neously by producing a vacuum in the milk receiving vessels and in the tubing affixed to the cows' udders. There is a good deal of difference of opinion about this machine. Some dairy authorities believe in it, while others raise various objections. One man believes that the suction must injure cows if continued after all the milk has been drawn from the animals—a complaint which the inventors declares to be absolutely devoid of foundation, as the machine *is in regular use on eight Scotch dairy farms*, and no case of injury has been reported. Another critic contends that the saving of labour is not sufficient to make it worth while to use the machine, and a third declares that the indiarubber tubing will flavour the milk, and that the more it is used the worse it will become. Upon these points experience alone will give authoritative verdicts. At any rate, the machine is a very ingenious one, and does its work well. It was a particularly happy thought which led the inventor to construct his air pump in such a way as to produce a pulsating vacuum, instead of a constant one, thus imitating the sucking action of the calf and the intermittent work of hand-milking. The machine was entered for the prize offered by the Society for the best milking machine, and not for a medal, yet we were given to understand that the judges awarded it a medal, and not a prize. This arrangement needs explanation. It is true that there was no competition; but if the judges deemed the machine good enough for a medal, we fail to see on what grounds they could refuse to give it the prize for which it was entered. A medal stamps an invention as deserving, in the opinion of the judges, and a prize does no more.—*En. Ag. Gazette.*

Professor Huxley on Agricultural Education.

In the course of a paper on Technical Education before the Easingwold Chamber of Agriculture on Friday Mr. J. Harrison, read the following letter which he had received from Professor Huxley:—

I am afraid that my opinion upon the subject of your inquiry is worth very little, my ignorance of practical agriculture being profound. However, there are some general principles which apply to all technical training. The first of these, I think, is that practice is to be learned only by practice. The farmer must be made by thorough farm work. I believe I might be able to give you a fair account of a bean plant and of the manner and condition of its growth, but if I were to try to raise a crop of beans your club would probably laugh consumedly at the result. Nevertheless, I believe that you practical people would be all the better for the scientific knowledge which does not enable me to grow beans. It would keep you from attempting hopeless experiments, and would enable you to take advantage of the innumerable hints which Dame Nature gives to people who live in direct contact with things. And this leads me to the general principle which I think applies to all technical teaching of school boys and school girls, and that is that they should be led from the observation of the commonest facts to general scientific truths. If I were called upon to frame a course of elementary instruction preparatory to agriculture, I am not sure that I should attempt chemistry, or botany, or physiology, or geology, as such. It is a method fraught with danger of spending too much time and attention on abstraction and theories, on words and notions, instead of things. The history of a bean, of a grain of wheat, of a turnip, of a sheep, of a pig, or of a cow, properly treated—with the introduction of the elements of chemistry, physiology, and so on as they come in—would give all the elementary science which is needed for the comprehension of the processes of agriculture in a form easily assimilated by the youthful mind, which loathes anything in the shape of long words and abstract notions; and small blame to it! I am afraid I shall not have helped you very much, but I believe that my suggestions, rough as they are, are in the right direction—Yours &c., T. H. Huxley.

The English Dairy Cow.

Speaking of the recent London Dairy Show, J. McLean Smith, says: "We have not as yet the official report of the last show, and the stock papers give only the yields of the three premium cows in each breed. Taking these as a basis for comparison, the three prize Shorthorns made an average score of 122.1 points; the three prize Jersey, 88.5; the three prize Guernseys, 90.76. Taking total solids as the basis of comparison, which determines the value of milk for cheese or for food, we find the Shorthorns average 6.85 pounds; Jerseys, 5.14 pounds; Guernseys, 4.99 pounds. For fat alone, the Shorthorns average 1.983 pounds; Jerseys, 1.623 pounds; Guernseys, 1.688 pounds. And yet, in the face of facts like these, there are men in the country who presume to say that, for dairy purposes, you should by all means choose one of these, "specifically-bred dairy breeds" and avoid the beefy cow. Was ever such "rot" uttered. The "beefy" cow, in this instance, is the cow that gives the most milk, and makes the most cheese and the most butter, and produces a bull-calf that will make a steer worth raising. And she does all this, according to Professor Whitcher, of the Vermont Experiment Station, at an annual expenditure for food of about $3.50 more than for a Jersey. It is true a cow should be strongly bred for the qualities desired—the more strongly bred the better. That is, she should be able to show a long line of ancestors, all having superior excellence in the lines desired. But it does not follow and, judging from the facts brought on in milking tests, it is not true that a cow, claiming excellence in one thing only, is necessarily superior, in that particular, to a cow claiming excellence in two or more qualities. *Farmers' Advocate.*

Visit of English-Farmers to the Channel-island.

Guernsey, Friday night.

This has been another day of charming weather. In the morning Mr. T. De Mouilpied read a very long paper on "The Guernsey Cow," from which the following extract is taken:—

We saw some grand specimens at yesterday's show, splendid bulls, and grand, promising cows and heifers. How well they looked with their milk veins extended, and their soft, sleek coats shinning in the sun, the picture of placid contentment. The Guernsey cow is no mean animal; she weighs from 900 to 1 200 lb.; she is an unpretentious, useful animal, with a form to delight the eye of the practical dairyman, because it means milk. She is of the wedge form, high and broad in the hindquarters, narrowing towards the front; yet she is not thin in the chest, like many milch cows, but has a fickness through the heart which indicates constitution. A deep, full brisket, a fair fulness in the crop, her skin is of a rich yellow, and her milk and butter are more highly coloured than those of the Jersey. In size she is nearly a third larger and apparently also to about the same extent more robust. An unprejudiced person passing judgment on the two breeds from their appearance only, would say "the Jersey" belonged to the lawn, and gentleman's park, while the Guernseys' place was in the rank-and-file of the hard workers, where butter-making meant business. The head, horns, and neck of many are too heavy to look well, the udder and teats are often deficient, particularly the fore udder and front teats. The udder often appears to be cut away in front, which gives the teats a backward slant which is not elegant. When we come across a Shorthorn or a Hereford, the first impression on our mind