

No. 646,606.

Patented Apr. 3, 1900.

J. I. PAYNE.

TRAP FOR REFRIGERATOR DRAIN PIPES.

(Application filed Apr. 4, 1898.)

(No Model.)

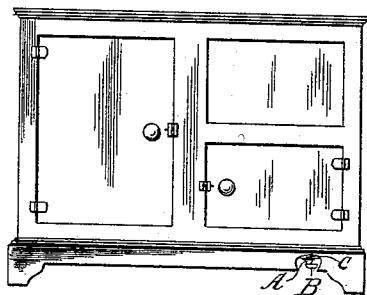


Fig. 1.

Fig. 3.

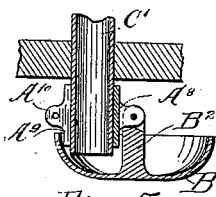


Fig. 5.

Fig. 2.

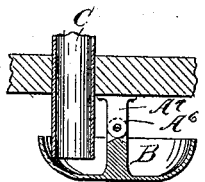
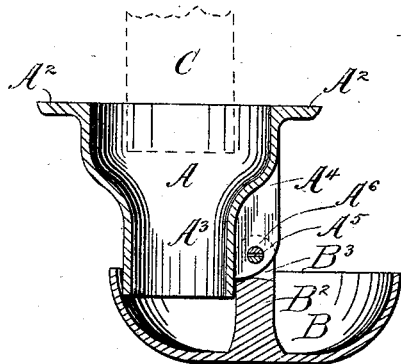
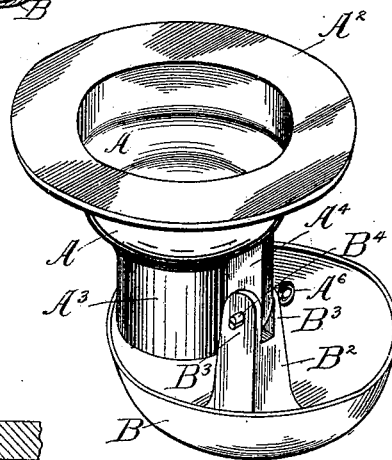


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## TRAP FOR REFRIGERATOR DRAIN-PIPES.

SPECIFICATION forming part of Letters Patent No. 646,606, dated April 3, 1900.

Application filed April 4, 1898. Serial No. 676,289. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES I. PAYNE, a citizen of the United States, and a resident of Arlington Heights, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Traps for Refrigerator Drain-Pipes, of which the following is a specification.

Among the various objects of my invention there may here be noted, first, simplicity of construction; secondly, economy of manufacture; thirdly, enlarged capacity of adaptation, and, fourthly, ease of manipulation.

The several features of my invention will be apparent from the following description and claims.

In the accompanying drawings, making part of this specification, Figure 1 represents a front elevation of a refrigerator and of the devices of my invention applied thereto. Fig. 2 is a view in perspective of my trap by itself. Fig. 3 is a vertical central section of the trap taken in a plane at right angles to the axis of the pivot connecting the two portions of the trap. Figs. 4 and 5 are each sectional views illustrating constructions setting forth certain features of my invention.

While I have shown my invention applied to one style of refrigerator in order to illustrate its functions and advantages, I wish to be understood that the trap is applicable to other descriptions and kinds of refrigerators having a drip-pipe.

I will now proceed to describe my invention.

A indicates a bowl, preferably of an inverted conical form and provided at its upper edge with an outlying flange A<sup>2</sup>. The lower end or bottom of the bowl is open and is extended in the shape of a pipe A<sup>3</sup>, substantially as shown. Below this device A<sup>2</sup> A<sup>3</sup> is suspended a bowl B, and the axial center of the latter, if extended upward, passes to the side of the pipe A<sup>3</sup>. Between the upper device A<sup>2</sup> A<sup>3</sup> and the lower bowl B there is a pivotal connection, and this connection is such that the bowl B is suspended in the line of its vertical axial center by said pivotal connection. The preferred specific construction of this pivotal connection is as follows: From the upper bowl A projects a narrow flange A<sup>4</sup>,

which extends part way down along the pipe A<sup>3</sup> and outwardly therefrom. This flange is preferably integral with the bowl A and pipe A<sup>3</sup>.

From the central part of the upper side of the bottom of the bowl B rises a pedestal or stud B<sup>2</sup> and at its upper end terminates in two flanges B<sup>3</sup> B<sup>3</sup>, between which is received the lower portion of the flange A<sup>4</sup>. There are holes B<sup>4</sup> through these flanges B<sup>3</sup>, and there is a hole A<sup>5</sup> through the flange A<sup>4</sup>. A pivot-rod passes through one of the holes B<sup>4</sup>, then through the hole A<sup>5</sup>, and then through the other hole B<sup>4</sup>. Thus the bowl B is pivoted to the upper device. The preferred form of pivot is that known as a "split key." The latter will not work out when the bowl B is swung back and forth on said pivot. Thus the bowl B is securely pivoted to the device A<sup>2</sup> A<sup>3</sup>. The pipe A<sup>3</sup> extends down into the bowl B at one side of the pivot-standard B<sup>2</sup>.

