

7. Don't disturb your starter while it is ripening—if you do, it will separate.

8. Don't use a starter without using good judgment. This combination is very essential.

SEPARATORS AND THE SEPARATION OF MILK.

BY MARK SPRAGUE, INSTRUCTOR.

As cream separators are coming more into use every day in the creameries of the Province, we feel that a few hints as to their care and management will be welcomed by all who are interested in butter-making.

As there are six or seven kinds of separators on the market, differing very much in construction, it would need as many sets of directions to make this part of our bulletin complete; but space will not permit of so full a treatment.

The principle of separation in each machine being the same, we shall divide our separators into two classes, viz., belt separators, and steam or turbine separators, the latter being driven by steam direct from the boiler.

1. *Belt Machines.* A stone foundation is not required for those makes of separators that are built with a rubber ring around the upper bearing, but the best results are got from having all separators solidly placed or set. First, place the intermediate, or jack, in position. Level it and put it in line with the driving shaft. Then fasten it in a position with bolts or lag-screws, bearing in mind that it may be placed immediately under, or several feet either way from the centre of the driving shaft, as best suits the requirements, and taking care that the pulley on the driving shaft be of sufficient width to carry the belt and allow of its being shifted from the tight to the loose pulley of the intermediate, and *vice versa*, and of the proper size to give the exact speed required.

Next, place the frame of the separator in position, far enough from the intermediate to give the proper tension to the endless belt. Level the machine both ways by placing your level on the top of the cast frame, which is turned true for this purpose. Line the separator with the intermediate by bringing the right hand outside surface of the spindle pulley in line with the centre of the face of the large intermediate pulley, having the vertical centre line of the spindle level with the under side of the intermediate pulley; then bolt the separator securely to the floor or foundation, unless it be one that has the spindle and bowl connected by a socket-joint. If the spindle is so connected, bolting down will be unnecessary.

Bear in mind that the separator bowl should revolve or turn to the right, or with the sun, and that the intermediate should run from the separator. Never put the idler or tightener on the drawside of the belt. Where only one separator is used, put on all the belting and start the separator with the engine, taking from ten to fifteen minutes to reach the proper speed. Wipe all bearings to free them from dust or dirt, and see that all oil tubes are cleaned and free to allow the oil to flow to the bearings. Look after this matter from day to day.

2. *Steam or Turbine Separators.* In setting a steam or turbine machine you have only to decide on the place to set it. This separator also must be set solid so as to be free from the possibility of vibration, and must be levelled in the same way as the belt machines. Turbine separators are all fitted with three-

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