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(54) REFRIGERATED COUNTER - DISPLAY CASE

KÜHLVITRINE

COMPTOIR/VITRINE FRIGORIFIQUE

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Description

[0001] The present patent application for industrial invention concerns a refrigerated counter-display for selling homemade ice-cream, having an integrated whipped cream dispenser apparatus.

[0002] As it is well known, all ice-cream shops selling homemade ice-cream usually use refrigerated counter-display of the type providing a large hollow base and an upper glazed display unit.

[0003] Components of the refrigerant unit are housed within the above base, while above the same a tank is obtained aimed to exactly contain different cups for different flavors of homemade ice-cream, leaving them well visible to the consumer.

[0004] Apparatuses known as "whip cream" are also known in the field of shops, said apparatuses being suitable to deliver whipped cream to put on the ice-cream sold to the clients.

[0005] A typical whip cream apparatus provides a metal housing, within which a container is provided, into which liquid cream is poured by operator.

[0006] Said container is connected to a small refrigerant group, maintaining the same at an exercise temperature between 2°C and 4°C, as well as a pump that, by input from operator, promotes pressure delivery of refrigerated whipped cream toward a delivery spout.

[0007] Particularly, said spout is so shaped that cream, passing through the same under pressure, can incorporate air, thus increasing its volume and becoming a soft and pasty fluid product (whipped cream).

[0008] A typical problem of homemade ice-cream shops is that space available for selling the product is very small.

[0009] In this situation, many difficulties are encountered to properly place said whip cream apparatus.

[0010] Thus, often, it is not provided on the refrigerated counter-display, not to take space to exhibition of different ice-cream cups, and it is preferred placing it in a position behind the operator.

[0011] However, it is easy understanding that such a positioning is not particularly satisfying, also due to the difficulties of the operator to handle the apparatus, since he/she has to turn back every time it is required putting whipped cream on the ice-cream cone or cup.

[0012] US5,193,354 discloses a humidification system for humidifying a controlled space which includes a control device connected to a water source for supplying water at a constant pressure, a tubing network for transferring water from the control device, a mist nozzle located within the controlled space and connected to the tubing network to receive water transferred from the control device, and a droplet discrimination device positioned around the mist nozzle and located within the controlled space for removing and draining larger water droplets from the mist sprayed from the mist nozzle for releasing a very fine water mist into the controlled space outside the droplet discrimination device.

[0013] FR 2 450 429 discloses a refrigerated cabinet comprising a tank, an evaporator in this tank, loading planes above the evaporator and at least one ramp for spraying liquid, maintained in a tilted position relative to a horizontal plane, along the inner walls of the tank and below the loading planes.

[0014] US 2,011,731 discloses a refrigerated show case having a conductive top, cooling means for the top, a nozzle arranged to spay water on the top and a conduit to supply water to the nozzle.

[0015] It is specific object of the present invention that of definitively solving the above problem, at last suggesting a practical and rational position of a whip cream apparatus.

[0016] Basic idea of the present invention is that of building-in a whip cream apparatus within the structure of a refrigerated counter-display, so that said whipped cream delivery spout is placed above ice-cream cups, toward the top of the glazed unit of the same counter-display.

[0017] Such an incorporation permits, on one hand, optimizing spaces and reducing general sizes of a space used to sell homemade ice-cream, and, on the other hand, ensures to the operators a more comfortable and ergonomic working situation.

[0018] Thanks to the counter-display according to the invention, the operator can first fill in the cone or cup with ice-cream, and, without changing his/her posture (thus without the needing of moving laterally, or turning back) can then put on the wished whipped cream garnish.

[0019] Choice of having provided spout of said whip cream apparatus at the top of the glazed unit of the new counter-display is particularly advantageous also because it permits to the client purchasing the ice-cream to closely control delivery of whipped cream over the same.

[0020] Thus, client is in a condition of best evaluating delivered product and to be reassured about quality of the same.

[0021] In order to optimize practical realization of said solution, it is provided that different components of whip cream apparatus built-in the counter-display according to the invention are no more provided according to a compact arrangement, but they are provided in different points of the same counter-display.

[0022] Particularly, it is provided that condensation group of the whip cream apparatus is "hidden" housed within hollow base of counter-display, while pump delivering whipped cream, container of the same and relevant dispenser are provided toward the top (substantially on the roof) of relevant glazed unit, particularly providing that said spout is faced toward the operator.

[0023] Due to a similar different "out-of-centre" positioning of whip cream apparatus components, it is provided that its condensation group and liquid cream container are connected by very long tubes, "hidden" housed within one of standard metallic upright of the support structure of the same glazed unit.

[0024] It is finally pointed out that the solution idea according to the present invention can also be realized according to alternative modes that, however, differ each other only by the constructive point of view, being perfectly functionally equivalent.

