

The Howe Scales exhibited are fine in construction, and were without competition.

The Knife Curd Mill, shown by C. P. Willard & Co., is the standard mill in use.

The only display, and that a partial one, of cheese making implements, was made by C. P. Willard & Co., Chicago.

J. A. SMITH, Cedarburg, Wis.,

O. S. BLISS, Georgia, Vt.,

D. E. WOOD, Huntley, Ill.,

Committee.

Cream Raising Utensils.

Device of any kind for raising cream.

Display of cans for gathered cream.

Carrying can for cream.

REPORT OF COMMITTEE ON CREAM RAISING AND CREAM CARRYING UTENSILS.

Your committee upon the above articles beg leave to submit the endorsed statements relative to their work.

They find the devices for raising cream numerous, and evidently of greatly varying worth. They have not attempted to report upon the relative merits of any in comparison with others. The wants of dairymen in different sections of our country vary greatly, and it would be an injustice to manufacturers to give rigid decisions. The poor articles will be driven to the wall rapidly enough without a word from us.

The methods of raising cream may be set down as four in number, judging from the exhibits.

First and oldest, the shallow pan; second, the deep setting; third, the vacuum process; and fourth, the centrifugal. The submerged process is but a form of deep setting.

With all the deep setting cans it is most evident that all attention is turned toward cooling the milk rapidly.

Your committee would state that upon the day of their examination of the apparatus, Thursday, December 7, the articles were not all tagged and tabulated, so that some exhibits may have been overlooked.

THE COOLEY CAN.

John Boyd, 199 Lake St., Chicago, Ill.

This deep, round can is constructed for submerging. The cover is so held over the top of the can that when the whole is under water a cushion of air under the rim of the cover prevents the water from rushing into the can. A glass gauge on the side of the can enables one to see the depth of cream, and a rubber siphon at the bottom permits of removing the milk from under the cream without disturbing it. The cream is then turned out by inverting the can.

THE DANISH WESTON CENTRIFUGAL MILK SEPARATOR.

The Philadelphia Creamery Supply Co., 1140 Ridge Avenue, Phila., Pa.

In this machine we have a novel method of cream separation. The machine consists of a drum, which is made to revolve at high speed. Milk is let into the machine in a continuous stream through a tube. As the milk climbs the sides of the drum, in partaking of the motion it separates into two parts; that heaviest, or the skim milk, works to the sides of the drum, while the lighter, cream, flows to the part nearest the center of the drum. Tubes let down into the drum are so arranged that one carries out the skim milk and the other the cream. After starting, the machine works continuously.

THE LINCOLN CHANNEL CAN.

William E. Lincoln, Warren, Mass.

This is a round, deep can with a channel extending clear through it, and reaching fully three-fourths of the way to the top. By this arrangement the milk in all the lower part of the can is none of it over one and a half inches from the cooling surface.

THE STANDARD MILK CAN.

Brown & Rosa, Wellsville, N. Y.

Used in deep setting. The can is oval in cross section, being six inches wide, sixteen inches long, and nineteen inches deep. It is provided with a tight-fitting cover, and has no tubes, spouts, etc., being a simple can.

GEO. W. KENNEDY'S MILK HOUSE.

Geo. W. Kennedy, Garnavillo, Iowa.

A small building with a wall sixteen inches thick divided into three four-inch spaces. The outer and inner of these spaces being filled with a non-conductor of heat, as sawdust, and the middle space left for air, which can be rendered "dead" by closing all openings, or ventilated at will. The house is built large enough to contain a water tank, into which deep cans of any make can be plunged. The house is designed to obviate intense heat in summer and too great cold in winter.

THE CALKINS COOLER.

I. T. Martin, Davenport, Iowa.

This consists of a tank for water, into which deep cans can be plunged. The metallic lid of the tank shuts down over the tops of all the cans, leaving a common cushion of air over them. This lid is so constructed that it will hold several inches of water, thus cooling the milk from above. Water poured on top of the lid of the tank first fills up the lid and then flows into the tank. A receptacle in the lid holds ice.

