

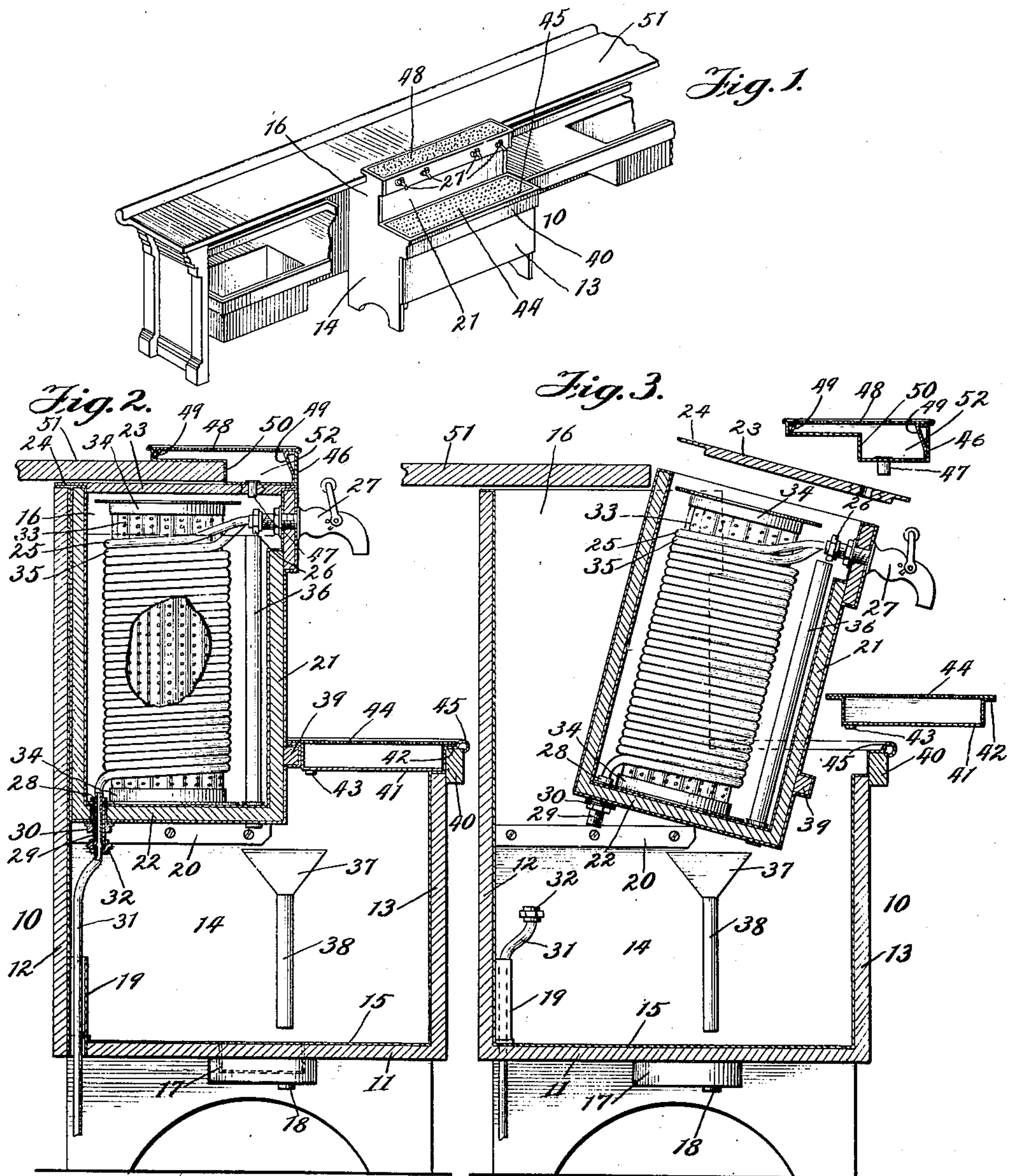
No. 868,287.

PATENTED OCT. 15, 1907.

