No. 695,312. Patented Mar. 11, 1902.

J. J. HICKEY.

WASTE WATER RECEPTACLE AND CONNECTION.

(Application filed Dec. 12, 1901.)

(No Model.)

Fig. 1.

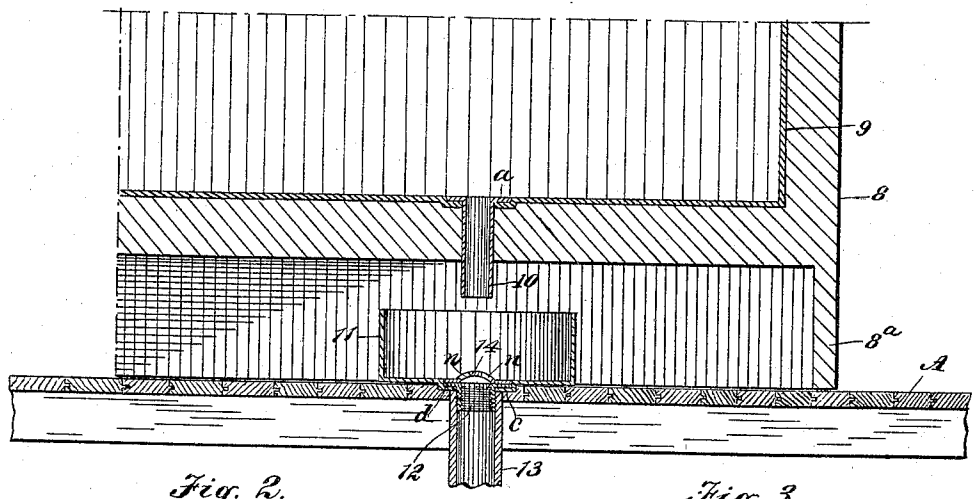


Fig. 2.

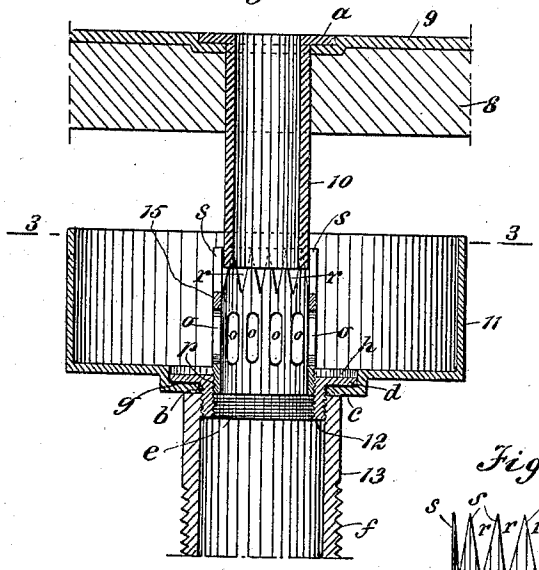


Fig. 3.

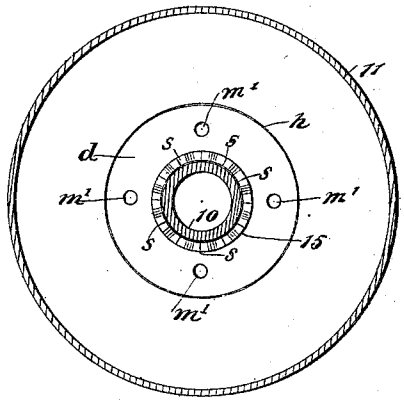


Fig. 4.

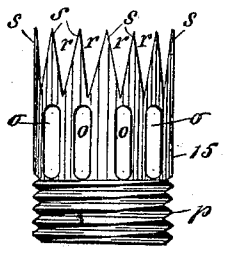


Fig. 7.

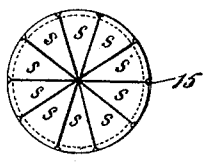


Fig. 6.

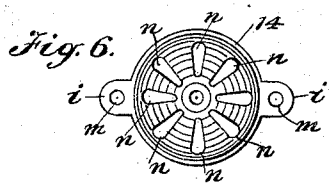
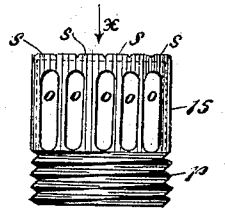


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN JOSEPH HICKEY, OF NEW YORK, N. Y.

WASTE-WATER RECEPTACLE AND CONNECTION.