[0025] More specifically, it could be decided mounting within the counter-display base an additional condensation group, exclusively aimed to proper operation of said whip cream apparatus.

[0026] As an alternative, it could be provided that the same whip cream apparatus exploits, thanks to presence of suitable connection branches, refrigerating action of the same "main" refrigerant circuit of the counter-display.

[0027] For a better comprehension, the specification of the present invention will be provided in the following with reference to the enclosed drawings, which are only illustrative and not limitative, wherein:

figure 1 is a section view showing a first embodiment of the counter-display according to the invention;
figure 2 is a section view showing a second embodiment of the counter-display according to the invention.

[0028] Making reference to figure 1, counter-display according to the invention provides a general structure having a standard arrangement, in which it is possible individuating a hollow basement 1 and an upper glazed unit 2, provided with an opening 3 faced toward the operator.

[0029] Always according to standard solutions, it is provided that, at the top of said base 2 a tank 4 is provided for containing a plurality of homemade ice-cream cups 5, which is maintained at a low temperature by a traditional refrigerant system, the refrigerant fluid condensation group 6 of which is housed within said hollow base 1.

[0030] As already said, peculiarity of counter-display according to the invention is that of building-in a whip cream apparatus A.

[0031] According to solution shown in figure 1, it is particularly provided that said base 1 also houses a second condensation group 7, which is a component of a refrigerant system suitably destined to said whip cream apparatus A.

[0032] Further components of the latter are housed at the top of said glazed unit 2.

[0033] Said components are liquid cream container 8, pump 9 and delivery spout 10, faced toward operator.

[0034] Connection between the above specific condensation group 7 and liquid cream refrigerated container 8 of the top of the glazed unit 2 is realized by a suitable circuit that is invisible from the client-side of counter-display, since tubes 11 are housed within one of metallic uprights 12 of the same glazed unit 2.

[0035] Figure 2 instead shows an alternative solution, characterized by providing that said whip cream apparatus A is not provided with a specific condensation group, exploiting the action of main condensation group (6), i.e. that of the standard refrigerating system of the counter-display.

[0036] To this end, tube 11 connecting to refrigerated container 8 of whip cream apparatus A really is a branching of the same refrigerating system provided for the tank 4 above base 1.

[0037] In the preferred embodiment, said tube 11 is joined with low pressure branch 13 of main refrigerating circuit of inventive counter-display.

Claims

1. Refrigerated counter-display for selling homemade ice-cream, comprising a hollow base (1) and an upper glazed unit (2), for preserving and displaying the product at a low temperature, **characterised in that** it incorporates, at the level of the ceiling of said glazed unit (2), a delivery spout (10), a refrigerated container (8) and a pump (9) of a whip cream apparatus (A), wherein the refrigerated container (8) is connected by a tube (11) to a condensation unit (6, 7) housed within said base (1).

2. Refrigerated counter-display according to claim 1, **characterised in that** the condensation unit aimed to operate said whip cream apparatus (A) is the same main condensation unit (6) of said counter-display.

3. Refrigerated counter-display according to claim 1, **characterised in that** the condensation unit aimed to operate said whip cream apparatus (A) is a specific condensation unit (7) for apparatus (A).

4. Refrigerated counter-display according one of the preceding claims, **characterised in that** said tube (11) connecting to said whip cream apparatus (A) is "hidden" housed within one of the two metallic uprights of the support structure of said glazed unit (2).

5. Refrigerated counter-display according to claim 2, **characterised in that** said tube (11) is joined to the low pressure branch (13) of the main refrigerating circuit of the counter-display.

Patentansprüche

1. Kühltheke für den Verkauf von handwerklich hergestelltem Eis umfassend ein hohles Untergestell (1) und eine darüber liegende Glaskuppel (2) zur Aufbewahrung und Ausstellung des Produkts bei niedrigen Temperaturen, **dadurch gekennzeichnet, dass** auf der Höhe des Daches der Glaskuppel (2) eine Ausgabeschnauze (10), eine gekühlte Box (8) und die Pumpe (9) eines Schlagsahnebereiters (A) eingebaut sind, wobei die gekühlte Box (8) mittels eines Rohres (11) mit einer Kondensationsgruppe

(6, 7) verbunden ist, die im Inneren des Untergestells (1) untergebracht ist.

2. Kühltheke nach Anspruch 1, **dadurch gekennzeichnet, dass** die Kondensationsgruppe, die dem Schlagsahnebereiter (A) untergeordnet ist, aus derselben Kondensationshauptgruppe (6) besteht, mit der die Kühltheke ausgestattet ist.

