

The Dairy.

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The Dairy Barn.

A dairy barn should be so constructed as to be convenient for the herdsman, saving time and labor in the care of stock; it should provide for the comfort and health of the herd; it should afford ample space for storing provender; it should be a comfortable, convenient and cleanly milking barn; and last but not least it should be conveniently arranged for disposing of and protecting the manure.

These points have been well provided for in the plan here illustrated taken from the barn of Peter Mulks, of Slaterville, N. Y. It is designed for the entire stock of cattle, and horses, and hay, and grain of a farm of 200 acres.

It is 95 feet long by 35 feet wide with 25 feet posts, and has a wing 80 x 40, used as a grain barn, carriage house, and stables for horses.

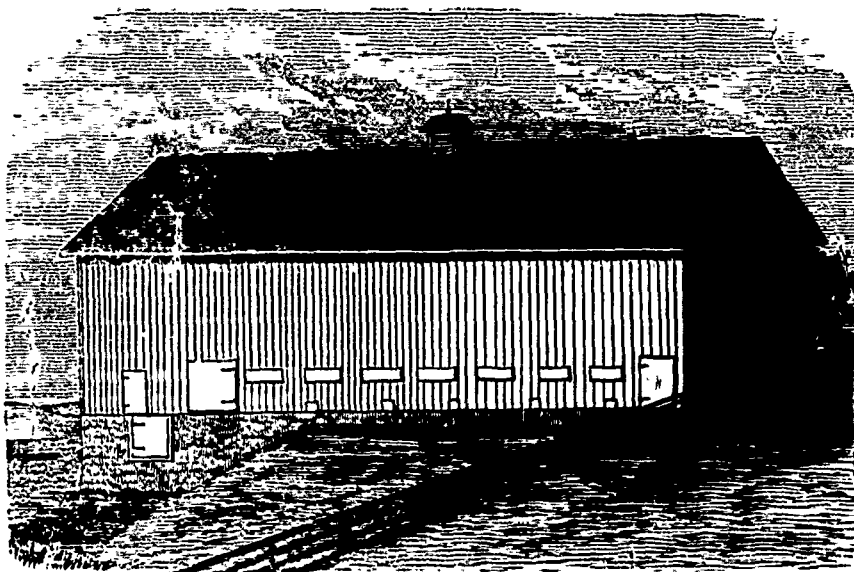
The main part of the building, which is designed for the dairy, is what we wish more particularly to call attention to.

This is located upon a moderate slope, the sides and one end resting upon mason work. The building stands with its longest dimensions east and west, with the west and front end through which it is generally entered, facing the highway. Under the east end is an excavation extending under the building 24 feet and walled up on three sides, the east end being left open. It forms a space 24 feet long by 35 wide and 10 or 12 feet deep, which is used as a manure shed. Under the remainder of the building the ground is levelled up with gravelly loam to the top of the wall, so that the main floor, A, in the centre, lies flat upon the ground instead of on timbers as is usual. The original design embraces a root cellar under a part of this floor.

The internal arrangements will be understood by referring to the ground plan. The stables occupy 72 feet of the front end of the barn, and are located on each side of the main floor with the heads of the cows facing each other. Behind them is a floor B. B. five feet wide with an inclination of two inches toward the cows. Next to this is a gutter 10 inches wide and 4 deep, made of 2 inch plank, very firm and tight. Next to this is the space D. D. on which the cows stand, sloping two inches toward the gutter. This space of 4 feet and 4 inches from the gutter to the bed piece which holds the stanchion, has no floor. The cows stand on a bed of gravelly loam, which has been pounded down and made firm and smooth. Mr. Mulks regards this as much better and more comfortable for the cattle than a wooden floor.

The stanchions allow three feet to each cow. They are built in the usual way except the mode of fastening which is the simplest and safest we have ever met with. This fastening consists simply of a loop of three-eighths round iron, wide enough to let the ends

of the upright pieces pass through it readily, and just long enough to drop over the movable upright and hold it in its place, the other end being dropped into a slot in the permanent upright, where it is made fast by filling up the slot after the loop has been dropped in. (See section of stanchion illustrated in the wing of the ground plan.) The upper end of the movable upright is made slanting so that the end of the loop slides upon it and falls astride of it when it gets to its place. Though in use several years a cow has never been known to get loose from this fastening. It is impossible for one to do so because the loop lies flat on the top of the horizontal piece which holds the uprights, and a cow cannot possibly reach it. We have used loops made of No. 6 iron wire, in the same way which have proved perfectly safe and satisfactory.



The mangers L. E. are two feet in the clear with the bottoms raised 4 inches above the feet of the cow. A separate feed-box is made for each cow. It is formed by boarding up in front 16 or 18 inches, and separating their heads with a partition of two inch plank. The part over the manure shed is fitted up with stalls for transient horses and places for keeping calves in the spring, or for absorbents as may be required.

manure thrown out of windows under the eaves to be washed by the drippings of a wide roof, half the value of the manure will be lost by the waste of all the liquid excrement of the herd, and very likely, half the strength of the remainder will be steeped out and soaked into the ground where it is not needed, and the bulky remainder finally carried to the field worth only one quarter its original value—a minimum too small to maintain the fertility of the soil. A remedy has been sought in a manure cellar directly under the stable, into which everything is dropped through trap doors directly behind the cows. This makes a complete saving of all the manure, but the fumes from the fermenting mass in the cellar are constantly steaming up through every crevice and opening, and filling the room above with offensive air, unwholesome for the cows to breathe.

All these defects are obviated in the plan before us. The manure shed, instead of being under the stable, is at one end and entirely outside of it, and is effectually shut away from it. It is open on one side so that all the effluvia that arises escapes into the atmosphere instead of being driven into the apartment above. It is at the same time perfectly protected from the weather. The gutter behind the cows and the whole stable inclines a few inches, making it easy to wheel the manure to the shed where it is dumped through the trap doors T. T. The saving of manure is complete, as all the liquid would find its way to shed by draining if not otherwise provided for. But bedding and absorbents are always supplied for taking it up and it goes in daily with the solids. Whenever necessary the gutter is rinsed out and the wash all goes into the shed and is saved. The droppings from the stalls, S, and from the horse stables in the wing are also daily mixed with that from the cows, improving the condition of both. One is prevented from heating too much and also acts as an absorbent, and the other from being too cold, wet and soggy.

The high posts make the left a capacious receptacle for fodder. It will easily hold 100 tons. The bents are 12 feet distant from each other and divide the whole into 6 equal parts. The timbers inside are arranged with a view to unloading with a horse fork, so that no beams are in the way. Beginning at the back side each division is filled separately and can be taken out separately if desired. As the filling progresses a scaffold is laid over the driving floor, A, of plank, the ends of which reach to the scaffolds over the stables and rest on 8 x 10 girts reaching from bent to bent.

This, when the barn is filled, forms a complete covering over head, utilizing all the room for storage and making the stables warmer in the winter by preventing a too ready escape of the heat radiating from the cows. With the recent improvements in railway forks, such a barn could be filled by driving up

One of the essential advantages of dairying over other modes of farming is the better means it affords for maintaining and improving the fertility of the farm. The extent to which the manure heap shall contribute to this end depends very much upon the arrangements of the dairy barn for taking care of the manure. If stables are placed in a lean-to on either side of the barn, as is frequently done, and the

to the front end and taking the hay in through elevated doors and carrying it back, where ever desired, on an elevated railway. Or the hay could be taken just within the front doors and elevated and carried back from there easier than to drive in and back out through so long a distance, and save also the labor of moving and replacing the scaffold over the floor.

