

are rarely washed and are usually smeared over with excretion from the cow liquified by the milk used by the milker in the filthy habit of wet-milking. In a word, the various dirt of the civilized human are reinforced by the inevitable dirt of the domestic cow."

That milk is being consumed by us every day that is procured under similar conditions cannot be questioned. How would we like to have bread and pastry prepared by similar hands and in similar environments? And yet we could do so with infinitely less danger to health and life, as the bread and pastry have to be submitted to a temperature that would destroy all pathogenic germs, while milk is used with all its bacterial contamination in activity, and, furthermore, milk constitutes an excellent culture medium for the rapid reproduction of these bacteriæ. Let us contrast this for a moment with the milking of cows under the municipal milk supply of Rochester, N.Y., established in 1899.

A central station, at which the milk is prepared, is organized in a farm outside the city, where a trained nurse and assistant have full control of the cows, bottles, utensils, etc. Everything coming in contact with milk is thoroughly sterilized in steam sterilizers. The milk itself is not subjected to any pasteurizing or sterilizing.

At the milk station on the farm the milk is taken from clean, well-fed, tested cattle into sterile cans, which are carried to the barn in sterile linen bags. Just before milking the cow's udder is well washed. A sterile cheesecloth fly cover is placed over the cow. The first portion of the milk is rejected. As soon as the cans are filled they are immediately covered by a layer of cheesecloth, held in position by a rubber band. The cans of milk, thus covered, are immediately taken from the barn into the laboratory, about two hundred yards away, where the milk is properly diluted, sweetened and turned off into sterile nursing bottles. The bottles are corked with sterile rubber corks, placed in racks, covered with cracked ice, and immediately transferred to the city for use. Of the milk prepared in this way forty-three samples daily were found to average not more than 14,000 bacteriæ per cubic centimetre, while the city milk at the same time approximated 235,000 per c.c.

We must remember, however, that there are some 200 varieties of bacteriæ in milk that produce practically no harm, many of them only affecting the commercial value of the milk by souring, coagulating, etc. But these, as Prof. Vaughan expresses it, should constitute the red lantern or danger signals (others