No. 890,912. PATENTED JUNE 16, 1908.

C. F. KURZ.

SODA FOUNTAIN.

APPLICATION FILED OCT. 25, 1907.

Fig. 1.

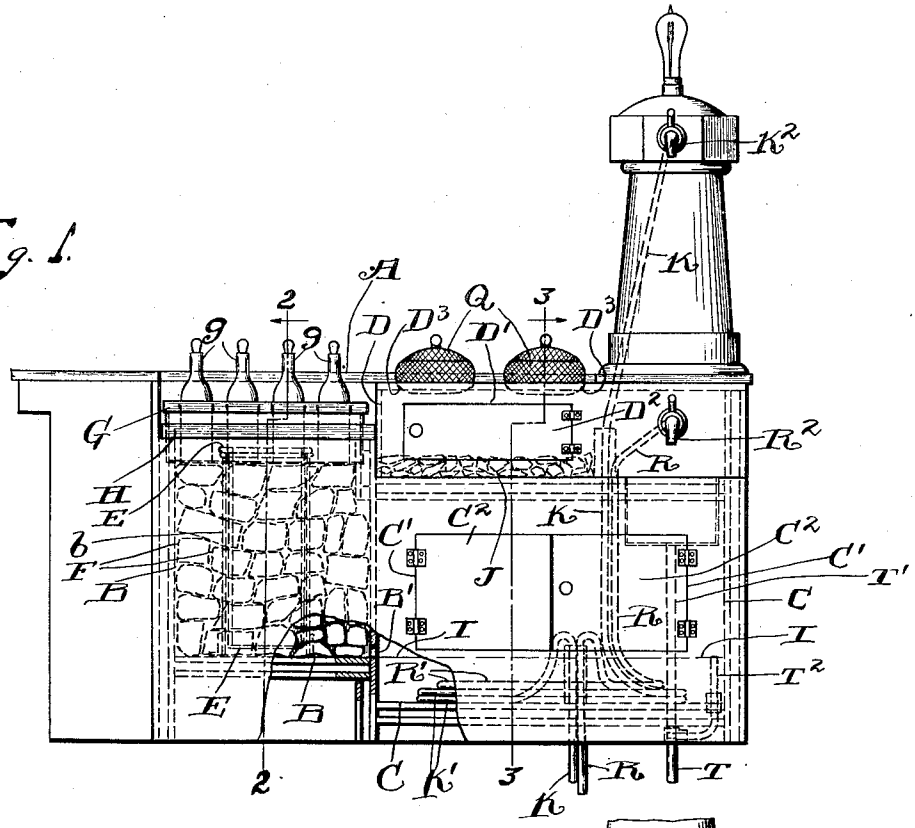


Fig. 2.

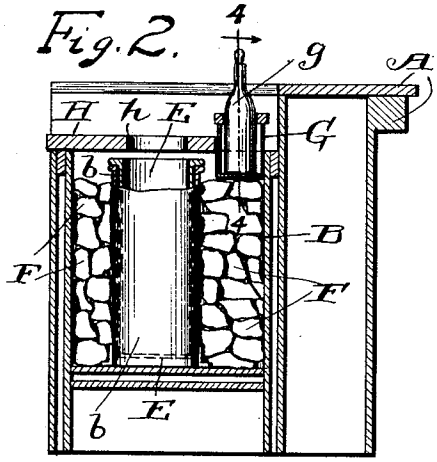


Fig. 3.

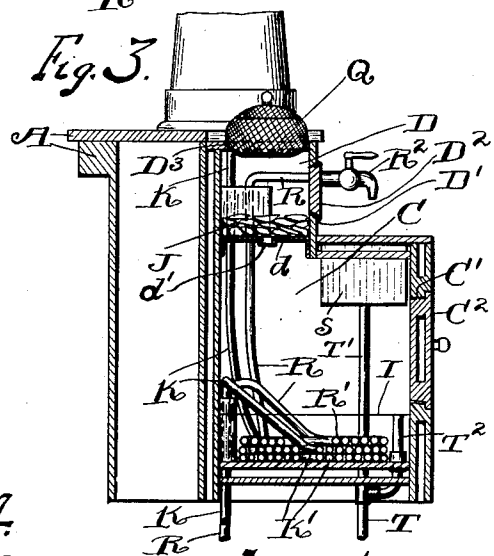
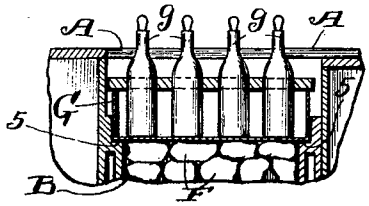


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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SODA-FOUNTAIN.

