

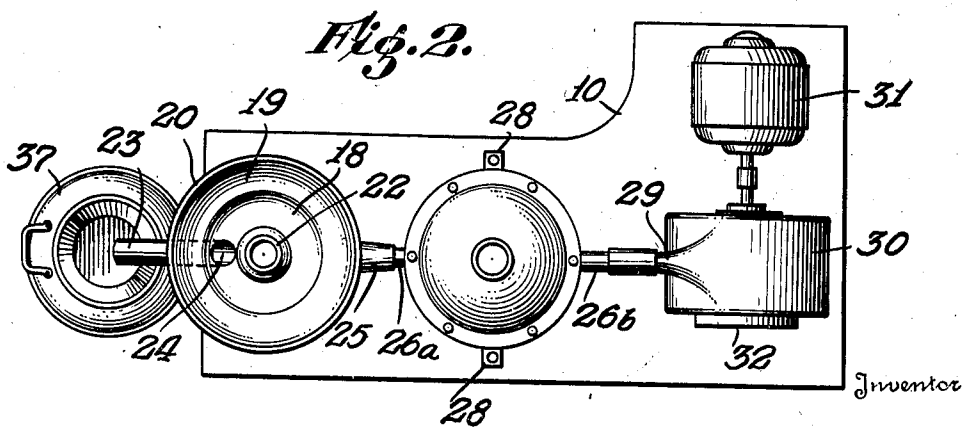
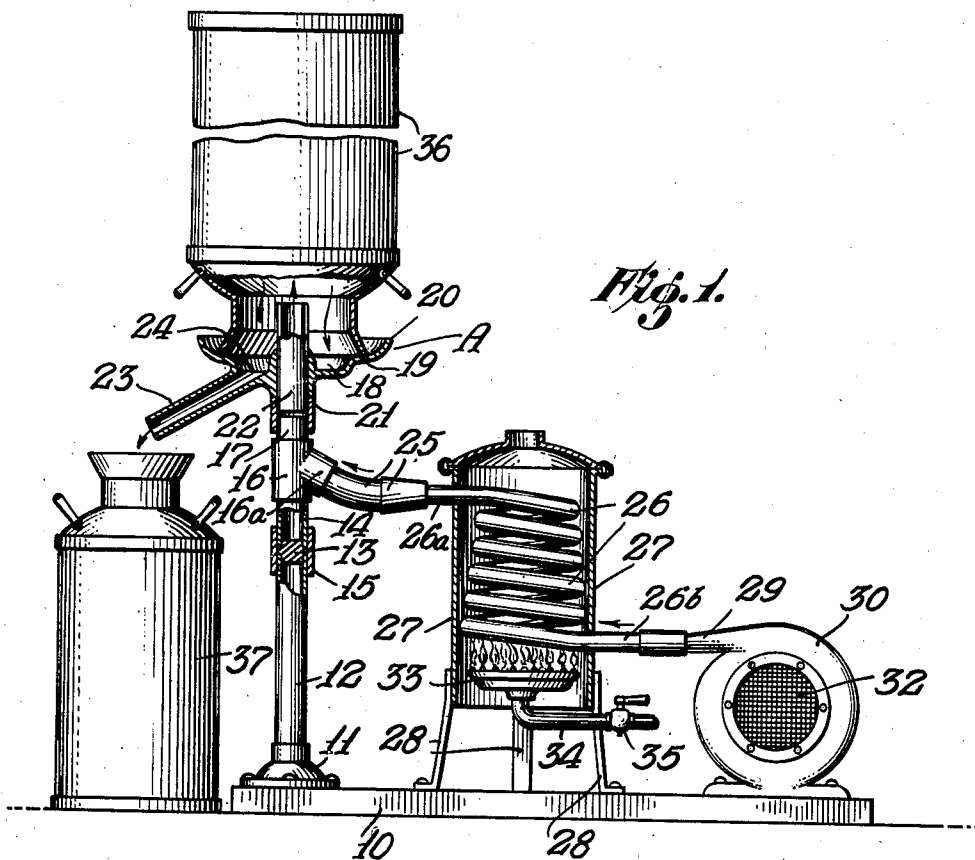
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HOT AIR CLEANER AND STERILIZER FOR CREAM CONTAINERS

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HOT AIR CLEANER AND STERILIZER FOR
CREAM CONTAINERS

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2 Claims. (Cl. 21-79)

My invention relates to an improvement in dryers and sterilizers for cream containers. In the cream business it is customary for the producer to bring his cream to the cream station in whatever kind of a container he may have, preferably a standard cream can. The cream is usually quite thick and heavy and while the bulk of the cream may be readily poured from the container there will be a thick heavy coating of cream left clinging to the wall of the container. This heavy coating of cream may be readily removed by applying heat thereto, whereupon the heavy cream will break down and flow freely, then this too may also be easily removed from the container. After the container is emptied it should be thoroughly cleaned and sterilized and returned to the owner in condition for further immediate use.

