to them as they eat it; they had access to water three times a day, and were, on the whole, treated as ordinary stall-fed cattle. The consequence was, that the first day they did not feed freely, and the produce of milk was considerably diminished; the next day the cows fed very freely, still the produce continued to get less, and at the end of eight days the produce of the dairy had fallen to about one half the usual quantity in milk, and two-thirds the produce in butter. The cows were then returned to the pasture, the system being considered decidedly inapplicable to milch cattle in the summer season, and, in twelve hours, the produce in milk nearly equalled the previous quantity.—*J. B. Brandon, in the Agricultural Gazette.*

Salting Pork.—Having seen a good deal of discussion about doing this without saltpetre, I beg to state that for years it has been our custom to salt all pork and meat with only salt and sugar. The method was as follows:—The pigs were shut up in a stye and fatted till they become as fat as bacon hogs, or fatter, as the fat on the sides used to be six or seven inches in thickness; they were killed and cleaned, and put up immediately, the sides brought in, divested of nearly all the lean, and slightly rubbed with salt and sugar; a thick layer of salt was laid upon the bottom of the brine-tub, and upon that sugar, the pork being cut to the size of the tub, was laid rind downwards, some sugar sprinkled over it, then a layer of salt, and then more sugar, till the pork was hid; another layer of pork, rined downwards, succeded, then the salt and sugar, till the tub was filled, care being taken to cover the top layer very thickly with salt, &c., to exclude the air, and to put the lid on tight; if in a week or two the brine did not begin to rise, some warm water was sprinkled over it. In about three months the pork might be begun, if wanted, and when boiled was firm, and as red as a cherry. At the end of two years our pork has been even better than when first begun and far preferable to bacon, also far finer flavoured, and richer then when saltpetre was used. The pork was warm when put into the tub. A bushel of salt was used for each hog—*D. M., Agricultural Gazette.*

Air Churn.—The Bishop of Derry has invented an atmospheric churn. Instead of the present unscientific mode of making butter by churning, his Lordship accomplishes this measure by the singular manner of forcing a full current of atmospheric air through the cream, by means of an exceedingly well devised forcing-pump. The air passes through a glass tube connected with the air-pump, descending nearly to the bottom of the churn. The churn is of tin, and it fits into another tin cylinder provided with a funnel and stop-cock, to heat the cream to the necessary temperature. The pump is worked by means of a winch, which is not so laborious as the usual churn. Independently of the happy application of science to this important department of domestic economy, in a practical point of view, it is extremely valuable. The milk is not moved by a dasher, as in the common churn, but the oxygen of the atmosphere is brought into close contact with the cream, so as to effect a full combination of the butyraceous part, and to convert it all into butter. On one occasion the churning was carried on for the space of one hour and forty-five minutes, and eleven gallons of cream produced twenty-six pounds of butter.

Manufacture of Butter.—From the account of the experiments of Professor Traill, contained in the "Transactions of the Highland and Agricultural Society," are derived the following results:—1. That the addition of some cold water facilitates the process, or the separation of butter, especially when the cream is thick and the weather hot. 2. That cream alone is more easily churned than a mixture of cream and milk. 3. That butter produced from sweet cream has the finest flavour when fresh, but the butter-milk so obtained is poor, and small in quantity. 4. That the scalding of cream, according to the Devonshire method, yields the largest quantity of butter which, if intended for immeditate use is agreeable to the palate, and readily saleable; but if intended to be salted, is most liable to acquire, by keeping, a rancid flavor. The process of scalding is troublesome, and the milk, after the removal of the cream, is poor, and often would be unsaleable from the taste it has acquired in heating. 5. That churning the milk and cream together, after they have been slightly acid, seems to be the most economical process on the whole, because it yields a larger quantity of excellent butter, and the butter-milk of good quality. 6. That, the keeping of butter in a pure state appears to depend on its being obtained as free from uncombined albumen or casein and water as it can be by means of washing and working the butter when taken from the churn.—*Report of the Commissioners of Patents.*

Improvements in Hop-poling.—Mr. Knowles's ground (Kent) consists of about 42 acres, lying on a very beautiful slope of the Ragstone hills, in a warm aspect and an excellent soil; which, however, evidently owes much of its productiveness to liberal dressing and spirited cultivation. Mr. Knowles digs his land twice—once early in winter, and again at the usual period in the spring, nidgets or harrows all through the summer, and generally farms upon four good maxims, which perhaps may be more easily remembered by the readers if thrown into a distich—

"Cut early, pick late.
Well mend, and cultivate,"

This new plan of poling was exhibited in about seven acres of splended goldings, at the back of Mr. Knowles's residence. The weather sides of this place has been polled four hills deep with handsome, straight, 21-feet large poles, in rows. These were lashed to similar poles horizontally across them, about eight feet high, from end to end of the hills; and the rows of hills were similarly bound to each other by poles placed from the outside rows to the inside ones. By this means a phalanx of poles offers a sufficient resistance to the wind to shelter the whole ground. Mr. Knowles was led to devise this plan as a means of shelter. In one year he calculates that he lost a bag an acre of his goldings, from the effects of the wind—a loss amounting to about £140. Notwithstanding that the winds of the present season have been rather troublsome, this arrangement has been found a complete protection. Another result has been obtained from it, which was scarcely anticipated - viz., a very great improvement in the quantity of hops grown on the outside poles. In many cases these poles are covered with from 13ft. to 14ft. of hops from the top, besides the cross poles being clustered most heavily, thus clearly showing the great advantage of keeping the plants and poles firmly fixed, instead of allowing them to swing about. We have certainly never seen any thing so beautiful in hop-growing as the side of the ground which is poled in this way. It is worth going many miles to see, and will probably lead to Mr. Knowles's plan being adopted throughout many grounds. The increased expence of poling a ground throughout in this way is estimated at about 30s. per acre, besides an extra man required in pulling. The saving in windy seasons would, doubtless, be very considerable.—*Maidstone Gazette.*

(*From the Mark-Lane-Express.*)

In reply to B. P. W.'s inquiry, relative to the action of the barometer, I beg to say that

1. The mean height of the barometer, that is, the mean weight or pressure of the atmosphere at the level of the sea, is nearly the same in every part of the globe.

2. The barometer descends in geometrical progression for equal ascents into the atmosphere; subject, of course, to a correction for the increasing temperature of the air, according to elevation.

3. Barometers in elevated stations are greatly affected, both by the diurnal and annual fluctuations of the atmosphere, while those at the level of the sea are but slightly affected.

4. In extra-tropical climates, great falls in the barometer generally precede great falls of rain, or great oscillations of the arial current, known as violent gusts of wind.

5. Barometers, if properly made and well adjusted by some well-known standard, though situated at great distances from each other, that is, in any part of the United Kingdom, rise and fall simultaneously, differing in extent of rise or fall according to their altitude; that is, the higher the barometer is placed the greater the fall, the atmospheric pressure being less.