THE CREAM SEPARATOR.

Its Proper Care and Preventing The Bowl From Shaking.

The separator is not a complex machine in the sense of multiplicity of parts, but it is emphatically a machine of delicate adjustment. The most usual way in which a machine is liable to get out of order is the oft repeated complaint that "the bowl shakes." This is a very common and, when not remedied, serious matter. It is especially troublesome in the smaller machines. While a slight jar does little harm, any pronounced washing or rattling of a bowl, when up to speed, will perhaps necessarily impair the work of the machine. As far as the most usual cause of a shaking bowl lies in the rubber ring which cushions the upper bearing of the bowl spindle. Even with all care this ring becomes saturated with oil, which causes it unequally curve one or the other, thus throwing the bowl spindle out of line with the lower spindle and causing the bowl to wobble sometimes so badly as to make it almost impossible to run it at all. This trouble is especially perplexing because of its sometimes temporary nature. A machine may run all right at night and very badly in the morning, or it may work for very poorly for a part of a run and suddenly settle down and run smoothly for the rest of the time, owing to some slight change in the position of the rubber ring or to the swelling equalizing itself. The only thing to do to put a stop to this and keep it as free from oil as possible. It may last for months, or it may swell unequally and trouble again almost immediately. Thus rubber ring may also be ruined by heating the bearing so hot as to burn it—a not very infrequent occurrence with poorer machines. An effort is being made to replace the rubber cushion by one made of coiled steel wire, which will not be affected by oil or time.

A shaking bowl may also be caused by the machine being set out of level, although I have never been able to see that a slight change in this respect would make so much difference as is often stated. Still a separator should be set as nearly level as can be determined by a spirit level resting in any direction across the top of the bowl frame, and it is very necessary that it be set on something solid, preferably a cement floor or stone pier. Absolute firmness of foundation will often overcome any tendency to shake.

Another cause of a bowl shaking, and one which ought not to exist in a new machine, is the wearing of the spindle or their bearings, so that they no longer run "close." The fit of a separator bearing must be very exact. Any slight "play" due to wear or inaccurate work in turning up the spindle will cause shaking of the bowl and heating of the bearings; more power will be required to run it, and it must be remembered, sometimes a new bushing may be all that is required, or if the spindle itself be worn it will have to be turned down to a new diameter and a special "repair shaft" bearing put in. Of course any springing of a bowl spindle, from a fall or other accident, will make it impossible to run it. Milk let into an empty bowl while the speed is very low will often cause most violent jarring, and even large machines will start more smoothly if the bowl be first filled with water or milk, because every bowl when not receives its final balancing when filled with water. The disengagement of the plates or other skimming devices may cause a bowl to shake by throwing it out of balance. It is a safe rule to follow that our machines must not jar, as it affects the skimming unfavorably, is unpleasant and consumes a great deal of power.—Jared Van Wagoner, Jr., in Rural New Yorker.

THE COWS THRIVE.

Milk Increased When Gluten Meal Was Mixed With Their Feed.

In January our cows and cottonseed began to fail, the cow having been a light one, and hearing Chicago gluten highly spoken of I purchased half a ton to give it a trial. We took for about eight quarts of the grain fed with the milkers—as much as could safely be done—of two quarts of the gluten meal, divided into two feeds. The last two cows of the old herd came into milk about Jan. 1, and during the month we milked 14. The increase in milk was very perceptible, the fresh cows and the gluten feed—was very perceptible, the milk stock amounting to $65.50 for the first two weeks of the month. The middle of January we commenced using new grain. I determined to sell 500 bushels of oats and buy ship stuff and bonsicr to feed in connection with Chicago gluten meal. At this time also I became anxious to know which cows were "paying their keep" and which were kept at a loss. Accordingly, a pair of scales was purchased and set up in the stables where feed and milk could be weighed and a record kept. We began feeding the cows six to seven pounds of the mixed feed, with one quart, night and morning, of the gluten (the two quarts weighing five pounds) to each cow. Don't know whether this is a balanced ration or not, but intend to find out.