In practice my improved trap is applied and used as follows: The flange A<sup>2</sup> is secured against and to the bottom of the refrigerator, so that the lower end of the drain-pipe C of the refrigerator shall duly extend down into the bowl A, the axial center of the drain-pipe C being coincident with the axial center of the bowl and pipe A<sup>2</sup> A<sup>3</sup>, substantially as shown in Fig. 3. The shape of the device A<sup>2</sup> A<sup>3</sup> is intentionally such as to enable the trap to be used over—that is, embracing from below up—a number of different sizes of drain-pipe. For example, the device in the drawings, which is there shown on a scale of about two-thirds working size, is capable of covering any size of pipe up to two inches. Such a general construction obviates the necessity of special construction for each size of drain-pipe used in the refrigerator. The flange A<sup>3</sup> is preferably secured by screws passed through it and into the bottom of the refrigerator in the well-known manner of using such connectives. After the device A<sup>2</sup> A<sup>3</sup> has been placed in position the bowl B is secured thereto by a pivot A<sup>6</sup>, applied as shown in the drawings. This pivot is preferably a split key, as shown, as it is easily attached or removed, but will keep its place as a pivot until removed by human agency.

In operation the water from the melting ice

flows down through the drain-pipe and through the device A A<sup>3</sup> into the bowl B. The water fills the latter and therefore rises above the bottom of the pipe A<sup>3</sup>, and thus forms a water seal after the manner of a trap and prevents the air or gases within the refrigerator from passing out through this trap, and vice versa prevents gases outside the refrigerator from entering the latter through this trap. The water in the bowl overflows the latter. A suitable receptacle is usually placed beneath the trap, and into this the water from the trap will fall. Any sediment coming down the drain-pipe with the water from the melting ice will be deposited in the bowl B, and when sufficient sediment has been collected therein it is cleaned. The removal of the sediment and cleansing of the bowl are readily effected by tipping the bowl. When the bowl is cleansed of sediment, the hold on the bowl is relinquished, and the latter will automatically return to its normal position, as shown in Fig. 2. It will be understood that the bowl does not automatically upset, but requires to be upset by human agency. However, it will, whenever permitted, automatically return to its original and normal position.

It will be observed that this trap can readily be applied to the refrigerator and that when once secured to the latter it cannot become detached from its connection with the drip-pipe. The trap is simple in construction and economical of manufacture and easily manipulated. It is a trap that will always be a trap. It has also enlarged capacity for adaptation to drain-pipes of different diameters.

The bottom of the trap in any of its preferred modes of application to a refrigerator will not extend below the base-board of the refrigerator, and the floor is located so that when the trap is screwed to it the lowermost part of the trap will not extend below the base-board of the refrigerator. Hence any drip-receptacle that can be put under the base-board will also go under the trap. This arrangement allows for the drip-receptacle of large capacity.

In Fig. 4 I present a description of trap in which the feature of the centrally-suspended trap-bowl B and a drain-delivery conduit extends down into the space of this bowl. In this case the drain-delivery conduit is the drain-pipe C of the refrigerator. In this in-

stance the bowl is suspended from the hanger A<sup>7</sup>, connected to the base of the refrigerator. This latter device is not so desirable as the construction shown in Figs. 2 and 3, because the ordinary drain-pipes are made of zinc or galvanized iron and wear out and deteriorate quite rapidly at the ends. Hence this arrangement would be only temporary in its efficiency.

Instead of the construction shown in Fig. 4 the drain-pipe C may be provided with a projection A<sup>8</sup>, clamped or otherwise secured to this drain-pipe. In the figure is shown a ring-clamp A<sup>9</sup>, having ears A<sup>10</sup>. Through the latter a screw passes and draws the ears together. To this projection the bowl B may be axially suspended, as illustrated in Fig. 5.

The construction first described and well illustrated in Figs. 2 and 3 is greatly preferable to the others specified, because (among other reasons) it protects the exposed sides of the end and the bottom edge of the drip-pipe with an efficient guard made usually of cast-iron galvanized and lasting, so to speak, indefinitely.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. In a refrigerator, the combination of a bowl A, and a hollow prolongation or pipe A<sup>3</sup> from an opening in the bottom of the bowl, and a flange or projection A<sup>4</sup> extending from the side of this upper portion of the trap, and a lower bowl having a stud centrally located in the latter and extending upward from the bottom of the latter, and pivotally connected to the projection A<sup>4</sup>, the pipe A<sup>3</sup> extending down into the bowl, substantially as and for the purposes specified.

2. In a refrigerator, the combination of a bowl A, and a hollow prolongation or pipe A<sup>3</sup> from an opening in the bottom of the bowl, and a flange or projection A<sup>4</sup> extending from the side of this upper portion of the trap, and a lower bowl having a stud centrally located in the latter and extending upward from the bottom of the latter, and having a notch receiving the flange A<sup>4</sup>, and there pivoted together, the pipe A<sup>3</sup> extending down into the bowl, substantially as and for the purposes specified.

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Attest:

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CHARLES F. SPIEGEL.