SPECIFICATION forming part of Letters Patent No. 695,312, dated March 11, 1902.

Application filed December 12, 1901. Serial No. 85,599. (No model.)

To all whom it may concern:

Be it known that I, JOHN JOSEPH HICKEY, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented new and useful Improvements in Waste-Water Receptacles and Connections, of which the following is a full, clear, and exact description.

This invention relates to means for catching waste water that escapes from a refrigerator, ice-box, sink-basin, or the like and conveying it to a point of discharge, and has for its object to provide an apparatus of the indicated character with novel details of construction of a simple practical nature which afford a very conveniently-arranged device adapted for general application at a low cost.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side view of a lower portion of an ice-box and of details of the invention thereon. Fig. 2 is an enlarged sectional side view of features of the improvement differing somewhat from those represented in Fig. 1. Fig. 3 is a sectional plan view substantially on the line 3 3 in Fig. 2. Fig. 4 is an enlarged side view of a tubular screen forming a novel detail of the invention. Fig. 5 is a like view, but showing the upper end of the screen closed by bending parts thereof inwardly. Fig. 6 is an enlarged plan view of a screen-plate employed, and Fig. 7 is a plan view of the closed upper end of the tubular screen seen in the direction of the arrow *x* in Fig. 5.

The improved waste-water receptacle and discharging connections therefor are applicable to lavatory and other fixtures for household convenience as a safety attachment to insure the proper conveyance of waste water therefrom to a suitable point of discharge—as, for example, the device may be connected with laundry-tubs, bath-tubs, toilet-basins, sink-basins, refrigerators, and ice-boxes that are portable or stationary—and for the purpose of illustrating the application of the invention I have shown the same applied to an ice-box for the purpose specified.

In the drawings, 8 indicates the lower portion of an ice-box of any preferred construction having the interior sheet-metal lining 9 secured therein, as usual, and, as shown in Fig. 1, the box 8 may be supported above a a room-floor A by a downwardly-extended skirt-wall 8^a, that is formed or secured upon the ice-box, so as to maintain it at a proper height from the floor. In the bottom portion of the lining 9 a waste-water-escape pipe 10 is secured, which projects down through the bottom wall of the ice-box 8, said pipe being preferably formed with a radial flange *a*, that seats in a countersunk formation in the lining, which affords a smooth level surface for the bottom portion of the lining where the flange engages with and is secured thereto.

The waste-water receptacle 11 may have any suitable dimensions and peripheral form. Preferably it is circular in contour and is so shown in the drawings. An orifice *b* is formed in the flat bottom wall of the receptacle 11, and around said orifice a countersunk depression *c* is produced of sufficient depth to receive other parts, which will be described. A short nipple 12 is provided, having a suitable diameter and at the upper end a radially-projected flange *d*, the diameter of the nipple-body and width of the flange thereon adapting the nipple and its flange to respectively pass down through the orifice *b* and seat in the countersunk depression *c*, as clearly shown in Fig. 2. The nipple-body 12 is threaded on the inner side and also on the outer side, the threads *e* on the inner side extending throughout the length of the nipple, as best shown in Fig. 2.

Upon the portion of the threaded exterior of the nipple-body 12 which projects below the annular countersunk depression *c* of the receptacle 11 the interiorly-threaded end portion of a waste-water conduit 13 is screwed until it forcibly contacts with the exterior surface of the bottom of the receptacle 11, thus clamping the same between the conduit end and the flange *d*, and any suitable joint material *g* may be introduced between the flange and annular countersunk wall *c* to prevent leakage of liquid between said parts. The

thickness of the radial flange *d* on the nipple 12 is so proportioned to the depth of the annular countersunk wall *c* as to afford a recess *h* above the flange, and in said recess is seated the screen-plate 14, as shown in Fig. 1. The screen-plate 14 is mainly circular in contour and is preferably given a concavo-convex form, the convex side being uppermost, as shown in Fig. 6. Two ears *i* are oppositely formed on the border flange of the screen-plate 14, said ears each having a perforation therein, as shown at *m* in Fig. 6, these perforations registering with two diametrically opposite perforations *m'* in the flange *d* of the nipple 12.

In the upwardly-dished wall of the screen-plate 14 a plurality of spaced openings *n* are formed for the free passage of liquid down through the screen-plate when it is in position for service, the ears *i* in this case seating in the recess *h* upon the flange *d* over the perforations *m'*, so that the perforations *m m'* register and are adapted to permit the insertion of headed screws through them and into threaded perforations in the countersunk flange *c* on the bottom of the receptacle 11. It will be seen in Fig. 3 that two additional perforations *m'* are formed in the radial flange *d*, and these perforations may be disposed opposite tapped perforations (not shown) in the flange of the countersink *c* to receive securing-screws, and thus aid in holding the flange *d* upon the seat-flange of the countersink.

