

and that it can be used not only in herds producing certified milk, but those of smaller communities. They also believe that it is considerably cheaper than other methods for institutions which care for a large number of infants.

Another paper³ in the symposium gave the results of experiments which have been going on at Columbia University for several years; namely, the purification and improvement of a concentrate from cod liver oil which contains the antirachitic element. This concentrate, in the proportion of 1 part to 12,000 of milk, will give practically 150 units of vitamin D per quart, equivalent to 3 teaspoons of cod liver oil. The concentrate may be added in several different ways, but the one apparently preferred by Zucker is to add it to the cream, pasteurize the milk, and recombine the two. Only 15 experiments on rachitic infants have been carried out by this method so far, but the results were entirely favorable and comparable to those obtained by a dosage of 3 teaspoons per day of cod liver oil. The author believes that this offers perhaps the best and safest method, since the concentrates are carefully assayed, and there is no possibility of accidental overdosage. So far, one dairy has been licensed to produce such milk, and the additional cost is said to be 1/25 cent per quart.

Some authorities object to what they call doctoring milk, and at present the addition of foreign material will probably meet with some opposition from the authorities carrying out the pure food laws, but if it is shown to be better than other methods, these laws can be changed.

This symposium contains much food for thought, and through the labors of these experts, we have learned of a practical method for the prevention of the widespread disease, rickets.

REFERENCES

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MOTTLED ENAMEL

WE wish to call attention to a situation in connection with public health activities which in some respects has unique features. Some years ago it was found that the permanent teeth of all the children born in Chetopa, Kansas, were afflicted with what is known as "mottled enamel." Recent investigations have shown that this

pathological condition, which occurs in many districts of the United States, is induced by the presence of fluorine in the drinking water. The water of the artesian well which supplies Chetopa was found to contain over 9 parts per million of fluorine, an amount which invariably leads to damaging and disfiguring lesions of the dental enamel.

For several years Dr. J. Scott Walker, a practicing dentist in that city, called public attention to the dangers of the situation with the result that it was proposed to bond the city to the amount of \$25,000 for a new water supply which would be free from fluorine. Last August this proposal was voted on but defeated, which meant that the dental defects would continue to develop in succeeding generations. Dr. Walker has continued his agitation and has brought it about that the monthly water bills bear the legend: "This water is unfit for consumption by children." It is clear that the matter is by no means settled.

This incident is of interest to public health authorities, not only because the officials of this community decided to save money rather than to eradicate a menace to the health of the community, but even more so because it illustrates what can be done by an energetic and persistent individual in the face of a lack of coöperation. The ingenious method of calling direct attention of the residents to the limitation in potability of the water might be of service to others who are concerned with similar problems.

BERNHARD BANG

FROM Europe comes the notice of the death of Bernhard Bang, one of the leading veterinarians of his time, in his 85th year.

The announcement of the discovery of the tubercle bacillus by Koch came 2 years after his graduation in veterinary medicine. He was one of the early converts to the science of bacteriology and carried out researches on many of the infectious diseases of domestic animals, two of which at least are known to be communicable to man—tuberculosis and bovine abortion. He devoted a great deal of time to the study of the eradication of bovine tuberculosis from cattle, and in 1894 put forth the method known by his name for converting a diseased herd into a healthy one, based on the knowledge that tuberculosis is not an inherited disease. His plan was to separate the newborn calf from the diseased mother within 48 hours of birth, and rear it on milk from a healthy nurse mother, or else on pasteurized milk.