

A NEW DANISH INVENTION IN SEPARATORS

Has been introduced in Canada Recently and done Excellent Work Under Test.
It's Principles Described.

Much interest is being manifested in a new Danish invention in cream separators that is being introduced in Canada. It has been tested at the Manitoba Agricultural College and shown to a number of our leading Ca-



Section of the New "Perfect" Hand Separator
Kendall's Patent

nadian dairy authorities, and is creating great interest.

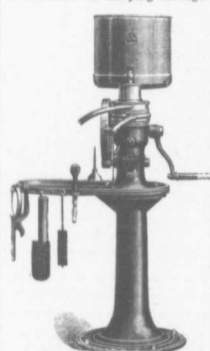
It is common knowledge that one of the principal drawbacks connected with all separator systems hitherto in use is their great delicacy with regard to the balance of the cylinder. A slight shifting of the bowl insertion, casual layers of milk mucus in the bowl, a careless treatment of same or its various parts, etc., etc., is quite sufficient to put it out of balance so it gradually begins to shake so violently in the frame that at last it cannot work any longer, but has to be sent to the factory in order to be rebalanced.

That the user under these circumstances, besides having to meet the cost of repairs, is caused loss by the deficient clean skimming and the greater wear and tear of the moving parts, which is a natural consequence of the disturbed balance of the cylinder, is notorious.

Moreover, there is to all existing separators with plate-insertions the objection, that the user also, with

longer to be troubled with those considerable drawbacks and the costs occasioned by same deserves the attention of all dairy-works—large as well as small.

The engineer director, Ivar Knudsen, candidates polytechnicum of Burmeister & Wain, Ltd., Copenhagen, has succeeded in inventing a separator, which is in every sense of the word self balancing, and which has, accordingly, done away with all the above mentioned and all other deficiencies characterizing the other systems. This new ingenious invention marks a new epoch in the development of the separator. Our dairymen have, consequently, every reason to make the acquaintance of this separator. An account of the particulars of the construction and the advantages conferred on dairying through this



The New "Perfect" Hand-Separator
Mounted on Stand

new skimming machine is here given.

A New Feature.

The chief principle and novelty of Messrs. Burmeister & Wain's separator is that the suspension of the cylinder (which is without a fixed shaft) is placed a considerable distance above the centre of gravity, while a small supporting bearing replaces the neck-bearing usually employed is placed in the centre of the cylinder (See fig. 2, which roughly illustrates the principle of the machine). The cylinder is loosely suspended on the end of an upright standing axle, which is likewise loosely connected with the worm, and thus the cylinder rests upon its bottom step. At the centre of gravity the cylinder is, as already mentioned, supported by a little ball train (with 6 balls), which transfers the oscillation to a tube, supported by a friction plate, sandwiched between two other plates. This friction plate causes that even when the cylinder gives the tube an oscillation, this gives no reaction, as the tube does not move without impulse from the cylinder.

It will be understood from the foregoing, that the bowl can thus freely occupy any position and, therefore, remain perfectly unaffected by even a very considerable side-heaviness.

By way of experiment a power-separator has, for instance, been put at the speed of 6,800 revolutions a minute with about 125 grams placed on the one side of the bowl, without the least vestige of shaking of the frame being experienced, which must be considered exceptionally good.

Other Novelties

The construction of the cylinder itself comprises many important nov-

elties. Thus there are no tubes, which in most cases are difficult or impossible to clean, but open, and accordingly easily accessible, grooves are employed which permit of the most convenient and yet most thorough cleaning. The plates and feeding tube are exceedingly easy to insert, because they are not, as in the case with other plate-separators, to be placed in a certain order, and in a certain way (the plates on other separators are numbered), but may be inserted in any way. The plates are, accordingly, round and without slots.

The most essential advantages of this separator may be summed up as follows:—

1. The cylinder is self-balancing, and remedies every side-heaviness itself, and has, accordingly, never to be rebalanced, and saves the user from expense and stoppage of work caused thereby, which are so often necessary with other systems.

2. Feeding pipe plates are inserted in any order (the plates being unnumbered), and may be kept in stock as spare parts (which is also the case with other parts of the cylinder).

3. The working is exceptionally smooth, as the friction on the moving parts has been reduced to quite a minimum on account of the self-balancing qualities of the cylinder.

4. The wear is, accordingly, infinitesimal. The consumption of power is exceedingly small; by a 600-lbs. hand separator, for instance; about 0.06 h.p. equal to 4.5 kilogram-meters per only, i.e., but 1.5 kilogram-meters per 200 lbs. milk, which is an exceptional result.

5. The consumption of oil is so small, that the hand separators for a couple of hours work requires only 2-3 drops of oil for the direct lubrication of the cylinder, while the power-separators' lubrication for the same purpose, and holding 2-3 oil, need be filled only once a month.

Clean Skimming.

That the clean-skimming, when so many factors tend to its perfection, must be the best obtainable is a matter of course. A circumstance of special interest, which alone is sufficient to illustrate the particularly fine clean-skimming capacity of this separator, is that it is able to clean-skim cold milk. This was one of the special objects in view when the machine was designed.

This separator is considered the best skimming machine ever produced. The foregoing mentioned advantages meet a long lasting desideratum and make it a most valuable and very interesting novelty in the Dairy Machinery line. It has been tested at several places both in United States and Canada, such as at the University of Wisconsin, Madison, U.S.A., Michigan, Experimental Agricultural College, Lansing, Mich., at Ontario Agricultural College, Guelph, Ont., Central Experimental Farm, Ottawa, and the Government Agricultural Col-

lege in Winnipeg, and at all places the results of the tests, especially where cold milk was used, have reached a degree that anything like it has never been known before. This separator will be shown at the Calgary and Toronto exhibitions this year.—Adv't.

Stock Car going West

In our last week's issue, mention was made that the association car of pure bred stock was expected to leave for the West about Wednesday, June 17th. After we had gone to press, we received notice from the director, Mr. A. P. Westervelt, at Toronto, that their arrangements had been changed and that the car would leave a week earlier.

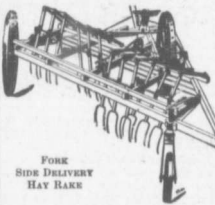
"Essentials in road-making: make the bottom, see that it is well-drained if necessary, then make the ditches and then have a uniform drop to the ditches."—Commissioner A. W. Campbell, Toronto.

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