OUR ENGRAVINGS.

Nectarines and grapes in pots; v. article on.
Hereford bull, Sir Harry; v. article on.
Steam cultivators at work; v. article on. (1)
American Merino sheep; v. article on p. 160.

CREAM SEPARATORS.

At the Kilburn Show the late Dr. Voelcker tested the Laval machine on behalf of the Royal Agricultural Society, and in his report he stated that by its use 93 per cent of the butter fat of the milk had been obtained in the cream, as compared with 78½ per cent, the average result of the common system of skimming; or, in other words, that only 7 per cent. of butter fat had been left in the separated milk, against 21½ per cent. in the skimmed milk. A later test, carried out at the London Dairy Show, gave results still more strikingly in favour of the separator, nearly four times as much butter fat being found in skimmed as in separated milk Peterson's more commonly known as the Danish separator (Laval's being the Swedish), has given quite as good results, the most exhaustive test of all having been made, we believe, with this machine. We refer to 600 experiments carried out by Professors Fjord and Storch, of Copenhagen, extending over a whole year. The results, first published in 1882, are recorded in Long's "British Dairy Farming." When the separator was used, the quantity of milk required to make one pound of butter was 24·4 lb.; when milk was churned, 26·7 lb.; when cream raised upon the ice system in thirty-four hours, 27 5 lb.; under the same system in ten hours, 29·5 lb.; by the cold-water system in thirty-four hours, 32·4 lb. It is to be observed that this victory for the centrifugal separator was all the more triumphant because the ice and cold-water system are improvements upon the old shallow-pan method, which was not tried at Copenhagen. It was the Danish machine, too, that was used in some experiments carried out at the Munster Dairy School in 1885, from January to July. The average results of forty-three experiments were to this effect:—Taking the butter from separated cream as 100 lb., the butter from an equal quantity of milk set in open pans, skimmed after twenty-four hours, was 59 lb.; after thirty-six hours, 66 lb.; after forty-two hours 73 lb.; and fifty-four hours, 76 lb. At a single trial made in 1886, a quantity of new milk was divided into four equal portions, one being set for twenty-four hours in shallow tin pans, a second in Swartz cans cooled in iced water for twenty-four hours, a third portion in Cooley cans cooled in iced water for eighteen hours, and a fourth put through the separator. On the cream from each lot being separately churned, 16 per cent. more butter was obtained from the separated cream than from that raised under either of the cold-water systems, and 24 per cent. more than from cream raised under the shallow-pan system still in general use throughout the United Kingdom. The manager of the school informs us that his experience leads him to the conclusion that 24 lb. to 29 lb. of milk, according to season, will produce 1 lb. of butter when the separator is used, while 30 to 35 lb. will be required when the skimming process is followed. It is worthy of notice that two horses, instead of a steam engine, as usual, have recently been used to drive the separator at the Munster Dairy School. The most remarkable results, however, are those obtained by Colonel Curtis Hayward, of Quedgley, Gloucester, who, during a period extending from October, 1885, to February, 1886, obtained from a dairy of forty two cows, eleven of which were of the Channel Islands breed, an average of 1 lb. of butter to 19½ lb. of milk, the Laval separator being used. Winter milk, it is to be observed, gives a higher proportion of butter than summer milk; but Colonel Hayward's proportion has seldom been equalled, and he is of opinion that the separator gives 20 to 25 per cent. more cream than any skimming system. He has found that he gets 1 lb. more butter per cow per week by using the separator than he obtained before using the machine. —*The Engineer.*

(1) Owing to pressure on our space, these articles must be deferred till next month.

Guernseys for Beef.

EDS. COUNTRY GENTLEMAN.—Having no further use for my Guernsey bull Cæsario 929, I decided to fat him for beef. He was in good show condition at Christmas last, but beef was then so low that I did not care to sell and agreed with the local butcher to feed him highly until Easter. I accordingly made up a ration from Prof. E. W. STEWART'S tables, mixing with good quality cut hay, cottonseed meal, corn meal and wheat bran, and feeding all the bull would eat. I found that he would not eat more than about two-thirds of what Prof. Stewart recommends for an animal of his weight. On Dec. 29th he weighed 1,965 lbs. He was again weighed on April 7th, being 17 days less than four years old. He was not fed from noon on the 6th, and at 10 A. M. on the 7th weighed 2,052 lbs. He was killed that afternoon, and the meat weighed on the morning of the 8th. The quarters weighed as follows; Fore 299 and 312 lbs.; hind, 297 and 284, making in all 1,192 lbs. net. The tallow weighed 210 lbs., and the hide 140, or in all 1,547 lbs.

Every one who saw the meat acknowledged that they had never seen so well-marbled, fine meat, or so fat a carcass. The neighbors generally were very curious to see how he would turn out as he and my other pure Guernseys had attracted much attention at the county agricultural exhibition last fall. Those who afterward tested the meat at the table agreed that it was the best they ever had; and I may here say that the same butcher has killed several very large and fat short-horn bulls, some of which looked much larger than Cæsario, and some even weighed more alive, but none ever dressed as much by 200 lbs., or even presented as good an appearance on the block.

I was very much interested in the result of this experiment, for being quite convinced from what I have read and seen, that the Guernseys are the best breed for practical dairying, I was anxious to see how they would show up for beef. Of course this is not a conclusive test, but it is a good showing; and I have now a three-year-old bull, Jeannot, who by this time next year could be easily made to go much larger, while he is as fine in bone as a Jersey or Ayrshire, and as straight and smooth as a Short-Horn, with at the same time splendid showing for milk.

My neighbors, who had never seen anything of this breed until within the last two years, when I brought a few together, are so well satisfied with what they have seen of both cows and bulls, that this spring I have had more demand than I could supply, for the grade bull calves to be used for breeding in default of thoroughbreds, which unfortunately are very scarce in Canada. S. A. FISHER. (1)
Alva Farm, P. Q., Can.

DR. BEAL, in his book on grasses, speaks of the marked defects of Timothy. When sown with clover, it makes but a small growth and must be cut young if the clover is secured in good season. It starts very slowly in the spring, is a long time coming into flower, and after cutting, the second growth is slow, feeble and of little consequence, seldom large enough

(1) This, from the member for Knowlton, only supports what I have been saying continually for the last ten years, that the Guernseys are the "coming cattle" for this part of the would.
A. R. J. F.