

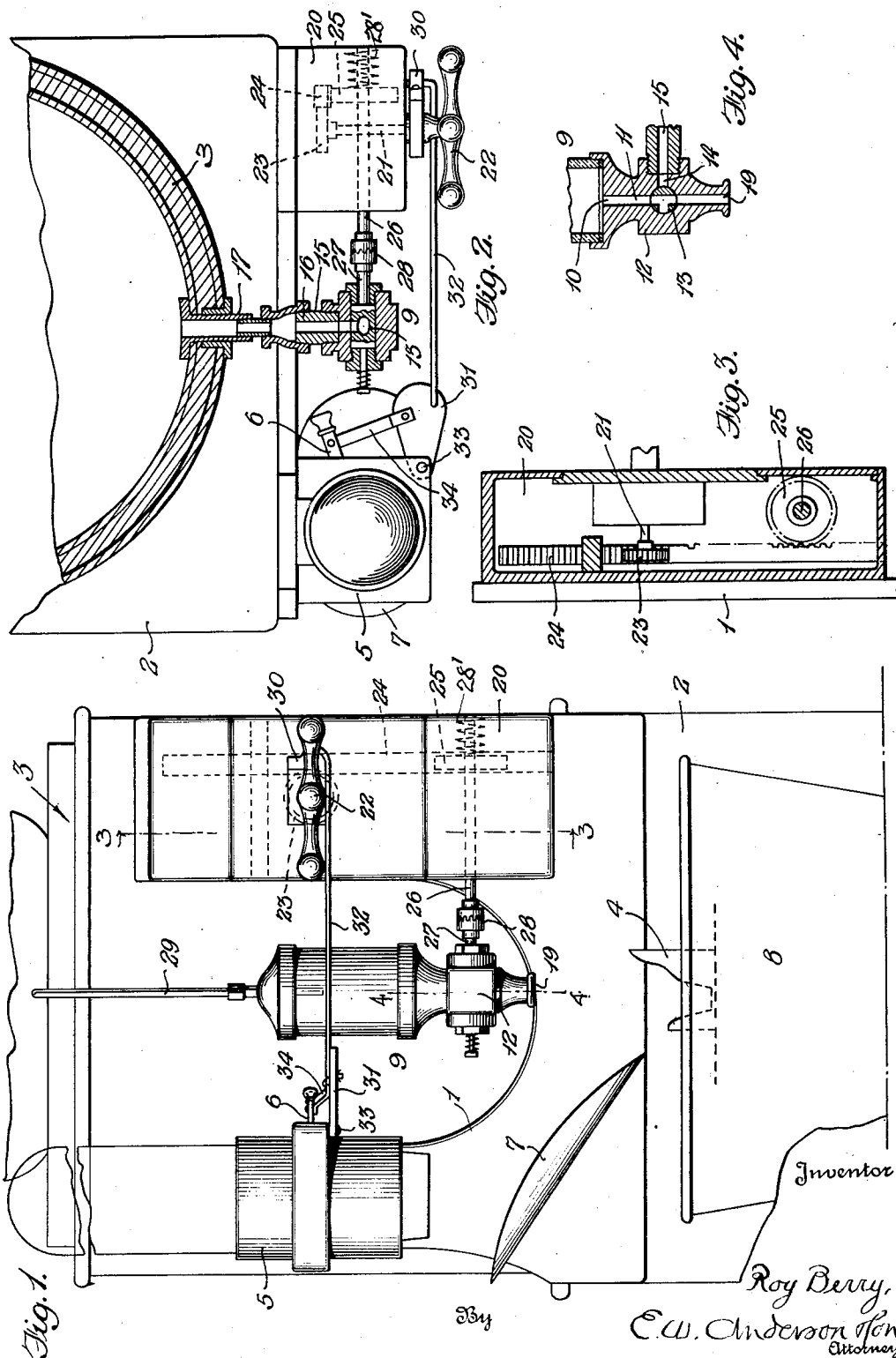
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ATTACHMENT ASSEMBLY FOR LIQUID COOLERS

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# UNITED STATES PATENT OFFICE