E. NEELY.
COOLER.

APPLICATION FILED SEPT. 6, 1904.

2 SHEETS—SHEET 1.



Witnesses:

Wm. D. Perry
Arthur B. Seibold.

Inventor:

Edward Neely
By C. W. M. Roberts
His Atty

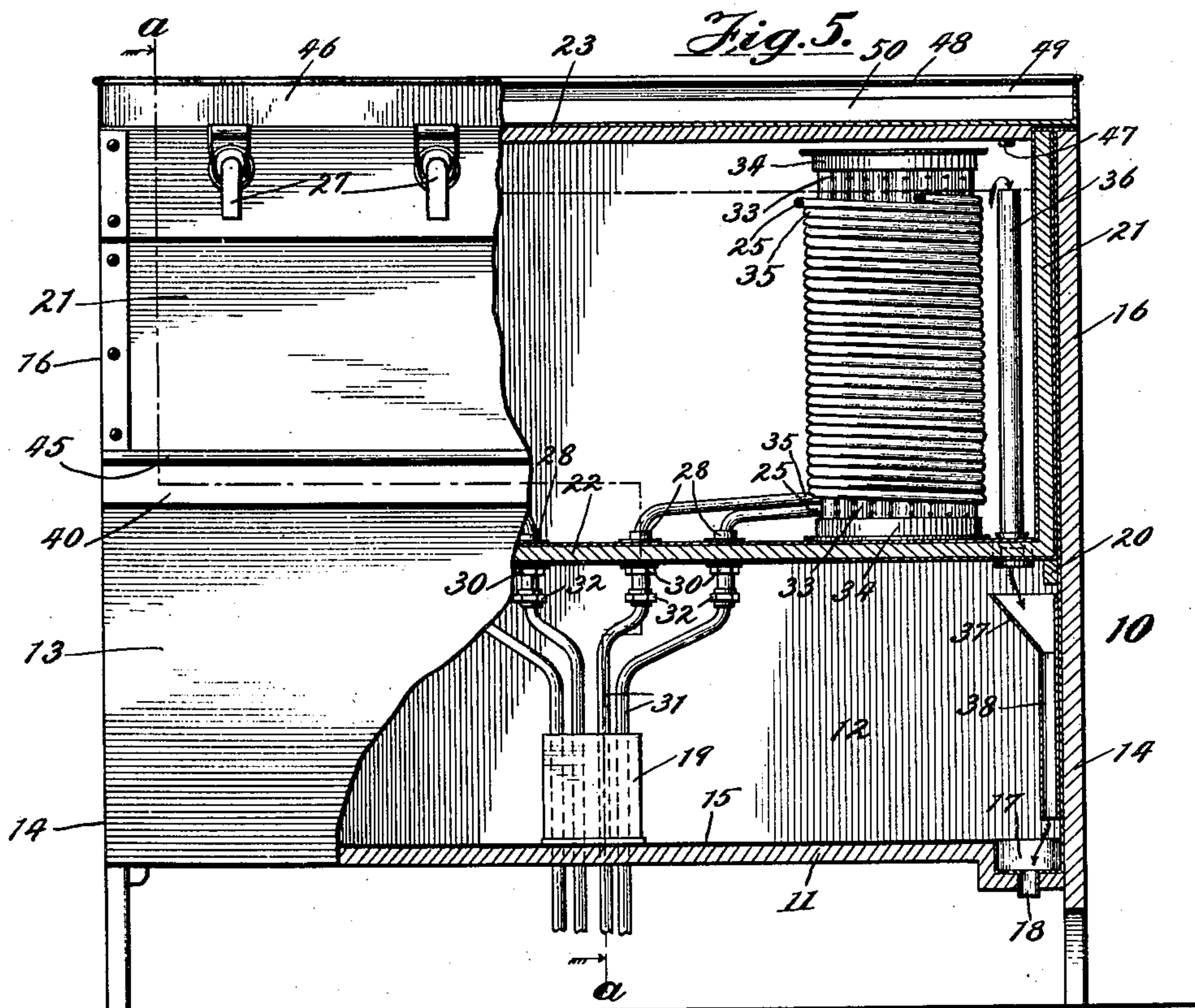
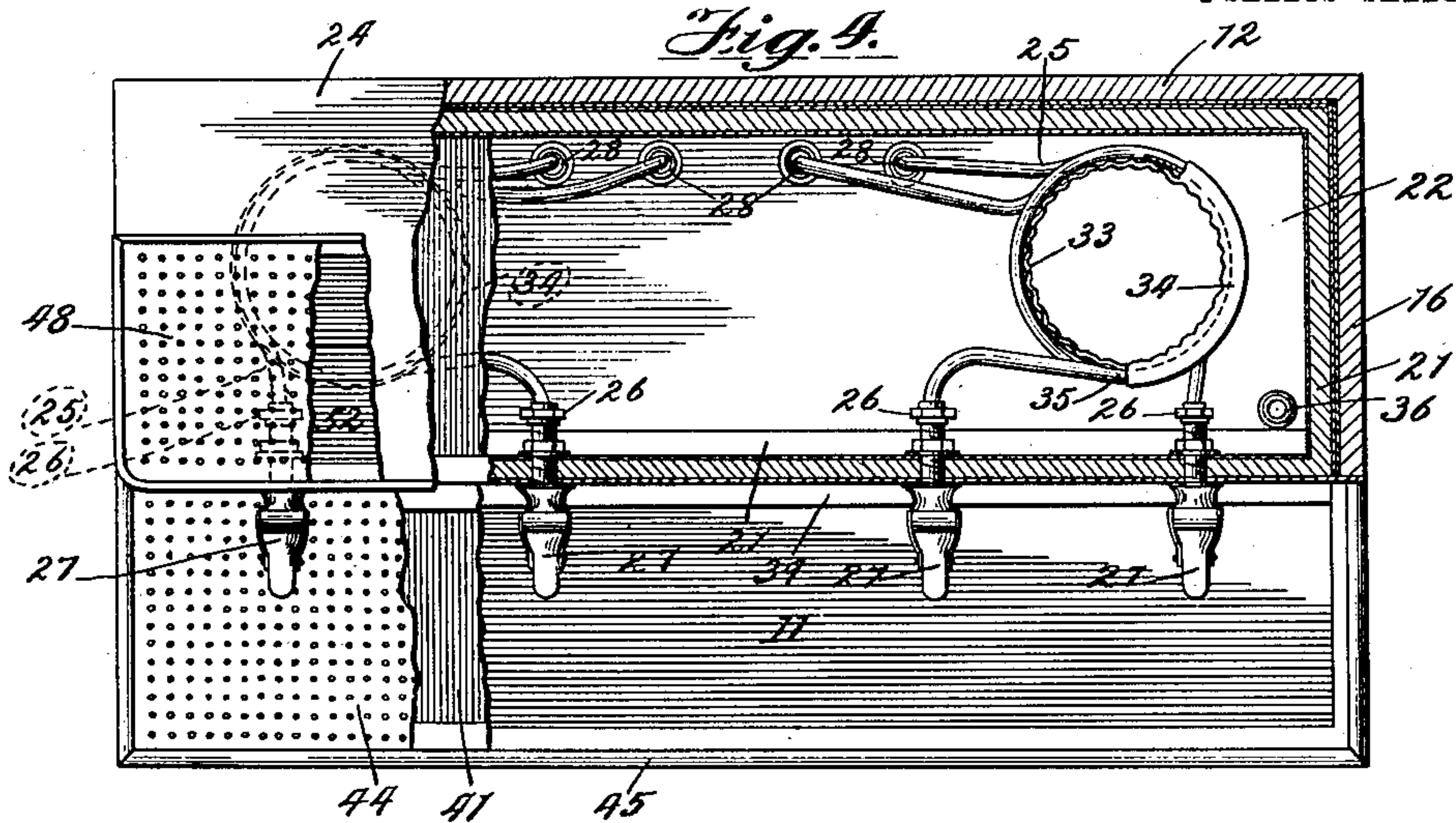
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2 SHEETS—SHEET 2.



