

and wood room attached. The upper story is used as a dwelling by the manufacturer. The milk room contains 12 large pans measuring 130 inches in length by 51 wide and 7 deep, giving them a capacity of 200 gallons, sufficient to hold the milk of 100 cows for one milking. Through the middle of the milk room is a track for a hand-car, and the pans are arranged on either side of it. Six on a side, 20 inches apart with one end butting against the outer wall, as seen in the ground plan. Just above the ends of the pans a water pipe connected with a good spring, passes

wood &c., and for heating the milk-room when necessary. This with the churns and butter worker, and a few other small things, constitutes the apparatus, which, with the factory building, cost \$3,800 and is sufficient to accommodate the milk of 300 cows.

The milk is delivered at these factories twice a day, and each milking is placed in three pans, which at the time of our visit were not much over half full. As soon as a pan is filled the water is let on and the milk is cooled down as quickly as possible to 60 or 62 degrees. As the water which supplies these factories

This not only injures the taste of the butter but it very much increases the tendency to become rancid. Such butter loses its fresh flavor so rapidly that it very soon becomes stale, unless kept all the time below 50 degrees, and even then it has much of the animal flavor, and will soon depreciate. At the Perry factory near Malone, the water had become scanty and warmed up to 60 degrees, and it required six hours and over to reduce the milk to 62 degrees. The butter made after the water failed was the best in the factory as the manufacturer could see when the fact was pointed out. The importance of distinguishing between animal odor and animal heat, and of getting rid of the odor instead of the heat, is a lesson which the butter makers of Franklin county as well as of other counties, very much need to learn. That the cowy odor in the milk could be condensed and retained in the milk and become a flavor instead of an odor had been by them, as by many others, overlooked till we called their attention to it, and pointed to the flavor in the cream and butter. It is no fault of the pans that the cooling was so rapidly done. It is only necessary to regulate the supply of water to cool in any desired time.

(Continued.)

Cooked Food for Cows.

The *Live Stock Journal* says:—The following statement of Mr. Wm. Iarnie of Springfield, Mass., has great force, having been continued for so long a period with a result so satisfactory. In a recent letter to us he says:

I still continue to steam the food for my stock, as I have done for more than fourteen years, and every year confirms more strongly my convictions of the great economy in food, as well as the comfort and thrifty growth of the cattle. For milk cows its advantages can not be too strongly urged. The saving is fully 33 per cent.

Effect upon Health.

I have seen some questions raised as to the effect of cooked food upon the health of the animals. I can only say, as to this point, that I have a number of cows, from seventeen years old and downwards, that have never been fed in any other way, except during the season of green feed, while they are now in perfect health and vigor. It is not, perhaps, too much to say that no more healthy stock of cows can be found than my herd of about fifty head, which has had this cooked diet for so many years. This system enables me to get as good yields of milk in winter as in summer, with the quality excellent.

Barn and Steaming Apparatus.