In view of the foregoing described situation and requirement I have provided a machine for the purpose of applying heat to the containers for the complete emptying thereof and also for the drying and sterilizing thereof.

Now referring to the accompanying drawing, Fig. 1 is a side view of the machine, parts being shown in section for convenience of illustration.

Fig. 2 is a plan view of the machine.

In the drawing is shown a base element 10 on which is rigidly mounted a post 11 in which is rigidly mounted a pipe or tubular element 12. The upper end of the pipe 12 is closed off by a plug 13 that is fitted into the end of the pipe 12 and projects therefrom.

On the protruding end of the plug 12 is slipped a second pipe 14 and the adjacent ends of the two pipes 12 and 14 are joined together by a pipe coupling 15.

On the upper end of the pipe 14 is mounted a Y-pipe fitting 16 in which is mounted a third pipe portion 17 that is in vertical alignment with the pipes 14 and 12.

At A is shown a drainage element that is somewhat cup shaped and is provided with a depressed portion 18 above which is a supporting ledge 19 around which is an upwardly extending flange portion 20. At 21 is a depending portion of the drainage element A that is provided with a bore in which is received the upper end of the pipe 17. Also in the bore in the portion 21 is a fourth pipe element 22, the upper end of which extends well above the top of the flange 20 as shown. The drainage element A is provided with a drainage spout 23 that opens at 24 into the depressed portion 18 of the drainage element A.

To the lateral 16a of the Y-fitting 16 is con-

nected a pipe and reducer element 25 to which is connected one end 26a of a thin walled coil of pipe 26 that is encased in a housing 27 that is supported on legs 28 that are rigidly mounted on the base element 10. The other end 26b of the pipe coil 26 is connected with the discharge 29 of a blower 30 that is also rigidly mounted on the base element 10.

The blower 30 is driven by a power unit, preferably an electric motor 31, which is also rigidly mounted on the base element 10 and is directly coupled to the blower 30 as shown.

Over the blower air intake is an air filter 32 to filter foreign material out of the air that is to be forced through the system as will later be explained.

Within the casing 27 and below the pipe coil 26 is a fuel burner 33 to which fuel is fed through the fuel feed pipe 34 under the control of the fuel valve 35.

The operation of the device is as follows: When a customer brings in his cream, the cream is emptied from his container 36 whereupon the container 36 is placed in an inverted position on the drainage element A as shown in Fig. 1. A second container 37 is placed in receiving position from the drainage spout 23 and now the fuel is turned on through the valve 35 and lighted at the burner 33 whereupon the tubular coil 26 is heated to a high degree of temperature. Now the motor 31 is started to drive the blower 30, whereupon air is drawn in by the blower 30 through the screen and filter 32 and discharged through the discharge pipe 29 and forced to flow through the hot tubular coil 26 wherein the air is heated to a high degree of temperature and then discharged through the fittings 25, 16, 17 and 22 into the container 36, whereupon the heat from the hot air being discharged therein melts the heavy coating of cream on the side wall of the container and the melted cream will readily flow into the depressed portion 18 of the drainage element A and thence through the opening 24 and spout 23 into the container 37.

Now the container 36 is removed from the drainage element A and taken to a standard washing vat where it is thoroughly washed and cleaned, and then the container 36 is replaced on the drainage element A and an extremely hot draft of air is introduced therein in the same manner as above described whereupon the container is simultaneously dried and sterilized, due to the high temperature, and the container is now ready to be returned to its owner in condition for further use.

Such modifications of my invention may be employed as lie within the scope of the appended claims without departing from the spirit and intention of my invention. Now having fully described my invention, what I claim is:

1. In a container cleaning and sterilizing device of the class described; said device comprising in combination a tubular coil and a heating unit therefor and thereunder, said heating coil and unit being positioned within a housing; a tubular hot air discharge element, said tubular hot air discharge element being positioned vertically and the lower end thereof being connected to one end of the said tubular heating coil, a drainage ele-

ment and a drainage spout thereon, said drainage element being positioned on said tubular hot air discharge element and supported thereby, said drainage element having means thereon for supporting an inverted container that may be positioned over said tubular hot air discharge element, an air blower, the discharge of said air blower being connected with the other end of said tubular heating coil.

2. In a container cleaning and sterilizing device as defined in claim 1, and power means for driving said blower.

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