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Inventor:

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UNITED STATES PATENT OFFICE.

EDWARD NEELY, OF CHICAGO, ILLINOIS.

COOLER.

No. 868,287.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed September 6, 1904. Serial No. 223,333.

To all whom it may concern:

Be it known that I, EDWARD NEELY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Coolers, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a novel construction in cooling and dispensing cabinets, and relates particularly to a device which is adapted to be set up behind and partially underneath the bar of a saloon, and which contains coils through which the beer flows to faucets disposed on the wall of the chamber containing such coils, the said chamber being movable on the base and adapted to receive chopped ice in order to cool the beer during its flow through said coils, the object being to provide a simple and efficient device of this character, in which all parts are easily accessible for the purposes of repair. It is further adapted to be used in connection with a bar without cutting the counter top, as has been necessary heretofore in similar devices.

The invention consists of the combinations and arrangements of parts hereinafter particularly described and pointed out in the appended claims; and is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the beer cooler showing the same in its relation to a bar counter; Fig. 2 is a section on the line *a— a* of Fig. 5 showing the parts in their assembled positions; Fig. 3 is a corresponding section showing the parts partially disassembled; Fig. 4 is a plan view of the cooler, the top of the cooling chamber being partially broken to show the interior of the same; and Fig. 5 is a front elevation of the apparatus partially broken away to disclose the arrangement and location of the coils in the cooling chamber and the connections for the coils.

Referring to the drawings, 10 indicates a chest or cabinet which is provided with a bottom 11, rear wall 12, front wall 13 and end walls 14. The chest may be of any suitable size and has a suitable sheet metal lining 15. The end walls 14 at the back portion are provided with vertical extensions 16 which terminate at the same height as the wall 12, as clearly shown in Fig. 3, the front portion of the chest thus extending in front of the extensions 16. The end walls 14 may be extended below the bottom 11, as shown, to provide legs to support the chest 10. The bottom 11 has a pocket 17 which is shown as located near one end thereof and is provided with a drip tube 18 which passes through the bottom of the pocket. Also located in the chest 10 mid-way of its ends and adjacent the rear wall 12 is a vertical sleeve 19 which is alined with an aperture in the said bottom. The ends of the chest 14 have secured to the inner faces thereof horizontal cleats 20 which are located at a suitable distance from the bottom 11 and

which constitute parallel guide rails upon which the cooling chamber to be described is slidably mounted.

The chest 10 provides a supporting structure or member (adapted to be disposed beneath and rearwardly of the bar) for a removable cooling chamber 21 which is designed to be carried by the chest between the extensions 16, and in the present construction this cooling chamber rests upon the cleats 20. The cooling chamber may be of any suitable construction and shape and is shown in the present embodiment of the invention as comprising a rectangular box or tank having a permanently closed bottom 22, and it has a sheet metal lining similar to that of the chest 10. The length of the box is such that it conveniently fits between the extensions 16 and it extends substantially the height of such extensions. When in position, as shown in Fig. 2, the front wall of the cooling chamber forms a front for the upper or extended portion of the chest. The cooling chamber is provided with a cover 23 removably seated on the top of the same and having a flange 24 which rests upon the upper edges of the walls of the said chamber and overlaps the side extensions 16 and rear wall 12 of the chest 10 to close the space between the cooling chamber and the chest.

In order to provide for an extended passage for the beer so as to effectually cool the same while passing through the chamber 21, the conducting or circulating tube is arranged in the form of a spiral coil 25 and this spiral coil is disposed vertically and has its upper end detachably connected, as by means of a union 26, with a suitable faucet 27 mounted on the front wall of the chamber 21, while its lower end passes through a thimble 28 secured on the bottom 22 and also through a suitable aperture in the bottom 22 and is provided with a threaded connection 29 held in place by a nut 30. The supply pipe 31, leading from the keg passes through the sleeve 19 and is provided at its upper end with a union 32 by means of which the said pipe may be detachably connected to the connection 29. By arranging the coil in the manner described the bottom 22 is free of coils, so that when ice is packed or crowded down into the chamber there is no danger of the coils being crushed or bent out of shape.