The revelation of the scales was not altogether a surprise, but it was satisfactory in confirming suspicions and in giving exact knowledge concerning individual cows. Some of the cows bought in August were found to be fairly profitable, giving all the way from 12 to 15 quarts daily, the third day of the test. Two from the old herd that dropped their calves in January did very poorly (I could give exact figures in each case, but this article is already too long), the two from the old herd which had been in milk since April and June. One was a registered Jersey, the other a Jersey-and-better. They gave 10 and 8 quarts respectively, while the three remaining, one of which I thought was a heifer, gave 7 to 8 quarts daily, hardly paying for bedding and grain.

The milk stock for the last two weeks in January under the changed ration of ship stuff and bonsicr with gluten amounted to $57.70, or for the best portion of the winter and not as bad considering that most of the cows had been five months in milk, while two had been milked nearly two months.—T. J. Sumner in Rural New Yorker.

When to Feed Raw Sugar Beets.

From the Nebraska station, where the sugar beet industry is receiving special attention, comes a bulletin in which fall plowing is urged for this crop. According to this bulletin, the sugar beet exhausts and wears the land more than any other crop, if only to a depth of three inches, but, however, follows by a spike harrow to make a loose layer of soil on top to prevent evaporation. It has been shown that land so prepared lost only one-third as much water by evaporation as land having a firmly packed surface. Unless the land is very rich spread well rotted manure after the shallow plowing, which will add to the yield and probably something to the sugar content. Harrow and surface plow in the fall, or if that cannot be done plow as deeply as possible. The extreme tyranny of our soil and climate, which makes where sugar beets are grown makes it important that manure should be well rotted. If the beet are to follow corn, clear off the stalks and harrow thoroughly. In the fall the plow can be run 12 or 14 inches deep. While if we wait until spring it is hardly safe to turn up the soil much below the average depth of previous plowing—four to six inches.

Dairy and Creamery.

There will be another great corn crop this year. When farmers know how to utilize it profitably this crop is not lost sight. They must know that the farmers of America for many years throw away and wasted much of the best part of the corn plant, the salvation of our agricultural greatness. Too cows of corn they fed to their live stock produced fat. They did not make the wholesome or strong bones. The dairyman takes somewhat little and prepare to utilize all the corn plant. In the stalk and the husk are the nutrients which must be added to the corn ear to make the complete ration. No way of using the plant so far is equal to the silo. It is to be hoped that silos this fall will be extended and increased in numbers to accommodate the corn crop. Better and cream raising is increasing much faster than the population of the country. Silage makes better cheaper than any other food and makes the milk yield more abundant. This fall is the dairyman's great opportunity in corn silage.

It is a mistake that good curdings pays cows' teeth. If it is as sour as vinegar and as fatty as mayonnaise, perhaps it might do harm, but that is not the right sort of curdings.

The thoroughly successful creamery man is the man who has at least the interest of his patrons as much as his own. You never catch him manipulating weights to test John Smith's milk. In the long run such a course will destroy him in the long run.

Before cold weather sets in test carefully each of your cows and falter for the latter every one that cannot make at least four pounds of butter a week or give abundant milk if you are in the milk line. It does not pay to feed cow pampers these times.

When creamery butter is soft and tasteless, this means that the cream was sweeten before churning. Immediately after cream is separated cool it down to about 50 degrees. Hold it there till time to ripen it for churning. Then ripen it, stirring it frequently meanwhile. But in any case cool it as soon after it is separated.

The poorest way for a creamery to accumulate is in the wages of its skilled workmen.

Growing Children need a good food. Many mothers say Scott's Emulsion is the best food they can give their children. It gives strong nerves, healthy tissue, healthy appetite. It gives strong bones, healthy blood. Scott's Emulsion is Cod Liver Oil with Hypophosphites in a palatable form. It is the best food for growing