

contained the results of many years' research on this important subject. The work of Mr. Shutt as chemist of the Experimental farms has been characterized throughout by accuracy and thoroughness, and has furnished many results of immediate and practical importance to Canadian agriculture.

### IMPORTANT CABLE FROM SOUTH AFRICA.

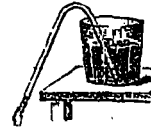
A telegraphic message just received from South Africa announces that the "Melotte" Separator has secured First Prize at the Great Trials of Hand Cream Separators hold at Port Elizabeth in competition with other machines. This signal award, so closely following the report of the Judges of Royal Agricultural Society of England and the honors obtained by the "Melotte" Separator at the last London and Dairy-Show and the Great Munich Exhibition (Bavaria) of 1898, would appear to ratify the guarantee issued by the "Melotte" Separator Sales Co. of Bristol, viz. that the "Melotte" Separator takes less power to turn and does more work in the same time than any other Hand Separator in the world, with equal efficiency. We understand the "Melotte" Co. are prepared to prove the merits of their Separator by sending any size machine on free trial for 14 days to any *bona fide* intending purchaser, to be worked alone or alongside any other make and if at the end of that time the machine does not fulfil the statement made concerning it, the users are at liberty to return same at expense of senders. A fairer offer could not be made, and buyers will be studying their own interests to write at once and avail themselves the same.

### Notes by the Way.

*Home-made superphosphate* is not a difficult thing to compass; only, care must be taken not to let the acid splash over the workmen. To avoid this, place the carboy on a raised platform, and empty it by means of a siphon.

A good sized wooden tub does very well to mix the phosphate and acid in. The materials may be thus proportioned; 500 lbs. of phosphate of lime in the form of bones, or mineral phosphate; to which add 15 gallons of water, and mix

thoroughly, and then pour on slowly from 300 to 350 lbs. of sulphuric acid, according to the quality of the phosphate. This is, of course, not at all



Siphon.

theoretically perfect, but it answers well in practice. When finished, dry the superphosphate up with ashes.

*Failure of clover.*—Boussingault, the great French agricultural chemist, suggests that the failure of the clover-plant is due to the exportation of the products of the farm. "If," says he, "the fodder is consumed on the spot, the greater part of the constituents of the plant will return to the manure after passing through the animals; and as a clover-crop takes up 77 lbs. of alkali (potash and soda), the food of clover will be always at its command. But if the fodder is sent to market, this will alter the position; it is to the continuous export of the product of the artificial grasses that the failure of the clover, as observed in soils, which have long produced it in abundance, is undoubtedly due."

This will not solve the problem. In England, particularly in the Eastern Counties, clover fails, as we have often mentioned, if repeated more than once in twelve years, i. e., three rotations; and, there, nothing is exported but grain, pulse, and meat. Tons upon tons of cake, beans, etc., and of artificial manures are imported; and yet the clover fails on repetition. To us, the cause of failure seems to be that the land becomes too loose to hold the roots. Boussingault recommends potash, wood-ashes and soda: Lawes and Gilbert can find no manure successful in restoring *clover-sick* land to its original condition. Liebig admits that the physical conditions essential to the fertility of a soil are generally neglected by the chemist; but the fact that, in the fine farms under the chalk-downs of S.E. England, no good crop of wheat can be raised after vetches, unless rape or turnips fed-off by sheep intervene, shows the importance of the point in question.

*Taste of wool in mutton.*—One often hears people complain of that peculiar flavour in mutton that they are pleased to call the "woolly taste." It is