The coil 25 is wound about a cylinder 33 which is provided at its top and bottom with reinforcing flanged collars 34, and this cylinder when in position rests upon one end and provides a support for the coil, holding the latter in shape and preventing the same from being disarranged or bent over. The cylinder 33 is preferably corrugated longitudinally and is also perforated, thereby permitting the cold water in the chamber 21 to pass entirely around the tube of the coil and also pass freely into the cylinder. One or more spiral coils may be wound on the cylinder in order to economize space and in the present instance I have

shown the cylinder as having a second coil 35 wound about the same. The connections at the inlet and discharge of the coil 35 are the same as those for the coil 25. The coils 25 and 35 are wound in parallel about the cylinder 33 so that the tube of each coil hugs such cylinder. This is not material, however, as any other suitable arrangement of the vertical spiral coils may be employed. The tubes of the coils are coiled about the cylinder 33 before the latter is placed in the cooling chamber 21, and after the cylinder and its coils are located each coil is connected to its associated faucet 27 by means of the union 26, while the lower free end, provided with its connection 29, is passed through the aperture in the bottom provided for the same and secured by the nut 30.

The cooling chamber and its associated coils and faucets constitute a cooling and dispensing member slidably mounted upon the cleats or guide rails 20 and adapted to extend partly underneath the bar 51 when at the rearward limit of its movement, as will be readily apparent.

The cooling chamber having been placed in position so as to rest on the cleats 20, each of the pipes 31, which are designed to supply the beer from the kegs, is drawn up and connected by means of its union 32 with the appropriate connection 29.

An overflow pipe 36 is located in the cooling chamber 21, its lower end discharging through an opening in the bottom of such chamber, the said opening being located over the funnel mouth 37 of a tube 38 secured to one end 14 of the chest 10 and so positioned as to discharge into the pocket 17, as clearly shown in Figs. 2 and 5.

The front wall of the cooling chamber has attached thereto a horizontal strip 39, the upper face of which is on a level with that of a strip 40 secured to the upper edge of the front 13 of the chest 10. A drip pan 41 is provided with a flange 42 which rests upon the strips 39 and 40 to support the pan 41 under the faucets 27. The pan 41 is provided with a nipple 43 which is so positioned as to be over, and discharge drippings from the pan 41 into, the funnel 37. A perforated plate 44 forms a cover for the pan 41 and also a rest or support for the receptacles into which the beer is discharged from the faucets 27, and this cover 44 is held against displacement by the front of the cooling chamber and a bead 45 formed at the edge of the metal lining of the chest 10. The pan 41 when in position secures the cooling chamber in place and also provides a removable cover permitting access to the chest 10.

Mounted on and extending longitudinally of the cover 23 of the cooling chamber is a tray 46 having a drip tube 47 passing through its bottom and also through an opening in the cover 23. The tube 47, when the parts are in their assembled positions, is in alinement with the open end of the overflow pipe 36. A perforated plate 48 forms a cover for the tray 46 and also a rest for the receptacles after being filled. This cover plate is removably supported by shoulders 49 formed in the tray. The tray 46 is constructed as clearly shown in Figs. 2 and 3, the bottom at the back portion being stepped up as at 50 so as to overlap the bar counter 51 when the tray is in position, the step up being substantially the height of the thickness of the

counter and providing a trough 52 at the front of the tray where the drip tube 47 is located. Drippings from the receptacles placed on the support plate 48 pass into the tray, finally passing from the trough 52 through the tube 47 into the tube 36 and out by way of the tube 38, while drippings from the pan 41 also pass into the tube 38.

It will be apparent that the tube 36 discharging into the funnel 37 of the tube 38, and the tube 47 discharging into the tube 36, constitute draining means carried by the supporting member or cabinet and the cooling and dispensing member or chamber.