The waste-water conduit 13 may be of cast or wrought metal in tubular form and may extend from the receptacle 11 directly to a trapped sewer-pipe or other suitable point of discharge, or the upper end portion of the conduit 13 may be in the form of a pipe-section having an exterior thread *f* thereon for the reception of a union or other ordinary connection for an attachment of a pipe extension thereto that may be a lead pipe or other metallic pipe of sufficient length to properly conduct the waste water to a point of discharge.

The screen-plate 14 serves to prevent fragmentary material passing from the ice-box 8 down into the waste-water conduit 13, which would produce a stoppage therein. In some constructions, however, it has been found very advantageous to provide convenient means for establishing a direct or continuous passage from the ice-box to the waste-water conduit 13. To this end I have provided a tubular screen 15, that is clearly represented in Figs. 2, 4, 5, and 7 and consists, essentially, of a cylindrical wall perforated in the side, as shown at *o*, these spaced openings being preferably in the form of longitudinal slots formed intermediately of the ends of the screen-wall. The portion of the screen-wall 15 which extends below the openings *o* is threaded, as represented at *p* in Figs. 2, 4, and 5, said threaded end being designed to screw into the interior thread *e* of the nipple-body 12, and thus be held erect in the receptacle 11. When a direct passage for waste water from the ice-box 8 into the conduit 13 is required, the open top of the tubular screen 15 is slid upon the lower end of the waste-water pipe 10, that it receives loosely, as shown in Fig. 2, and then the threaded lower end of the screen-wall is screwed into the thread *e*, this connection of parts adapting the tubular waste-water conduit to take the water from the ice-box without its passing into the receptacle 11, which is advantageous when the ice-box is washed out and considerable water escapes therefrom.

In the erection of a new building and location of an ice-box permanently therein or the placing of a refrigerator or ice-box in an old building it is essential that means be provided for preventing dirt and small fragments of building material from passing down the water-escape pipe 10 into the conduit 13. To avoid this contingency, a series of V-shaped notches *r* is formed in the upper portion of the tubular screen-wall 15, thus producing a corresponding series of tapered tongues *s* thereon which project above the openings *o*. It will be seen that if the tongues *s* are bent inwardly, so that their points converge to a common center, this will close the upper end of the screen and form a protecting-wall thereon to keep dirt from passing down in the screen when it is in position as already described, the openings *o* then affording a free passage for liquid entering the receptacle 11 from the ice-box.

It will be obvious that the screen-plate 14 or the tubular screen 15 may be used as may be preferred and either one afford effective service, adapting the improvements for general use as may be desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A waste-water receptacle, having an opening in its bottom wall, a countersunk depression around said opening, a nipple radially flanged at its upper end and seating in the countersunk depression when the nipple extends through the opening, said nipple having an internal thread and an external thread, a tubular screen threaded to screw into the internal thread of the nipple and having a normal open upper end, and a conduit-pipe internally threaded at one end for engagement with the external thread of the nipple.

2. In a device of the character described, the tubular screen, comprising a cylindrical wall having openings therein intermediately of its ends, an external thread on the lower end thereof, and a series of spaced tapered tongues on the upper end which when bent inwardly will close said end.

3. The combination with an ice-box or the like, and a waste-water-escape pipe in the bottom thereof, of a waste-water receptacle supported below the escape-pipe and having a perforation in its bottom, a threaded nipple having a radial flange seated in a countersunk depression formed around the perfora-

tion, a screen-plate removably held on the radial flange and over the nipple, and a conduit-pipe connection screwing on the nipple and bearing upon the bottom of the receptacle.

4. The combination, with an ice-box or the like, and a waste-water-escape pipe depending from the bottom of said box, of a waste-water receptacle supported below the escape-pipe and having a perforation in its bottom encircled by a countersunk depression, a nipple interiorly and exteriorly threaded, a radial flange on the upper end of said nipple and seated in the countersunk depression, a tubular screen screwing into the nipple and receiving the lower end of the water-escape pipe, and a conduit-pipe connection screwing on the depending end of the nipple.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN JOSEPH HICKEY.

Witnesses:
JOSEPH C. HICKEY,
JOHN HICKEY.