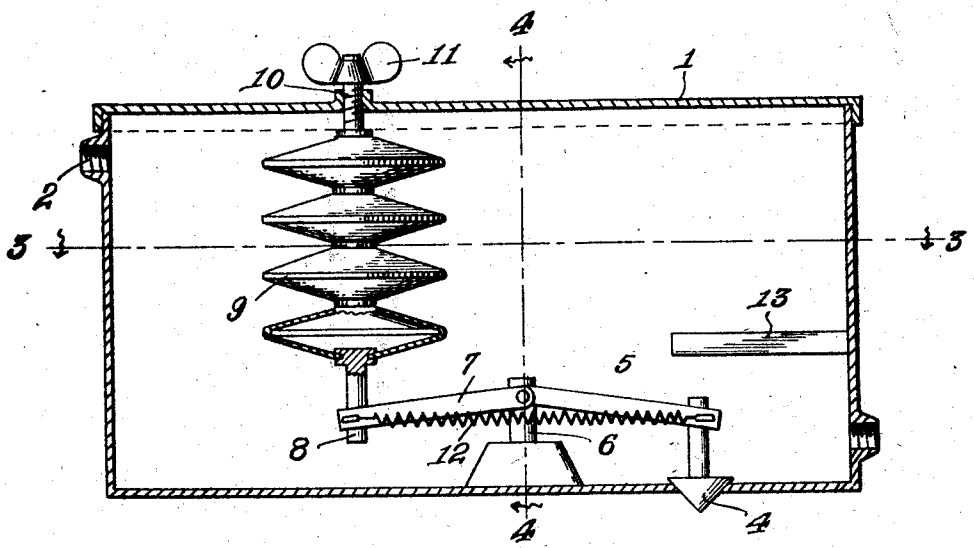
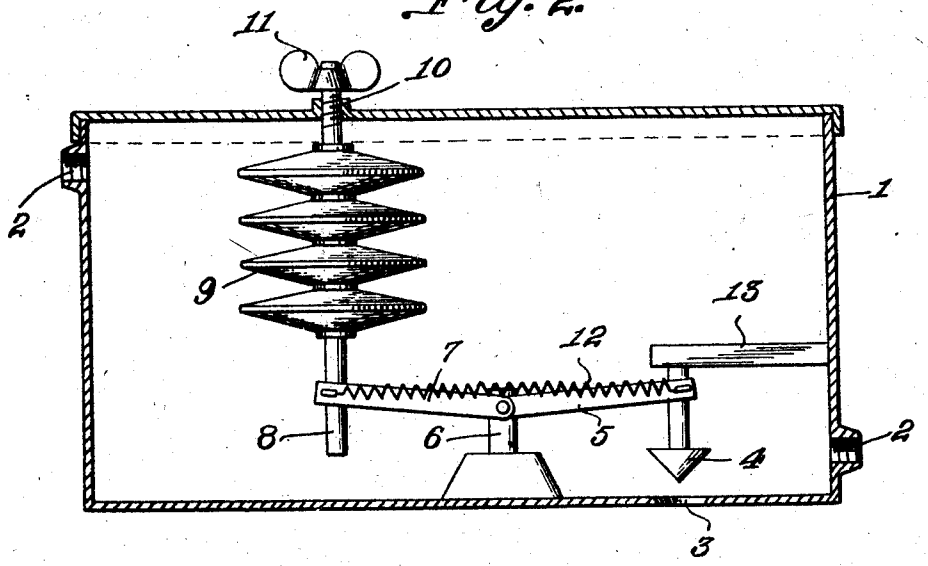


Fig. 2.



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Fig. 3.