In assembling the parts, after the coils are mounted in the cooling chamber as heretofore described, the cover 23 is placed on the cooling chamber and the latter is then slid into place and seated on the cleats 20. The pipes 31 are then drawn up through the sleeve 19 and coupled with the lower ends of the coil tubes. The pan 41 not being in position this coupling of the pipes 31 and the coil tubes may be readily accomplished. The drip pan 41 having been placed in position the chest 10 is moved back so as to extend partially under the counter 51. The drip tray 46 is finally placed in position, its rear portion overlapping the counter, as clearly shown in Fig. 2. This arrangement of the drip tray 46 locates the latter conveniently on the counter without cutting the counter, as is usually done when a drip tray for the counter is employed with beer cooling apparatus.

The cooling chamber comprises a unit or unitary structure, consisting of the tank 21, the cylindrical supports 33 and coils located in the tank, and the associated faucets fixed to the tank, overflow pipe, etc. This unitary structure may be readily removed from the chest 10 for repairing or cleaning, and without moving the chest, which as heretofore stated extends under the counter, locating the cooling chamber thereunder, simply by lifting off the drip pan 41 and tray 46 and uncoupling the union 32. After the removal of the cooling chamber the coils with their cylinders may be removed from the cooling chamber by unscrewing the unions 26 and nuts 30.

In the present instance I have shown the cooler as arranged for four faucets, showing two coil cylinders 33 each provided with a pair of coils. It is, of course, obvious that the device may be arranged for but one faucet or any other number desired. In using the cooler, ice is introduced through the top of the cooling chamber and when tamped down owing to the vertical disposition of the coils the latter are not liable to be injured or crushed during the tamping operation. Water may also be employed with the ice, passing freely around the coil tubes and into the cylinders 33, and any excess of water overflows into the pipe 36 and finally discharges through the nipple 18, by way of the tube 38.

The chest 10, the top of which is formed by the bottom of the coil box and the pan 41 provides a closed dry cold storage chamber for bottled goods, and this chamber is kept at low temperature by reason of its proximity to the cooling chamber 21 which is in effect located therein. This cold storage chamber is conveniently located, being accessible to the attendant merely by removing the pan 41, and without leaving his position for drawing from the faucets.

Various modifications may be made in the invention, and I do not, therefore, limit myself to the particular construction and arrangement shown; and while I have described and illustrated my invention as a beer cooler, it is obvious that it may be employed for cooling water, soda water and other beverages.

Having described my invention what I claim is—

1. In a device of the class described, the combination with the chest having the narrow top-portion and the wider bottom portion, the narrow top portion being over the rear of the bottom portion, of the cooling chamber forming the front of the top of the chest and filling the narrow top portion above the rear of the bottom portion, a coil in the cooling chamber, a faucet supported in the front of the chamber and connected to one end of the coil, a supply pipe extending adjacent the chamber where the other end of the coil emerges therefrom, and detachable connections between the pipe and the end of the coil, the elements being so constructed and arranged that when the connections are detached the cooling chamber with its coil and faucet in place can be removed bodily from the chest.

2. In a device of the class described, the combination with the chest having the narrow top-portion and the wider bottom portion, the narrow top-portion being over the rear of the bottom portion, of the cooling chamber forming the front of the top of the chest and filling the narrow top portion above the rear of the bottom portion, a coil in the cooling chamber, a faucet supported in the front of the chamber and connected to one end of the coil, a supply pipe extending adjacent the chamber where the other end of the coil emerges therefrom, detachable connections between the pipe and the end of the coil, and means for removably securing the chamber in place, the elements being so constructed and arranged that when the connections are detached and the securing means released, the cooling chamber with its coil and faucet in place can be removed bodily from the chest.

