

The stones must be carefully yet quickly placed in their positions; practice will soon enable the builder to avoid having to fit them, or move them a second time. The way a stone is laid is also of great consequence, as it must always be so placed as to have the largest end outside, so that all the stones will have a tendency to fall inwards instead of outwards. The two sloping sides thus formed will, if the stones are large enough, bear one against the other; or if too small, they will press against the middle stones used to fill up with; gradual ascent is thus made, and when the wall reaches three feet high, the top is about 12 to 16 inches wide, and is finished with a rounded capping of smaller stones. These fences are permanent and good, and when finished, one or two fence boards are nailed along the top from post to post, that project about two feet through the wall. The boards may be narrow, and placed several inches apart, as smaller animals are not likely to be tempted to get on the top of the wall, and the boards effectually prevent larger ones from disturbing the stones.

C.

Proper Application of Manures.

The way manure is generally applied to the fields, is one which ensures a great deal of loss, both of time and plant food. It lies in lumps over the meadows. These lumps are stores of food which are supplied to the plant by instalments as each shower saturates these lumps; but it requires a deal of rain to do this, for they get crusted over with a hard shell by the burning heat of the sun, and can be found any time during the summer, kicking about like so many coprolites. Like these same coprolites, they are of little use until they are ground.

The fact is, manure should be manipulated before it is applied to the soil, if most of its value is to be utilized and its effect to be felt at once. There is indeed a way of applying manure in a raw state which saves time, and is also valuable on heavy soils. I may write of this hereafter, but at present I wish to suggest the necessity of breaking up as small as possible every particle of manure, and spreading it on the fields as a top dressing evenly. I should suggest a cribble or sieve for this purpose, to be attached to a frame on wheels, a thing I would invent myself, if I only had the money to spend on the necessary models. Such a machine would save manure, which is always too hard to procure. To save manure is equal to saving money put out at interest; manure and its management are the key to good farming.

In England I have heard old farmers remark that "two waistcoats are better than one coat," and I think they are right. Whether we look upon the manure as food or stimulus, in either case the application must be in the form of a top dressing, and it is certain that the nearer you can approach to

applying the manure in pieces as small as peas the more certain the result.

I would advise my farming friends, then, to try this experiment: get a boy to chop up as fine as possible about two thirds the quantity of manure they usually apply to a given piece of land, and apply it evenly at two distinct periods, as far apart as half the growing time of the crop, and note the result.

PHIALA.

Mr. Rawlinson, an eminent English engineer, in a report to Parliament about the sewers of London, estimates the marketable value of the matter accumulated there at £1,000,000, and states that it would enrich 70,000 acres of land.

The Illinois Agricultural Report for 1864 says:—"The fences of the United States have cost more than the houses, cities included; more than the ships, boats and vessels of every description which sail the ocean, lakes and rivers; more than any one class of property aside from real estate, except, it may be, the railroads of our country."

The manufacture of beet sugar, which was commenced about a year ago at Sacramento, and from which much money was to be made, has been suspended. The cause of this is said to be the incompetency of the superintendent to make the business a paying one. The sugar produced from 3,000 tons of beets would, under the present system, sell for \$46,800; but it would cost \$76,000 to produce it.

LARGE FARMING.—E. W. Stewart gives an account of the extensive farming of John T. Alexander of Illinois, who cultivates some 36,000 acres. One cornfield was twelve miles long, and from one-half to a mile wide, containing 5,500 acres. Standing on a corn crib, the eye could see over five miles of corn in opposite directions. A little boy visited this farm with his father, and after riding miles and miles, he became thoroughly tired and exclaimed, "Pa, let's go home—I don't want to see no more corn, never!" During spring 85 ploughs were run constantly to plough it; 15 planting machines put in the seed; and 20 cultivators dressed the rows. This field yielded 220,000 bushels, or 40 bushels per acre. A meadow of 2,500 acres of timothy and blue grass, yields 3,000 tons of hay. Fifteen machines are run in mowing it, and horse-forks stack it. Timothy for seed is cut with a header, cutting ten feet wide, and 400 acres yield 1,500 bushels. There are 6,000 acres of prairie pasture, and 12,000 seeded to timothy, blue grass and clover—carrying about 4,000 head of cattle. An Osage orange hedge encloses 27,000 acres, and several intersect the farm, making a total length of hedge equal to 130 miles. There are 80 miles of board fence on the farm. These facts we have gleaned from an article in the *Rural New Yorker*.

Stock Department.

A Word about Shorthorns

Much difference of opinion ever must exist as to the relative value to the farming community of our several breeds of cattle. We must, however, all admit that the Shorthorns present themselves to us under peculiarly favourable circumstances.

Possessing in a eminent degree a combination of qualities at one time thought incompatible, they have, by the good points which they have exhibited, by the perfect symmetry of form, and the compactness of their frames, become objects of public curiosity, and are now looked upon as the noblest and handsomest type of cattle. They have realized enormous sums to their owners, and not only in Great Britain and America, but in nearly all foreign countries, they are in great request.

Some more light might perhaps be thrown upon the principles and science of breeding, if we could trace back with certainty our present improved Shorthorns to those native stock from which they have originally sprung.

So much has been written, within the present century, and so generally have the plans, opinions, and results of successful breeders been diffused over the agricultural world, that the art of breeding has been brought within the compass of every intelligent farmer.

How much credit do we then not owe to those early breeders who first began, without the aid of the experience of others, and relying solely upon their own thought and energy, to lay the foundation of that noble class of animals which to-day take the foremost place in the showyard and in the market.

From the earliest records that are extant, the counties of Durham and York have been noted for their breed of cows; but they were only celebrated for their feats at the pail. They were wonderful milkers, but when put up to fatten, were found slow feeders, and produced but an inferior meat, not marbled or streaked, and without the due admixture of fat and lean which gives fame to the beef of the improved Shorthorns. This very same peculiarity exists to the present day in the unimproved Shorthorns; they are splendid milkers, but make poor beeves.

It is now a full century ago since the Shorthorns on the banks of the Tees, hence called the Teeswater breed, had assumed a more improved condition. In colour they resembled our present Shorthorns—red, white and roan.

We have not records to show by what crosses these early Teeswaters attained such improvement over the original Shorthorns. We can only conjecture the breeds