

to Poor Law Matrons had been sent to the Hon. Secretary and were discussed by the meeting. The "Responsibility of Ward Sisters in the teaching of Nurses" was again brought forward and elicited a most helpful and instructive discussion. Many useful schemes were described for recording what probationers had been taught, as they were apt to say they had never been shown certain things. One proposal was that probationers should be provided with manuscript books in which they must enter what they have been taught. These to be submitted every month to the Matron. Several Provincial members had travelled long distances so as to be present at the meeting.

E. BARTON,
Hon. Sec.

MODIFIED MILK AND ITS PREPARATION.

Dr. Ralph Vincent delivered his second lecture of the present course of Lectures on Babies, on Tuesday, October 24th, at the Infants' Hospital, Vincent Square, S.W., the subject being "Modified Milk and its Preparation."

He began by epidiascopic demonstrations of the Hospital Farm at Coombe Bank, Sevenoaks.

- (1) Sheds (exterior) forming the winter quarters of the cows, the roofs of which are well intersected with air spaces, which are so constructed as not to admit rain.
- (2) Milking sheds (exterior) with an unusual provision for light, and a false roof providing a current of air.
- (3) Interior of the winter quarters, which looked most attractive with a liberal covering of clean straw.
- (4) Milking shed (interior). The floor of this is of concrete and, with the walls, is washed down with a hydrant twice daily before milking to prevent the possibility of any dust.
- (5) An oast house, converted into an isolation shed, where a new cow was shown waiting for veterinary inspection before being placed with the herd.
- (6) A refrigerator, by means of which the temperature of milk, after being drawn, is immediately reduced to 40 deg. Fahr.
- (7) The separating machinery. The cream is separated, and the milk is fat free.
- (8) Coolers.
- (9) A churn, so constructed with an air wall as to prevent the access of heat. The

milk by this means, after travelling a distance of 30 miles to the Hospital, only rises one degree.

It is not surprising to learn that with all these precautions, the milk will keep fresh for 72 hours even in a warm temperature.

Proceeding with his subject Dr. Vincent pointed out that more than half the total solids in mother's milk were lactose, more than six times as much being present as caseinogen, so that any attempt at diluting cows' milk should be got away from, as the wrong things were diluted as can be seen from the following table:—

HUMAN MILK.		COWS' MILK.	
Fat	.. 4'00	Fat	.. 4'00
Lactose	.. 7'00	Lactose	.. 4'50'00
Whey Proteins	1'00	Whey Proteins	1'00
Caseinogen	.. 0'5'00	Caseinogen	.. 2'75'00
Min. Salts	.. 0'25'00	Min. Salts	.. 0'75'00

The relative proportions of lactose and caseinogen in human and cows' milk were, the lecturer said, the whole explanation of the work of the Laboratory. By means of the slides he showed the close similarity of the fat globules in the modified milk to those in mother's milk, and pointed out that the separator secured *all* the fat globules, while cream secured only the large ones.

In passing he said that it was important to avoid Jersey cows, as the fat globules in their milk were very large.

As modified milk was practically an impossibility for the poor, he had invented the best substitute for it, namely, fat whey, made according to the following directions:—

- (1) Add four drops of the special rennin supplied to one quart of milk.

N.B.—The milk must be quite fresh. It must not be boiled, sterilised or pasteurised, and must not have any preservative in it.

- (2) After adding the rennin warm the milk in a clean jug surrounded by water in a saucepan. When the milk is at blood temperature (100 degrees Fahr.) remove the saucepan from the fire.
- (3) Stir the milk in the jug until the curds are well formed, at the same time press them to the bottom of the jug with a spoon.
- (4) When the curds are formed into a solid mass at the bottom of the jug place the saucepan again on the fire and boil the *water* round the jug for one minute.
- (5) Pour off the whey and use as directed.

This method removes the caseinogen, while everything else is retained.

Caseinogen can be provided when necessary by adding milk in small quantities.

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