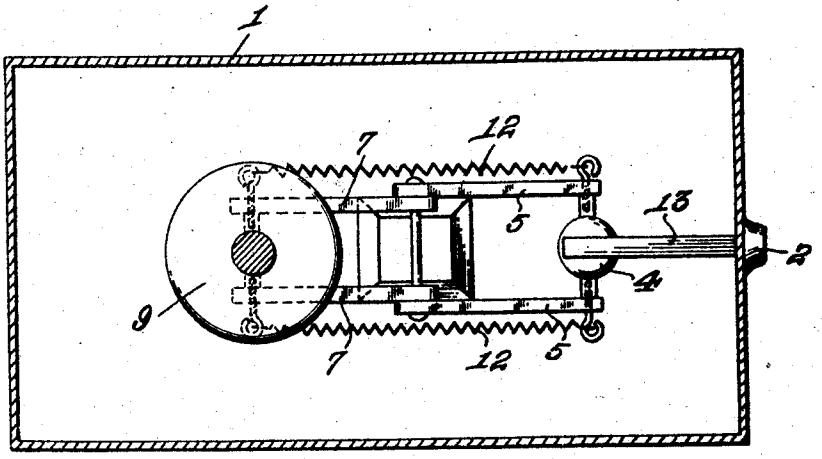
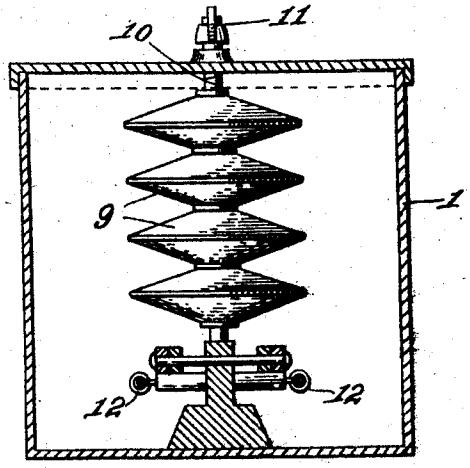


Fig. 4.



Leo Hayes.

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Patented Oct. 20, 1925. 1,558,276

UNITED STATES PATENT OFFICE.

LELAND H. PETERSON, OF WAUNETA, NEBRASKA.

AUTOMATIC DRAIN.

Application filed December 31, 1924. Serial No. 759,143.

To all whom it may concern:

Be it known that I, LELAND H. PETERSON, a citizen of the United States, residing at Wauneta, in the county of Chase and State of Nebraska, have invented new and useful Improvements in Automatic Drains, of which the following is a specification.

This invention relates to a device for preventing freezing of a water system, the general object of the invention being to provide a thermostat for opening and closing a valve which is arranged in a part of the system so that the valve will be opened to drain the system when there is danger of the water freezing, the thermostat closing the valve again when the temperature of the water increases.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a sectional view showing the invention in closed position.

Figure 2 is a similar view with the valve in open position.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a section on line 4—4 of Figure 1.

In these views, 1 indicates a tank or receptacle which is adapted to be placed in a suitable part of the water system, preferably at the lowest point of the system or at the place at which freezing is most likely to occur. This tank is provided with the threaded openings 2 for receiving the inlet and outlet pipes and with a drain opening 3 in its bottom which is adapted to be closed by a valve 4. This valve is carried by a pair of arms 5 which are pivoted to a support 6. Another pair of arms 7 is pivoted to said support and the outer ends of these arms 7 are connected to the stem 8 of a thermostat 9 which has its upper stem 10 passing through a hole in the top of the tank and threaded to receive a wing nut 11 which permits adjustment of the thermostat. Springs 12 connect the outer ends of the arms 5 and 7 together and act to hold the valve in either open or closed position. A stop bar 13 is arranged above the valve to limit its upward movement. The thermostat is adjusted to hold the valve in closed position, as shown in Figure 1, when the temperature of the water or other fluid passing through the system is above the freezing point. When the temperature of the liquid approaches the freezing point the thermostat will contract and thus raise the arms 7 until the springs 12 pass a dead center when they will act upon the arms 5 and snap the valve to open position so that water will drain from the system and thus be prevented from freezing therein. As soon as the temperature rises again the thermostat will expand, thus forcing the arms 7 downwardly to carry the springs 12 beyond dead center so that they will act upon the arms 5 to close the valve 4. Thus the device is entirely automatic and will prevent freezing of the system. The thermostat can be adjusted to operate at the desired temperature by means of the thumb nut 11.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A drain device comprising a receptacle having a drain opening in its bottom, a valve for controlling the opening a support in the receptacle, a lever pivoted to said support and supporting the valve, a second lever pivoted to the support, a spring having its ends connected with the outer ends of the levers, a thermostat connected with the outer end of the second lever, means for adjusting the thermostat and a stop for limiting the upward movement of the valve.

In testimony whereof I affix my signature.

LELAND H. PETERSON.