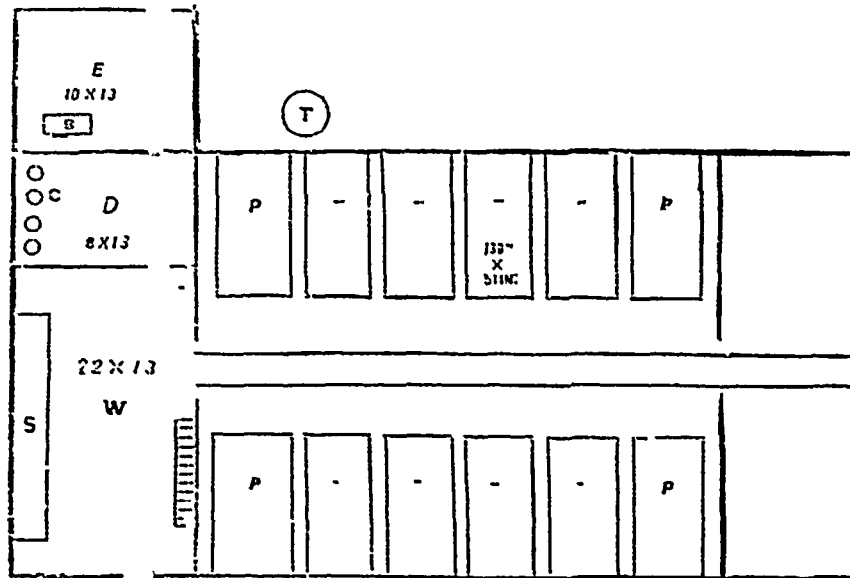
My barn is built on a side hill, and is three stories high in some parts. The floor of the principal story is on a level with the ground on the highest side, and is used for storing hay, grain, etc. The story below opens on the barn yard, and is used for stables; and the part under ground for a root cellar. Under this is a manure cellar eight feet deep. In the stable story is located my apparatus for steaming. My boiler is an upright tubular, of about the capacity of four horses, situated in the corner of this story, under the ground, in a room about ten feet square. The chimney is built of brick on the outside, and extends about six feet above the roof. The steam box in which the cooking is done is built of brick, and extends to the story above. It is lined with two-inch plank, tongued and grooved, six feet square inside, and eight feet deep, with a lid the whole size of the top, and opening on a level with the floor above. It has a door four feet square on one side near the bottom, out of which the feed is taken. The steam pipe runs directly from the boiler to the steam-box, extends around the four sides and across the middle, some six inches above the bottom. This pipe, inside the box, is perforated with small holes for the escape of the steam. A cask holding two hundred gallons is conveniently located at one side and over the steam-box, which, by a pipe, is kept full of water for wetting the feed and filling the boiler. The fodder is cut by horse power, shovelled into the steam-box, mixed with bran, or whatever is fed with it, and well wet. The fire is first started under the boiler, and then the fodder is cut while the steam is getting up. I only steam twice per week, finding that the feed will keep warm three days in winter; this saves much labor and fuel. My plan has usually been to feed steamed rations morning and evening, with dry hay at noon. This counteracts all tendency to looseness. I use about three tons of coal for the season's cooking. A change from cooked to dry food for a single day has sometimes caused a marked shrinkage in milk.



BUTTER FACTORY, WEST BANGOR, FRANKLIN CO., N.Y.

along the wall as shown in figure 1, that brings water at 48 degrees to supply the pans for cooling milk. A little below this is a waste pipe for carrying away the water as it is discharged from the pans. This apparatus with the steam pipes overhead, completes the furniture of this room. Nothing else is allowed in it, and being properly ventilated and kept perfectly neat and tidy, the air in it was as pure as the out-door breeze.

is usually at 50° or below, and as it runs 'four times the length of the pan before it is discharged, it carries off the heat very rapidly and the milk is reduced to the desired temperature in from two to three or four hours. The manufacturers all seem to labor under the impression that the animal heat (which they confound with animal odor) ought to be got out of the milk in the shortest time possible, and the Jewett pen does this to their satisfaction. It is a little too



GROUND PLAN.

B Boiler and Engine, 8 horse power.
C Churns.
D Churn room.
E Engine room and wood house.

P P Jewett pans.
S Sink, 3x12 feet.
T Tank for sour milk.
W Work room.

Upon a hand-car which passes through the centre of the room, is placed a platform scale with a weighing can on it. The milk is brought to the factory in what are called iron-clad cans, and as they arrive are elevated by a hoisting crane and dumped into the can on the scale. When it is full, the car, with all its burden, is rolled along the track between the pans, and the milk is spouted into the pans on either side as desired. The 12 pans in this factory with their fixtures cost \$700. An eight horse power boiler supplies an engine with steam for churning and sawing

good, as it enables them to cool the milk too rapidly. Excepting their allowing the milk to be brought to the factories in closely covered cans, and without previous airing, cooling the milk too soon was the first essential error we noticed connected with the use of these pans. It takes from six to twelve hours, at ordinary summer temperatures, for the animal odor to escape. The objection to such sudden cooling is, that it condenses the odor and retains it in the milk and cream. In nearly every factory we detected the cowy flavor in the butter.