3. Kühltheke nach Anspruch 1, **dadurch gekennzeichnet, dass** die Kondensationsgruppe, die dem Schlagsahnebereiter (A) untergeordnet ist, aus einer speziellen, dem Schlagsahnebereiter (A) zugeordneten Kondensationsgruppe (7) besteht.

4. Kühltheke nach einem oder mehreren der vorstehenden Ansprüche, dadurch gekennnzeichnet, dass das Rohr (11), das dem Schlagsahnebereiter (A) untergeordnet ist, verdeckt in einem der Metallpfosten untergebracht ist, die zur Tragestruktur der Glaskuppel (2) gehören.

5. Kühltheke nach Anspruch 2, **dadurch gekennzeichnet, dass** das Rohr (11) mit der Niederdruckleitung (13) des Hauptkühlkreislaufs der erfindungsgemäßen Kühltheke verbunden ist.

Revendications

1. Vitrine comptoir réfrigérée pour la vente de glace artisanale comprenant une base cave (1) et un pavillon vitré sus-jacent (2) prédisposée pour la conservation à basse température et l'exposition du produit, **caractérisée en ce qu'**elle incorpore, à hauteur du toit du dit pavillon vitré (2), un bec verseur (10), un réservoir réfrigéré (8) et une pompe (9) d'un dispositif pour fouetter la crème fraîche (A), où ledit réservoir réfrigéré (8) est relié, moyennant un tuyau (11), à un groupe de condensation (6, 7) logé dans ladite base (1).

2. Vitrine comptoir réfrigérée selon la revendication 1, **caractérisée en ce que** ledit groupe de condensation asservi au dit dispositif pour fouetter la crème fraîche (A) consiste dans le même groupe de condensation principale (6) qui équipe cette vitrine comptoir.

3. Vitrine comptoir réfrigérée selon la revendication 1, **caractérisée en ce que** ledit groupe de condensation asservi au dit dispositif pour fouetter la crème fraîche (A) consiste en un groupe spécifique de condensation (7) dédié au dispositif (A).

4. Vitrine comptoir réfrigérée selon l'une ou plusieurs des revendications précédentes, **caractérisée en ce que** ledit tuyau (11) asservi au dispositif pour fouetter la crème fraîche (A) est logé de manière amovible dans l'un des deux montants métalliques qui appartiennent à la structure portante du dit pavillon vitré (2).

5. Vitrine comptoir réfrigérée selon la revendication 2, **caractérisée en ce que** ledit tuyau (11) est relié au circuit basse pression (13) du système réfrigérant principal de la vitrine comptoir selon l'invention.