3. In a device of the class described, the combination with the chest having the narrow top-portion and the wider bottom portion, the narrow top portion being over the rear of the bottom portion, of the cooling chamber forming the front of the top of the chest and filling the narrow top portion above the rear of the bottom portion, a coil in the cooling chamber, a faucet supported in the front of the chamber and connected to one end of the coil, a supply-pipe extending adjacent the chamber where the other end of the coil emerges therefrom, detachable connections between the pipe and the end of the coil, and a drip-pan adapted to fit between the cooling chamber and the front of the top of the bottom portion of the chest to secure the cooling chamber in place, the elements being so constructed and arranged that when the connections are detached and the drip-pan removed the cooling chamber with its coil and faucet in place can be removed bodily from the chest.

4. In a device of the class described, the combination with the chest having the narrow top-portion and the wider bottom portion, the narrow top-portion being over the rear of the bottom portion, of the cooling chamber forming the front of the top of the chest and filling the narrow top-portion above the rear of the bottom-portion and supported by inwardly projecting horizontal flanges, a coil in the cooling chamber, a faucet supported in front of the chamber and connected to one end of the coil, a supply pipe extending adjacent to the chamber where the other end of the coil emerges therefrom, and detachable connections between the pipe and the end of the coil, the elements being so constructed and arranged that when the connections are detached the cooling chamber with its coil and faucet in place can be slid forward on the flanges and removed bodily from the chest.

5. In a device of the class described, the combination with the chest having the narrow top-portion and the wider bottom-portion, the narrow top-portion being over the rear of the bottom-portion and adapted to extend partly beneath a bar, of the cooling chamber forming the front of the top of the chest and filling the narrow top-portion above the rear of the bottom-portion, the drain-plate pan resting on the top of the portion of the chest

not extending beneath the bar, a coil in the cooling chamber, a faucet supported in the front of the chamber and connected to one end of the coil, a supply pipe extending adjacent to the chamber where the other end of the coil emerges therefrom, and detachable connections between the pipe and the end of the coil, the elements being so constructed and arranged that when the connections are detached the cooling chamber with its coil and faucet in place can be removed bodily from the chest.

6. In a device of the class described, the combination with the chest having the narrow top-portion and the wider bottom-portion, the narrow top-portion being over the rear of the bottom-portion and adapted to extend partly beneath a bar, of the cooling chamber forming the front of the top of the chest and filling the narrow top-portion above the rear of the bottom portion, the drain-plate pan resting on the top of the portion of the chest not extending beneath the bar, a drip pan adapted to fit between the cooling chamber and the front of the top of the bottom portion of the chest to secure the cooling chamber in place, a coil in the cooling chamber, a faucet supported in the front of the chamber over the drip-pan and connected to one end of the coil, a supply pipe extending adjacent the chamber where the other end of the coil emerges therefrom, and detachable connections between the pipe and the end of the coil, the elements being so constructed and arranged that when the connections are detached and the drip-pan removed, the cooling-chamber with its coil and faucet in place can be removed bodily from the chest.

7. In a cooler, in combination, a chest providing a cold storage chamber and having an upper extension at its rear portion, a cooling chamber located in the extension and comprising a unit consisting of a tank the front wall of which forms a front for the extension, a circulating coil in the tank, and a draw off faucet carried by the front of the tank and to which one end of the coil is connected, the other end of the coil passing through the bottom of the tank, a supply pipe passing into the chest and to which the latter end of the coil is detachably connected, and a removable drip pan under the faucet forming the top of the front portion of the chest and engaging the tank, whereby when the drip pan is removed and the tube disconnected from the supply pipe the cooling chamber in its entirety may be removed from the chest.

8. In a cooler, the combination with a chest, of a removable cooling chamber carried by the chest and provided with a coil, a faucet on the cooling chamber and connected to the coil, and a removable drip pan mounted on the chest under the faucet and which when in position prevents removal of the cooling chamber.

9. In a cooler, the combination with a chest, a drip tube in the chest, a removable cooling chamber carried by the chest and having an overflow pipe discharging into the drip tube, a coil in the cooling chamber provided with a faucet, and a removable drip pan located under the faucet and securing the cooling chamber in position and having an outlet also discharging into the drip tube.

