F., in order to let the spores which are left behind germinate and form vegetative cells, then in order to destroy these to submit the milk again for two hours to a temperature of 160° to 165° F., then again to allow the milk to stand for several days at the same favorable temperature for germ development, 100° F., and so on. These consecutive changes of temperature may be repeated five times, one after the other, and at last the milk is brought to

a temperature of 212° F.

The properties of the milk, however, under the above treatment undergo considerable change. The fine condition of division of the butter fat is somewhat altered. A number of the fat globules of the milk come together, and after a time there collects on the surface a cream which resembles butter, and which can no longer be uniformly broken up. This, unfortunately, is such an inconvenient method, and takes up so much time besides being very expensive, that it is not well suited for general application. However I am informed it is to be given a trial in this country, before very long, and if found to be practicable, should prove a remunerative investment, by providing pure milk suitable for export to tropical, countries, where at present milk is only used in the condensed form.

April 1898.

H. WESTON PARRY.

Butter

Butter consists of the following Tri-Glycerides:

FATS.	Symbols	Melting Points.	Group.	Corresponding. Futty Acids.	Symbols	Melting Points.	Group.
Butyrin	C ₂₁ H ₃₈ O ₄ C ₂₇ H ₅₀ O ₄ C ₈₃ H ₄₂ O ₆ C ₅₇ H ₁₀₄ O ₆ C ₄₅ H ₈₆ O ₆ C ₅₁ H ₉₈ O ₆ C ₅₇ H ₁₁₀ O ₆	O 3	Liquid Fats (Oil) Solid Fats	Butyrie Caproie Capryllie Rutie Oleie Myristie Palmitie Stearie Butie	C ₆ H ₁₂ O ₂ C ₈ H ₁₆ O ₂ C ₁₀ H ₂₀ O ₂ C ₁₈ H ₃₄ O ₂ C ₁₄ H ₂₈ O ₂ C ₁₆ H ₃₂ O ₂ C ₁₈ H ₃₆ O ₂	2 16 30 4.4 53.8 62.2 69.2	Volatile Fatey Acids Real Fatey Acids

ANALYSES OF BUTTERS.

Comparison of the Percentage Composition of Real and Artificial Butter.

	Fresh	Fresh	Salt	Butter		Butter	
	Butter Unwas'd	Butter Washed.	Butter Loz to 1 lb	Milk.	Constituents.	Renl	Artificial
Water	10.0	11.3	12.0	90.0	Palmitin	20.33	22.32
Butter Fats	87.8	87.2	82.5	1.0	Stearin	42.77	46.94
Albuminsids	1.0	0.5	1.0	3.0	Olein	27.71	30.42
Neilla Sugar	0.3	0.2	0.3	5.5	Butyrin)	
Asb	0,9	0.8	4.2	0.5	Caproin	9.19	0.32
	100.0	100.0	100.0	100.0	Caprillin		
		ł			Rutin or Caprin		
		}·			Butin or Arachidin		
	}	· ·		į	Myristin		
,	}					100.00	100.00