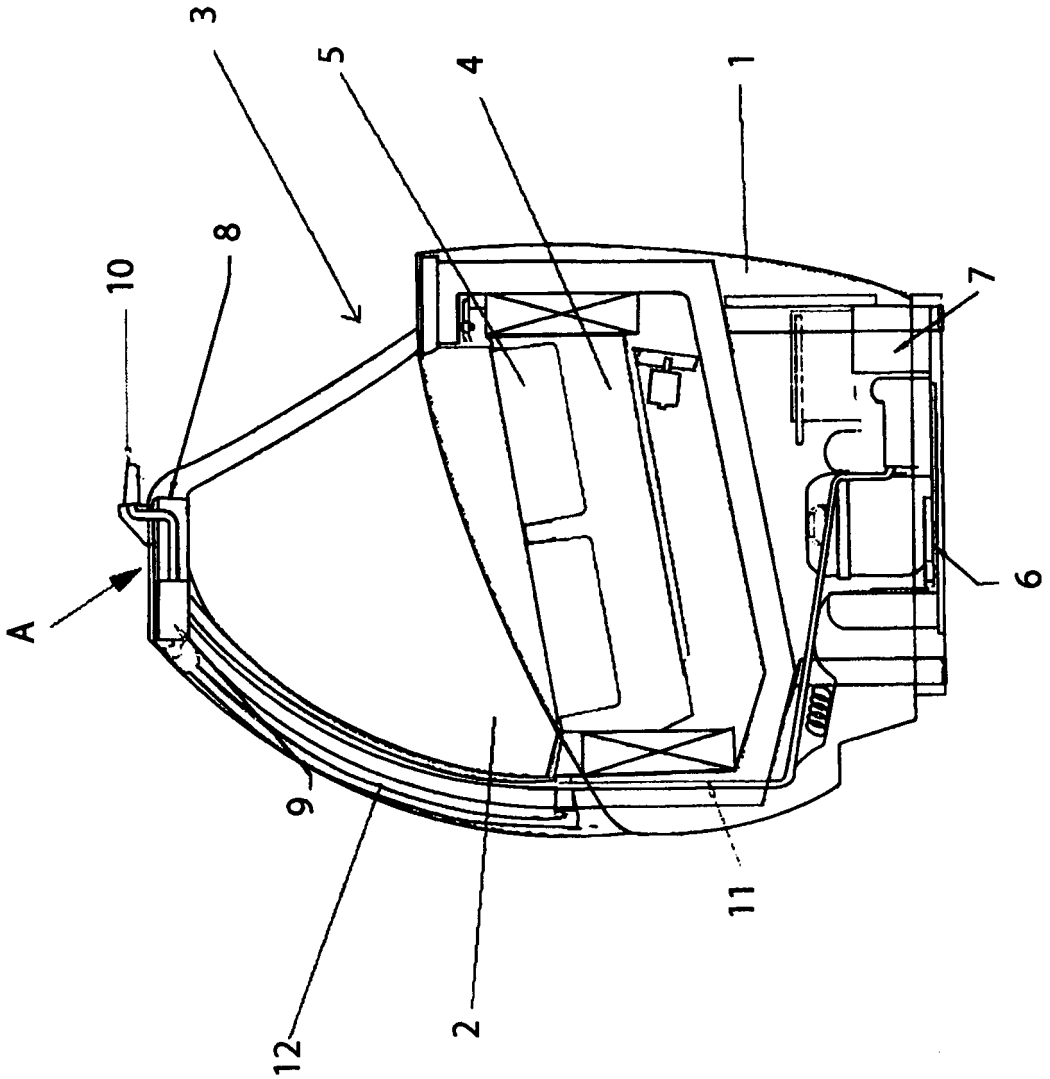

FIG.1

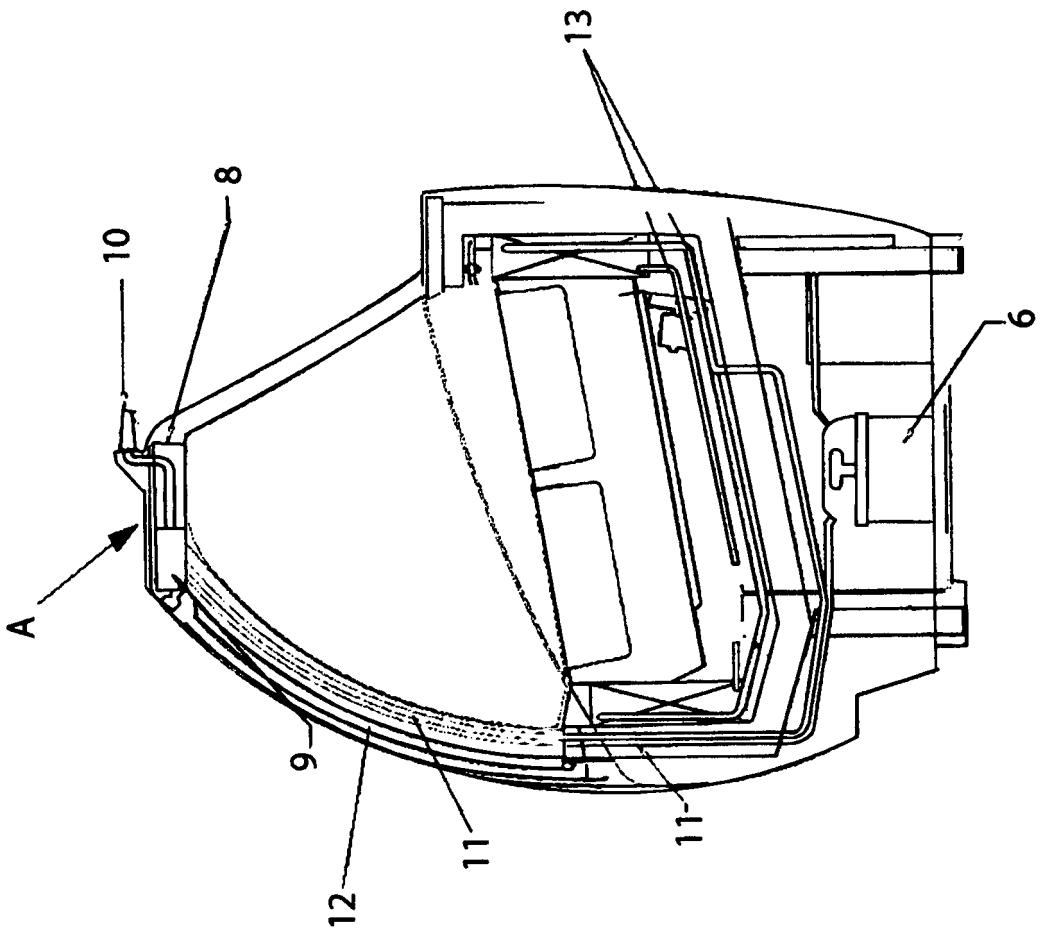

FIG.2.

REFERENCES CITED IN THE DESCRIPTION

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