milk to 85 degrees C., and the old form of apparatus is not capable of economically heating the milk to this temperature. The improvements are as follows:

A series of rings are soldered on the heating surface of the pasteurizer. These rings slope downwards, giving the appearance of eaves arranged concentrically around the heater. These rings gather and shed the water formed by condensation of the steam on the heating surface; for this water deposited as a thick layer upon the surface of the heater, is a bad conductor, opposes the resistance, and enfeebles the penetration of the heat to the milk, which is thrown by the agitator against the inner surface of the heater.

The agitator has also been improved by the addition of horizontal plates on the paddle, to prevent the milk from taking too vertical a movement in the pasteurizer; and this improvement helps to give the same temperature to all parts of the milk, and prevents frothing.

A third improvement is an air-cock fixed on the water-trap, which allows the air carried along into the steam jacket to escape.

No doubt the efficiency of the Lister and Reid pasteurizers could be increased considerably by attaching the improvements suggested by Prof. Storch, of the Experimental Laboratory of the Royal Agricultural and Veterinary College of Copenhagen.

DAIRY DATA.—In our Dairy, the experiments consisted of several series.

Series I. In the first, about 3,000 lbs. of milk was mixed in a receiving vat. One-half of several lots was separated at a temperature of about 90 degrees F., and the other half was pasteurized at temperatures of 140, 160, and 185 degrees F.

Series II. In this series, 3,000 lbs. of milk was well mixed. One-half of several lots was heated to 140 degrees F. before separating; and the other half was heated to 160, 185, and 195 degrees F.

Series III. In this series, one-half of several lots was heated to 160 degrees, and the remainder to 185 degrees.

Series IV. In this series, samples of butter made from milk heated to 185 and 195 degrees were compared.

Series V. In this lot, one vat of about 3,000 lbs of milk was divided into four parts. During April and May, each of these parts was heated to 140, 160, 185, and 195 degrees respectively; but during March, July, and August, the temperatures used were 90, 140, 160, and 185 degrees.

Series VI. In the last series, experiments conducted during March and June, vats of milk were divided into two lots. One part was left unpasteurized, and the other was pasteurized at about 160 degrees.

Boiler Pressure.—The boiler used for generating steam at the Dairy is a 50 horse-power boiler situated about 50 feet from the pasteurizer. An average pressure of 75 to 80 pounds was maintained as far as possible. When the steam pressure was reduced below 70