1,936,103

## ATTACHMENT ASSEMBLY FOR LIQUID COOLERS

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4 Claims. (Cl. 225—21)

The invention has relation to an attachment assembly unit for liquid coolers operating by mechanical refrigeration and of which there are quite a number on the market of different makes, an object being to provide such an assembly unit comprising a cup dispenser, a liquid measuring dispenser and an operating device or means of simultaneous operation for the cup dispenser and the liquid dispenser all located forwardly of the face of the cooler in transverse alignment and in full view, the cups successively released from the cup dispenser falling upon the cup rest which is part of the cooler and the liquid measured and dispensed being discharged into the cup upon said rest. Another object is to provide the cup dispenser, the liquid dispenser and the operating device stated all mounted on a vertical face plate attachable closely to the face of the cooler. Another object is to provide such an assembly unit adapted for attachment to different makes of coolers by an unskilled person in a short time. Another object is to provide such an assembly unit the members of which are all located in full view and readily accessible for inspection, repairs, disconnection, replacement, etc. Another object is to provide such an assembly unit constructed so that the operating means for the cup release and the liquid dispenser may take place by a fractional turn of the operating shaft in one direction, the reverse turn of the operating shaft serving to return the parts to normal position. Other objects and advantages will appear hereinafter.

The invention consists in the novel construction and combinations of parts as set forth in the appended claims.

In the accompanying drawing illustrating an embodiment of the invention—

Figure 1 is a front view of the invention, partly broken away.

Figure 2 is a plan view with parts in section.

Figure 3 is a detail section on the line 3—3, Figure 1.

Figure 4 is a detail section on the line 4—4, Figure 1.

In the drawing, the numeral 1 designates the vertical attachment plate, which is bolted or screwed to the front face of the cooler 2, said plate extending upwardly in front of the liquid reservoir 3 of the cooler and being located close to the front face of the cooler, the cup rest being shown at 4.

The cup dispenser the details of which are no part of the present invention and which are well known is shown at 5, operation of the lever 6 of

said dispenser successively releasing cups one at a time which thereupon fall upon the cup rest aforesaid, a deflector 7 secured to the plate 1 serving to direct the cup into the base holder 8 of said rest so that it will fall in upright position. This cup dispenser is secured to the plate 1 at one side thereof and close thereto.

The liquid measuring dispenser is shown at 9, and comprises a measuring vessel having a lower orifice 10, communicating with the upper orifice 11 of a valve casing 12, wherein works a three way valve 13, a rear orifice 14 of said valve casing having a stub pipe 15 extending rearwardly across the plate 1 and threaded at 16 so that it may be readily coupled to the discharge pipe 17 of the reservoir 3 of the cooler. This liquid measuring dispenser is located centrally of the plate 1 and of the cooler and spaced from the cup dispenser in transverse alignment therewith. This liquid dispenser is located above the cup rest 4 and the valve casing thereof has a lower discharge spout 19 delivering the measured contents of the dispenser into the cup upon said rest.

The means of simultaneous operation of the cup dispenser and of the valve of the liquid measuring dispenser, comprise a casing 20, which is secured to the attachment plate 1 close thereto, a rotary operating shaft 21 having bearings in said casing and being provided with a forward handle 22, said shaft having a rear gear wheel 23, meshing with a vertical rack 24, the lower portion of said rack meshing with another gear wheel 25, fast to a lateral stub shaft 26, having bearings in said casing and being in line with a lateral stub shaft 27 of the three way valve 13 of the liquid dispenser, these two shafts 26 and 27 having a clutch connection 28 which is readily engaged and disengaged by movement of stub shaft 26, which has sliding bearings in said casing, the gear wheel 25 moving therewith and placing a spring 28' under tension, said spring restoring the clutch connection upon release of the shaft.

Upon operation of the shaft 21 one quarter turn to the right, the three way valve 13 will be similarly operated to establish communication between the discharge pipe 17 of the liquid reservoir and the measuring vessel 9, whereupon liquid will flow into said vessel to an extent determined by the height of the vent pipe 29 of said vessel, said vent pipe being slidably adjustable for height to vary the charge of liquid in said vessel. That is to say when the liquid so discharged rises to cover the lower end of the vent

pipe, the discharge of liquid will stop for obvious reasons.