No. 890,912. Specification of Letters Patent. Patented June 16, 1908.

Application filed October 25, 1907. Serial No. 399,120.

To all whom it may concern:

Be it known that I, CHARLES F. KURZ, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Soda-Fountains; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to improvements in soda fountains.

The primary object of this invention is to reduce to a minimum the quantity of ice required in maintaining the various compartments or chambers and receptacles of the soda fountain in a cool condition.

Another object is to keep the water in the water-supply pipes adequately cool without liability of freezing in the coiled portions of the pipes.

Another object is to advantageously arrange the various compartments or chambers so as to render the soda fountain compact, convenient and simple in construction.

With these objects in view, and to the end of realizing other advantages hereinafter appearing, this invention consists in certain features of construction, and combinations of parts, hereinafter described, pointed out in the claims and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is a front side elevation of a soda fountain embodying my invention, and portions are broken away and in section in this figure to more clearly show certain features of construction. Fig. 2 is a vertical section on line 2—2, Fig. 1, looking in the direction indicated by the arrow. Fig. 3 is a vertical section on line 3—3, Fig. 1, looking in the direction indicated by the arrow. Fig. 4 is a vertical section on line 4—4, Fig. 2, looking in the direction indicated by the arrow.

Referring to the drawings, A indicates the counter of my improved soda fountain. At the inner side of the counter A are formed three compartments or chambers B, C and D. The chamber D is arranged over the chamber C, and both chambers C and D are arranged at one side of the chamber B. The chambers B, C and D are refrigerating chambers. The chamber B is provided centrally with an open metallic receptacle *b* for receiving the ice-cream-laden can E, and ice F and salt (not shown) are packed around the receptacle *b*. The chamber B is therefore the main refrigerating chamber of the soda fountain. The side walls of the chamber B are provided adjacent the upper portion of the counter with upwardly facing shoulders 5 which afford support to a rack or holder G employed in holding syrup-bottles *g*, and a lid H is arranged over the receptacle *b* and can E and removably supported in any approved manner, which lid is provided with an aperture *h* affording access to the interior of the can.

K represents a soda-water-supply pipe which extends upwardly into the chamber C and is coiled, as at K′, next above the bottom of the said chamber, and the said pipe extends from its coiled portion K′ upwardly to and is connected with a suitably supplied faucet K^2 from which soda water can be drawn when required.

R indicates a pipe for supplying uncharged water, which pipe is coiled, as at R′, within the lower portion of the chamber C and extends above its coiled portion R′ upwardly to and is connected with a suitably applied faucet R^2 from which water supplied by the said pipe can be drawn.

The chamber B has a lateral outlet B′ at its lower end, which outlet discharges into the chamber C above the coiled portions of the pipes K and R. That is, the chamber C extends far enough below the outlet B′ to accommodate the location of the coiled portions of the pipes K and R within the said chamber below the said outlet. Any brine or cold water resulting from the melting of ice within the chamber B flows into the chamber C from the chamber B at the outlet B′ of the last-mentioned chamber and keeps the coiled portions of the pipes K and R in a desirably cool condition, and obviously the said coiled portions of the said pipes are kept submerged in the said water thus received by the chamber C, and I indicates the level of the liquid in which the said coiled portions of the said pipes are thus kept submerged. One of the walls of the chamber C is provided with a doorway C′ which is normally closed by suitably applied doors C^2, which doorway is arranged above the liquid-level I to be maintained within the said chamber. It will be observed therefore that the chamber C constitutes the water-pipe-cooling chamber of the soda fountain.

The bottom of the chamber D is formed by

a sheet metal plate *d* which is supported in any approved manner and participates in the formation of the top wall of the chamber C so that any ice placed upon the said bottom will cool the said bottom and thereby participate in cooling the said chamber C. The lower portion of the chamber D is supplied with chipped or crushed ice J which is suitable for use in the preparation of iced beverages and introduced into the said chamber through a doorway D′ with which one of the walls of the said chamber is provided, which doorway is normally closed by a suitably applied door D^2.

The top wall of the chamber D is provided with apertures D^3, and the surrounding walls of the said apertures are beveled to form desirable seats for bowls or dishes Q in which fresh fruit is kept on hand. The chamber D, although constituting primarily the crushed-ice-supply compartment of the soda-fountain, also operates as the fresh-fruit-cooling chamber of the soda fountain.

