career as a leader and worker in the field of education. Farm and Dairy expresses its appreciation of Dr. Sinclair's record, worth and work. In his new position, his field will be a broad one and his influence large. We wish him success in the charge he has assumed.

Practical Pasteurization of Whey

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A large number of cheese factories in Western Ontario will pasteurize whey during 1909. The object of this article is to give some practical information regarding different methods of pasteurizing. Patrons and makers, generally, recognize the benefit of proper pasteurization, in increased feeding value of the whey by even distribution of the fat, better condition of the tanks, sweeter whey for calves and pigs, easier washing of cans, checking yeasty flavor, and numerous other ways. From data secured during 1908 the following may be of interest:

Average per cent. acidity of whey going in patrons' cans, whey pasteurized, 1.12 per cent.; when pasteurized, 150 deg. to 160 deg., .4 per cent.

Average per cent. of fat in whey going in patrons' cans, whey not pasteurized, 1.12 per cent.; whey pasteurized, .22 per cent.

Total fat returned per ton of cheese (20,000 lbs. whey x .09 per cent. equal to 18 lbs.) (20,000 lbs. whey x .22 per cent.

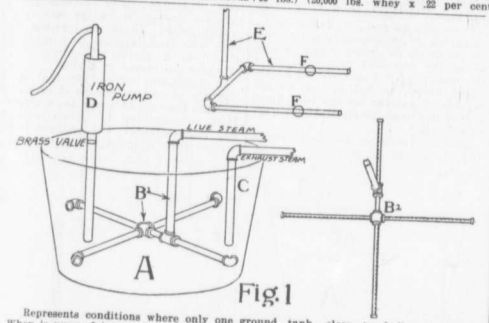

Fig. 1

Represents conditions where only one ground tank, close to boiler, is used. Whey is pumped into patrons' cans by hand. This single whey tank can be elevated if desired, and the whey ejected directly from the vats, delivered to elevated tank at temperature of about 122 deg. One of the systems of pipes shown elsewhere can be put in and whey heated to 155 deg., with live steam. When engine is in use, exhaust may also be used in ground tank. (a) Tank. (B1.) ¾ inch live steam pipes as shown, with open elbows. (B2.) Another ¾ inch system of live steam pipes, ends plugged and holes drilled as shown, holes turned same angle. Either system will keep whey in circulation and assures even heating. (C.) Exhaust steam. (D.) Iron hand pump with brass valve. Leather valves wear out quickly with hot whey. (E.) Another method of arranging live steam pipes in tank. (F.) Noiseless heater. Four noiseless heaters may be placed on (B1.) if desired instead of elbows.

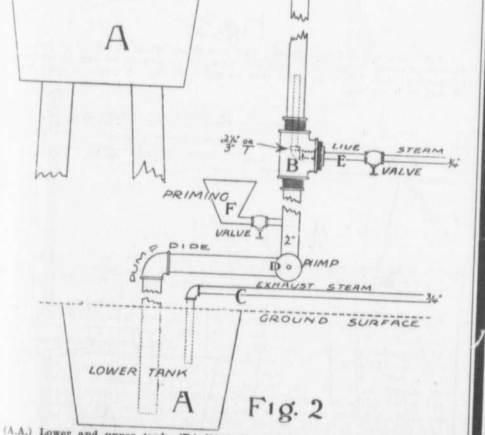

Fig. 2

(A.A.) Lower and upper tank. (B.) 2½ inch or 3 inch T. (C.) Exhaust steam, 1½ inch, not ¾ inch, as shown in cut. (D.) Pump or ejecteor. (E.) Live steam turned up 2 inches inside T. (B.) as shown by dotted lines. When pump or ejector is started, sufficient live steam is turned on through (E.) to deliver whey in elevated tank at 155 deg. (F.) Priming valve for pump. Pump pipe two inches, the T (B.) reduced to fit. If ejector is used, 1½ to 1¼ inch pipe instead of 2 inch. Exhaust steam (C.) will be heating whey in lower tank while pump is running. Exhaust steam (C.) can if desired be turned in the T (B.) instead of tank, but would not keep lower tank in as good condition. Will probably cost less to pasteurize whey when elevated with this system than anyother. Using an ejector instead of pump with this system works well.