The operating shaft being when given a one quarter reverse turn to normal position, the three way valve will be similarly operated to establish communication between the measuring vessel and the discharge spout thereof to deliver the liquid so measured into the cup located upon the cup rest.

In order that the cup dispenser may be operated simultaneously with the liquid dispenser to release the cup so that the latter will fall into position on the cup rest ready to receive the liquid discharged from the measuring vessel as stated, said operating shaft is provided forwardly thereof with an eccentric 30, and the cup dispenser casing is provided forwardly thereof with a lever 31, a connecting rod 32 being operated by said eccentric or crank 30 and in turn actuating the lever 31 to push the latter forwardly upon its fulcrum 33, said lever having a pivotal link connection 34 with the lever 6 of the cup dispenser to release the cup during the quarter turn forward of the operating shaft. The connecting rod 32 extends horizontally and transversely in front of the measuring vessel 9, said rod having in the present instance an upwardly and inwardly bent end 35, engaging a perforation of the eccentric 30 and at the other end being bent downwardly at 36 to engage a perforation of the lever 31.

I claim:—

1. An attachment assembly for liquid coolers having a reservoir provided with a discharge pipe, comprising a vertical face plate attachable to the face of the cooler, a cup dispenser carried by said face plate at one side thereof, a liquid measuring dispenser, and an operating device for said cup dispenser and liquid dispenser including a rotary shaft carried by said face plate at the other side thereof and located forwardly of said face plate in transverse alignment with said cup dispenser and liquid dispenser both of which are also located forwardly of said face plate, the liquid dispenser having a rotary valve the casing of which is adapted for connection with said discharge pipe.

2. An attachment assembly for liquid coolers having a reservoir provided with a discharge pipe, comprising a vertical face plate attachable to the face of the cooler, a cup dispenser carried by said face plate at one side thereof, a liquid measuring dispenser, and an operating device for said cup dispenser and liquid dispenser including a rotary shaft carried by said face plate at the other side thereof and located forwardly thereof in trans-

verse alignment with said cup dispenser and liquid dispenser both of which are also located forwardly of said face plate, the liquid dispenser having a rotary valve the casing of which is adapted for connection with said discharge pipe, said operating device having operating connections with said cup dispenser and said valve all located forwardly of said face plate and readily accessible.

3. An attachment assembly for liquid coolers having a reservoir provided with a discharge pipe, comprising a cup dispenser, a liquid measuring dispenser having a measuring vessel and a rotary valve the casing of which has a discharge spout and is adapted for connection with said discharge pipe, and an operating device for said cup dispenser and liquid dispenser including a rotary shaft located forwardly of said cooler in transverse alignment with said cup dispenser and liquid dispenser both of which are also located forwardly of said cooler said rotary shaft being provided with an eccentric, a lever fulcrumed to the cup dispenser casing and having a link connection with the cup dispenser, and a connecting rod between said eccentric and said lever, said shaft having also a gear wheel, a rack in mesh therewith, a stub shaft having a gear wheel also in mesh with said rack, said valve having a stub shaft in line with and having clutch connection with the first named stub shaft.

4. An attachment assembly for liquid coolers having a reservoir provided with a discharge pipe, comprising a vertical face plate attachable to the face of the cooler, a cup dispenser carried by said face plate at one side thereof, a liquid measuring dispenser having a measuring vessel and a rotary valve the casing of which has a discharge spout and is adapted for connection with said discharge pipe, and an operating device for said cup dispenser and said liquid dispenser including a rotary shaft carried by said face plate at the other side thereof and located forwardly thereof in transverse alignment with said cup dispenser and said liquid dispenser both of which are also located forwardly of said face plate, said operating shaft being provided with an eccentric, a lever fulcrumed to the cup dispenser casing and having a link connection with the cup dispenser, and a connecting rod between said eccentric and said lever, said shaft having also a gear wheel, a rack in mesh therewith, a stub shaft having a gear wheel also in mesh with said rack, said valve having a stub shaft in line and having clutch connection with the first named stub shaft.

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