The chamber D is provided in its bottom *d* with an outlet *d′* at which any water resulting from the melting of ice within the said chamber passes into the chamber C and is there added to the water received by the said chamber C from the chamber B and hence utilized in cooling the coiled portions of the pipes K and R.

By the construction hereinbefore described it will be observed that the requirement if ice within the pipe-cooling chamber D is avoided that the water in the said pipes is therefore not liable to be frozen because the coiled portions of the said pipes are not in contact with ice; that none of the water resulting from the melting of ice in the chambers B and D is wasted until after it has been advantageously utilized in cooling the said pipes; that the amount of ice required in cooling the different chambers is reduced to a minimum, and that the various portions of the soda fountain are compactly and conveniently arranged.

T indicates a drain-pipe which has a branch T′ arranged to carry off water from a sink *s* arranged to receive the drip from the faucets K^2 and R^2 and is provided with another branch T^2 having its receiving end communicating with the chamber C and arranged substantially in line horizontally with the outlet B′ of the chamber B and consequently above the coiled portions of the pipes K and R so that the maintenance, above the said coiled portions of the pipes, of the liquid-level in the chamber D is not disturbed.

What I claim is:—

1. A soda fountain comprising a counter; a chamber arranged at the inner side of the counter for receiving an ice-cream-containing can or the like and ice; another chamber arranged at one side of and extending a suitable distance below the first-mentioned chamber and in communication a suitable distance above its bottom with the said first-mentioned chamber; a liquid-supply pipe extending into and coiled within the lower portion of the second-mentioned chamber below the aforesaid outlet and thence rising upwardly to the place from which liquid is to be drawn therefrom, and a drain-pipe having its receiving end communicating with the second mentioned chamber and arranged above the coiled portion of the said pipe.

2. A soda fountain comprising a counter; a chamber arranged at the inner side of the counter for receiving an ice-cream-laden can or the like and ice; which chamber has an outlet at its lower end; another chamber arranged at one side of and extending a suitable distance below the first-mentioned chamber and in communication with the aforesaid outlet; a liquid-supply pipe extending into and coiled within the lower portion of the second-mentioned chamber below the said outlet and thence rising upwardly to the place from which liquid is to be drawn therefrom, and a drain-pipe having its receiving end communicating with the second-mentioned chamber and arranged above the coiled portion of the said pipe.

3. A soda fountain comprising a counter; a chamber arranged at the inner side of the counter for receiving an ice-cream-laden can or the like and ice, which chamber has an outlet at its lower end; another chamber arranged at one side of and extending a suitable distance below the first-mentioned chamber and in communication with the aforesaid outlet; a liquid-supply pipe extending into and coiled within the lower portion of the second-mentioned chamber below the said outlet and thence rising upwardly to the place from which liquid is to be drawn therefrom, and a drain-pipe having its receiving end communicating with the second-mentioned chamber and substantially in line horizontally with the aforesaid outlet.

4. A soda fountain comprising a counter; a chamber arranged at the inner side of the counter for receiving an ice-cream-laden can or the like and ice; a pipe-cooling chamber arranged at one side of and extending a suitable distance below the first-mentioned chamber and in communication a suitable distance above its bottom with the first-mentioned chamber at the lower end of the first-mentioned chamber; a liquid-supply pipe extending into and coiled within the lower portion of the second-mentioned chamber below the point at which the said second-mentioned chamber communicates with the first-mentioned chamber and rising upwardly to the place from which liquid is to be drawn therefrom, and a crushed-ice-supply chamber arranged above the pipe-cooling chamber and provided with a water-dis-

charging outlet communicating with the pipe-cooling chamber.

5. In a soda fountain, the combination, with a pipe-cooling chamber, and a liquid-supply pipe extending into and coiled within the lower portion of the said chamber and thence rising upwardly to the place from which liquid is to be drawn therefrom, of a drain-pipe having its receiving end communicating with the pipe-cooling chamber at the level of a body of cooling liquid to be maintained in the said chamber; a crushed-ice-supply chamber arranged above the pipe-cooling chamber and provided with an outlet at which water resulting from melting of ice within the said ice-supplying chamber passes into the pipe-cooling chamber, and another ice-receiving chamber arranged at one side of the pipe-cooling chamber and provided at its lower end with an outlet discharging into the pipe-cooling chamber, and the last-mentioned ice-holding chamber being arranged far enough above the lower end of the pipe-cooling chamber to locate its said outlet substantially in line horizontally with the receiving end of the aforesaid drain-pipe.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

CHARLES F. KURZ.

Witnesses:
C. H. DORER,
VICTOR C. LYNCH.