10. In a cooler, the combination with a storage chest, of a removable cooling chamber carried by the chest and provided with a plurality of coils, supply pipes passing into the chest and detachably connected to the coils, a discharge faucet for each coil mounted on the front wall of the cooling chamber, and a removable drip pan mounted on the chest under the faucets and engaging the cooling chamber to secure it in place and providing a closure for the chest, whereby when the drip pan is removed and the coils disconnected from the supply pipes the cooling chamber may be removed from the chest.

11. The combination with the bar, and a supporting member disposed beneath and rearwardly of the same, and parallel guide rails carried by said supporting member, of a cooling and dispensing member slidably mounted on said guide rails and adapted to extend partly underneath said bar when at one limit of its movement, and draining means carried by said members.

12. The combination with the bar, and a supporting member disposed beneath and rearwardly of the same, and parallel guide rails carried by said supporting member, of a cooling and dispensing member slidably mounted on said guide rails and adapted to extend partly underneath said

bar when at one limit of its movement, draining means carried by said members, and a drip pan removably mounted in said supporting member, which when in position cooperates with the cooling and dispensing member to secure it at said limit of movement.

13. The combination with the bar, and a supporting member disposed beneath and rearwardly of the same, and bearings carried by said supporting member, of a cooling and dispensing member movably mounted on said bearings and adapted to extend partly underneath said bar when at one limit of its movement and to have its top moved entirely from underneath said bar when at the other limit of its movement, and draining means carried by said members.

14. In a device of the class described, the combination with the cabinet having the top portion and the bottom portion, of the cooling chamber occupying the top portion of the cabinet, a member removable from the top of the cooling chamber to give access thereto for icing it, a coil in the cooling chamber, a faucet supported in the front of the cooling chamber and connected to one end of the coil, a supply pipe extending adjacent to the chamber where the other end of the coil emerges therefrom, and detachable connections between the pipe and the end of the coil, the elements being so constructed and arranged that when the connections are detached, the cooling chamber, with its coil and faucet in place, can be moved on the bottom portion of the cabinet.

15. In a device of the class described, the combination with the cabinet having the top portion and the bottom portion, of the cooling chamber occupying the top portion of the cabinet, a member removable from the top of the top portion of the cabinet, a removable drain plate above the top of the top portion of the cabinet, a cover on the top of the cooling chamber beneath the drain plate removable to give access to the cooling chamber for icing it, a coil in the cooling chamber, a faucet supported in the front of the chamber and connected to one end of the coil, a supply pipe extending adjacent to the chamber where the other end of the coil emerges therefrom, detachable con-

nections between the pipe and the end of the coil, and a drip pan adapted to fit between the cooling chamber and the front of the top of the bottom portion of the cabinet beneath the faucet to secure the cooling chamber in place, the elements being so constructed and arranged that when the connections are detached and the drip pan removed, the cooling chamber with its coil and faucet in place can be moved on the bottom portion of the cabinet.

16. In a device of the class described, the combination with the cabinet having the top and bottom portions, the bottom portion being wider than and extending beyond the top portion, of the cooling chamber in the top portion of the cabinet and supported thereby and having the strip elements being so constructed and arranged that when the ed to be supported on the strip and the tops of the walls moved to the bottom portion of the cabinet.

17. In a device of the class described, the combination with the cabinet having the drain pipe in the bottom portion thereof, of the cooling chamber in the top portion of the cabinet, having the overflow pipe therein discharging into the drain pipe, and the drain plate on the top of the top portion of the cabinet over the cooling chamber, having an aperture in the bottom thereof discharging into the overflow pipe.

18. In a device of the class described, the combination with the cabinet having the drain pipe in the bottom portion thereof, of the cooling chamber in the top portion of the cabinet having the overflow pipe therein discharging into the drain pipe, the drain plate on the top of the top portion of the cabinet over the cooling chamber, having an aperture in the bottom thereof discharging into the overflow pipe, and a drip pan carried by the cabinet adjacent the cooling chamber, and having an aperture discharging into the drain pipe.

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

EDWARD NEELY.

Witnesses:

ARTHUR B. SIBOLD,
ELIZABETH MOLITOR.