

arms on this axis revolve at the rate of 100 revolutions per minute, and butter "comes" generally within half an hour. How very rapidly the process may be carried out is apparent from the following remarkable statement by Mr. Littledale:—"We churn by steam, and last summer we tried the shortest possible time we could do it in; it was a hot day, and we accomplished it in five minutes and a half; the engine making 300 revolutions per minute, and the quantity eighty gallons of milk. We have also found out in this very hot weather that it pays us well to put American ice into the milk before churning, to reduce the temperature to get out more butter."

Let it be noted here, that however possible and even desirable, when an immediate sale is obtained for the produce, such rapid churning as this may be, it tends more to the permanent value of the produce when butter is obtained more slowly, as, for instance, in forty minutes, or within the hour.

Among other vertical churns, we may refer to Standing's (Preston, Lancashire,) patent "sun and planet" churns, in which two vertical axes are made, by a very simple arrangement of bevelled wheels above, to revolve each on its own axis, and each around the other, so that the whole mass of milk within the cylinder is made to undergo a beating, without generating any revolving motion of the milk itself within the vessel, which would, of course, so far enable it to escape the action of the beaters. A common vertical churn consists of a simple cylindrical vessel, with an upright axis, carrying three pierced flanges, extending from the axis to nearly the surface of the vessel, and worked by a handle and bevelled wheels above. In this case, it is well, with every two or three turns of the handle, to reverse the movement, because of the tendency of the motion one way to carry the milk or cream with it. Lastly, we may name Drummond's (Stirling) plunge churn, in which two plungers work alternately up and down alongside each other, and thereby produce sufficient agitation in the cream; the tub being separated into two chambers, one for each plunger, by a vertical perforated divider.

The following are the prices of the common forms of churn:—Barrel churn costs from £2 upwards, the smallest size being eighteen inches long, and as much in diameter at the widest part.

Rowan's churn varies from 50s. to £4, according to size. The Sussex churn costs from 30s. to two guineas. American box churns vary from £2 to £5 or £6, accord-

ing to size. Standing's "sun and planet" churns are advertised at from 33s. to 118s. i. e., as capable of churning two gallons to thirty gallons of cream.

In every case after churning and the removal of the batter and buttermilk, the churn is to be well scrubbed and cleaned with cold water; and then, being washed out, scalded with hot water, which should stand in it for an hour, and the churn may then be left open to the air to drain and dry.

Correspondence.

GOOD COWS, WALKING HORSES, &c.

MR. EDITOR—What is the principle by which Judges award prizes to the best cows for milk? Is it by their appearance only, if so, this, I apprehend is not always a sure sign. Should not some facts be produced proving what the cow has yielded as evidence of her goodness?

What are the best marks or signs of a good cow?

In raising calves are there any marks by which we may know that the one will be a good milker, and that the other will not be as good? Can any one give us any information on this subject?

In the *Genesee Farmer* for the present month, I find an article on walking horses, and the writer suggests the offering of premiums at our Agricultural Shows for fast walking, as well as for fast trotting horses. I am quite of this opinion, as fast walkers are of more importance to the farmer than fast trotters; this quality is much needed at the plough, the harrow, and when taking off loads. And should there not be a prize for the oldest team in good working order?

This may lead to the choice of the best stock of horses, and the kind of treatment they have received.

I often see a fine animal passing my place before a load of wood, and the owner informed me that she was twenty-four years old.

I hope this will draw out others on these subjects.

S. KING.

Ryckman's Corners.

HUNGARIAN GRASS.

To the Editor of the *Agriculturist*.

Pine River, March 13, 1860.

In an early number, will you oblige a new subscriber with instructions as to the