HEWES' AIR-PRESSURE CREAMER.

B. F. Hewes, Crete, Illinois.

This consists of a tank for water, into which deep cans can be set. A metal lid with deep sides is placed over the tops of the cans, after which water is allowed to run into the tank. The water rising meets the cushion of air held by the lid, and is forced up over the lid. In this state there exists a body of cold air below a body of slightly compressed air at the top of the cans, and cold water above.

BLACKMER'S VACUUM CREAM EXTRACTOR.

N. B. Blackmer, Portage, Wisconsin.

In this process the milk is placed in cans which are air tight. By a very simple air pump, connected to the cans by rubber tubes, a vacuum is formed over the milk. After the vacuum is produced, the cream is left to rise. The cans may be used with or without water.

COLDITZ REFRIGERATOR CREAMER AND MILK COOLER.

William Colditz, Rochelle, Illinois.

A tank with movable, deep cans. The tank is filled with water to within an inch of the top of the cans. The lid of the tank holds water to a depth of several inches. Ventilators from the air space below pass up through this lid.

THE NUBSON MILK COOLER.

Frank R. Peck & Co., 146 West Water St., Milwaukee, Wis.

A milk can and water tank combined. A can with a hollow tube extending to a chamber below. Water being poured into the hollow tube fills the chamber and tube. This cools the milk at the middle and the bottom. A tube below permits of emptying the chamber of water at will.

WILHELM'S IMPROVED MILK CAN.

Manufactured at Wooster, Ohio.

This is a can twelve inches in height, with a conical cover extending down over the can six inches. The cover is constructed with a tube extending down into the can so as to form a cold air chamber through the center of the milk. The screw valve on top of the cover enables the air to be excluded and the can can be sealed by setting into water six or more inches deep.

HYDE'S DOUBLE CHANNEL MILK PAN.

Kenosha Milk Pan Manufacturing Co., Kenosha, Wis.

A large shallow pan with a double bottom, allowing cold water to pass under the milk, which is set only a few inches deep.

CLARK'S REVOLUTION MILK PAN.

A. C. Clark & Co., Manchester, Iowa.

A water tank with two or more chambers, in each of which are two long, narrow, deep pans or cans, with a spout in front. These cans are so attached to the tank by iron bales that when lifted they pitch forward and allow the cream to be removed at the spout, and by further elevation and tilting they can be emptied of the skim milk.

THE FAIRLAMB MILK CAN.

Davis & Fairlamb, 170 Lake St., Chicago.

This is a deep, circular can, enlarging upwards, with a central cooling tube extending from the bottom to about three-fourths of the way to the top, where it connects with the exterior again by a smaller tube running to the side of the can. This arrangement, when the can is plunged into water, cools the milk at the center, but does not interfere with the skimming surface.

THE CHAMPION CREAMERY.

The Dairy Implement Company, Bellows Falls, Vt.

Immovable, deep cans set in a water tank. These cans have funnel-shaped bottoms, through a faucet in which the skim milk and later the cream is drawn.

THE CHERRY CAN.

J. S. Cherry, Cedar Rapids, Iowa.

A broad, deep, circular can, with central cooling tube and tin cover so arranged as to permit being sealed by water. The milk is removed either by a siphon at the bottom or by skimming at the top.

A. H. REID'S CREAMERY.

A. H. Reid, 26 S. 16th St., Philadelphia, Pa.

A cabinet cold-water tank, with two stationary long, narrow, deep tin cans having rounding bottoms, which slant towards the faucets through which the milk first and later the cream is drawn.

PROF. W. A. HENRY, Madison, Wis.

O. F. HOUCK, —, Iowa,

E. A. MCKENNA, Geneva Lake, Wis.

Committee.